

# Package ‘MTurkR’

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**License** GPL-2

**URL** <https://github.com/leeper/MTurkR>

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## Description

This package provides access to the Amazon Mechanical Turk (MTurk) API via R, including all the basic API calls, plus additional wrappers to simplify multiple sequential calls and transform the XML returned by the API requests into R data structures (especially, dataframes). The package provides users of the MTurk Requester User Interface (RUI) with access to a variety of functions currently unavailable to them (the creation and maintenance of worker Qualifications, email notifications to workers through [ContactWorker](#), and streamlined bonus payments through [GrantBonus](#)). It also provides users with all functions available in the RUI directly in R as well as a large number of other functions, with a relatively simple command-line interface.

The core functionality is enacted through [request](#) and [authenticate](#), though most users are unlikely to use these functions directly. (And, the needs of even advanced users can probably be satisfied by the functionality of [request](#) for making arbitrary API requests.) Instead, most users will find themselves using four principal functions: [credentials](#), [CreateHIT](#), [GetAssignments](#), and [ApproveAssignments](#), to define one's MTurk (AWS) credentials, to create one or more HITs on the MTurk server, to retrieve completed assignments, and to approve assignments (and thus pay workers), respectively. Critically important, nothing in MTurkR will work during a given session without either first setting AWS credentials with the [credentials](#) function or specifying those credentials atomically within each function.

There are five common parameters that can be specified in most MTurkR functions: `keypair`, `print`, `log.requests`, and `sandbox`. The first of these is the AWS credentials parameter just described (whose default can be set globally with [credentials](#)), and the latter four are logicals. `print` causes certain information to be displayed on the standard output when functions are executed. `log.requests` records details of API calls in the working directory (see [readlogfile](#)). Setting the parameter `sandbox=TRUE` executes requests in the developer sandbox rather than the live server. This can be set globally with `options('MTurkR.sandbox')`, where the default is `FALSE`.

A lightweight menu-based Wizard (called by [MTurkR.Wizard](#)) is also available for beginners to interactively connect with MTurk. The wizard is designed to quickly create HITs, approve and reject work, contact or bonus workers, grant Qualifications, and so forth. While helpful, the wizard is intended only to facilitate beginners and is not intended to mimic anything near the full functionality of individual MTurkR functions.

## Author(s)

Thomas J. Leeper

Maintainer: Thomas J. Leeper <thosjleeper@gmail.com>

## References

[MTurkR homepage](#)

[Amazon Mechanical Turk](#)

[Amazon Mechanical Turk API Documentation](#)

---

AccountBalance	<i>Retrieve MTurk account balance</i>
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---

### Description

Retrieves the amount of money (in US Dollars) in your MTurk account. `SufficientFunds` provides a wrapper that checks whether your account has sufficient funds based upon specified characters of your HIT.

### Usage

```
AccountBalance(verbose = getOption('MTurkR.verbose'), ...)
```

```
SufficientFunds(amount, assignments = NULL, hits = NULL,
                bonus.ct = NULL, bonus.amount = NULL, masters = FALSE,
                turkfee = 0.1, turkmin = 0.005, mastersfee = 0.2, ...)
```

### Arguments

<code>amount</code>	Intended per-assignment payment amount.
<code>assignments</code>	Number of intended assignments (per HIT, if multiple HITs).
<code>hits</code>	Number of HITs.
<code>bonus.ct</code>	Number of intended bonuses.
<code>bonus.amount</code>	Amount of each bonus.
<code>masters</code>	A logical indicating whether MTurk Masters will be used. Default is FALSE.
<code>turkfee</code>	Amazon's fee as percentage of payments. Default is 10-percent (as 0.10).
<code>turkmin</code>	Amazon's minimum per-assignment fee. Default is \$0.005.
<code>mastersfee</code>	Amazon's additional charge for use of MTurk Masters. Default is 20-percent (as 0.20).
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

### Details

`AccountBalance` takes no substantive arguments. `SufficientFunds` is a wrapper for `AccountBalance` that accepts as inputs information about intended payments and bonuses to check whether your account has sufficient funds. If `sandbox=TRUE`, `AccountBalance` always returns “\$10,000.00”.

`accountbalance()` and `getbalance()` are aliases for `AccountBalance`.

### Value

Return value is an object of class “`MTurkResponse`”, including an additional character string (`balance`) containing the balance of the account in US Dollars.

**Author(s)**

Thomas J. Leeper

**References**[API Reference](#)**Examples**

```
## Not run:
AccountBalance()
SufficientFunds(amount=".25", assignments="50", hits="5")
SufficientFunds(bonus.ct="150", bonus.amount=".75")

## End(Not run)
```

---

ApproveAssignment	<i>Approve Assignment(s)</i>
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---

**Description**

Approve one or more submitted assignments, or approve all assignments for a given HIT or HIT-Type. Also allows you to approve a previously rejected assignment. This function spends money from your MTurk account.

**Usage**

```
ApproveAssignment(assignments, feedback = NULL, rejected = FALSE,
                  verbose = getOption('MTurkR.verbose'), ...)
```

```
ApproveAllAssignments(hit = NULL, hit.type = NULL, feedback = NULL,
                     verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

assignments	A character string containing an AssignmentId, or a vector of multiple character strings containing multiple AssignmentIds, to approve.
hit	A character string containing a HITId all of whom's assignments are to be approved.
hit.type	A character string containing a HITTypeId (or a vector of HITTypeIds) all of whom's HITs' assignments are to be approved.
feedback	An optional character string containing any feedback for a worker. This must have length 1 or length equal to the number of workers. Maximum of 1024 characters. For ApproveAllAssignments, must be length 1.
rejected	A logical indicating whether the assignment(s) had previously been rejected (default FALSE). Approval of previously rejected assignments must be conducted separately from other approvals.

verbose      Optionally print the results of the API request to the standard output. Default is taken from `getOption('MturkR.verbose')`.

...          Additional arguments passed to [request](#).

### Details

Approve assignments, by `AssignmentId` (as returned by [GetAssignment](#) or by `HITId` or `HITTypeId`). Must specify `assignments` xor `hit` xor `hit.type`. `ApproveAllAssignments` approves all assignments of a given HIT or HITType without first having to perform [GetAssignment](#).

`ApproveAssignments()` and `approve()` are aliases for `ApproveAssignment`. `approveall()` is an alias for `ApproveAllAssignments`.

### Value

A dataframe containing the list of `AssignmentIds`, feedback (if any), and whether or not each approval request was valid.

### Author(s)

Thomas J. Leeper

### References

[API Reference: Approve Assignment](#)

[API Reference: Approve Rejected Assignment](#)

### See Also

[RejectAssignment](#)

### Examples

```
## Not run:
a <- ApproveAssignment(assignments="26XXH0JPPSI23H54YVG7BKLEXAMPLE")

b <- ApproveAssignment(
  assignments=c("26XXH0JPPSI23H54YVG7BKLEXAMPLE1", "26XXH0JPPSI23H54YVG7BKLEXAMPLE2"),
  feedback="Great work!")

c <- ApproveAllAssignments(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ")

d <- ApproveAllAssignments(hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW")

## End(Not run)
```

---

AssignQualification    *Assign Qualification*

---

## Description

Assign a Qualification to one or more workers. The QualificationType should have already been created by [CreateQualificationType](#), or the details of a new QualificationType can be specified atomically. This function also provides various options for automatically specifying the value of a worker's QualificationScore based upon a worker's statistics.

## Usage

```
AssignQualification(qual, workers, value = "1", notify = FALSE,
                    name = NULL, description = NULL, keywords = NULL,
                    status = NULL, retry.delay = NULL,
                    test = NULL, answerkey = NULL, test.duration = NULL,
                    auto = NULL, auto.value = NULL,
                    conditional.statistic = NULL, conditional.comparator = NULL,
                    conditional.value = NULL, conditional.period = NULL,
                    set.statistic.as.value = FALSE,
                    verbose = getOption('MTurkR.verbose'), ...)
```

## Arguments

qual	A character string containing a QualificationTypeId.
workers	A character string containing a WorkerId, or a vector of character strings containing multiple WorkerIds.
value	A character string containing the value to be assigned to the worker(s) for the QualificationType.
notify	A logical indicating whether workers should be notified that they have been assigned the qualification. Default is FALSE.
name	An optional character string specifying a name for a new QualificationType. This is visible to workers. Cannot be modified by UpdateQualificationType.
description	An optional character string specifying a longer description of the QualificationType. This is visible to workers. Maximum of 2000 characters.
keywords	An optional character string containing a comma-separated set of keywords by which workers can search for the QualificationType. Cannot be modified by UpdateQualificationType. Maximum of 1000 characters.
status	A character vector of "Active" or "Inactive", indicating whether the QualificationType should be active and visible.
retry.delay	An optional time (in seconds) indicating how long workers have to wait before requesting the QualificationType after an initial rejection.
test	An optional character string consisting of a QuestionForm data structure, used as a test a worker must complete before the QualificationType is granted to them.

<code>answerkey</code>	An optional character string consisting of an AnswerKey data structure, used to automatically score the test.
<code>test.duration</code>	An optional time (in seconds) indicating how long workers have to complete the test.
<code>auto</code>	A logical indicating whether the Qualification is automatically granted to workers who request it. Default is FALSE.
<code>auto.value</code>	An optional parameter specifying the value that is automatically assigned to workers when they request it (if the Qualification is automatically granted).
<code>conditional.statistic</code>	An optional character string containing the name of a statistic (see <a href="#">ListStatistics</a> that should be used to conditionally assign the QualificationType to workers.
<code>conditional.comparator</code>	An optional character string containing a comparator by which a worker's score of a qualification is compared to the specified value. One of <, <=, >, >=, ==, !=, Exists.
<code>conditional.value</code>	An optional numeric or character string value against which workers scores will be compared. The QualificationType will only be assigned to those whose score on the specified statistic meet the comparison to this value.
<code>conditional.period</code>	An optional character string specifying the period for the statistic. Must be one of: "OneDay", "SevenDays", "ThirtyDays", "LifeToDate". Default is "LifeToDate".
<code>set.statistic.as.value</code>	An optional logical specifying whether the worker's value of the statistic should be used as the value they are assigned for the QualificationType. Default is FALSE and value is used instead.
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

## Details

A very robust function to assign a Qualification to one or more workers. The simplest use of the function is to assign a Qualification of the specified value to one worker, but assignment to multiple workers is possible. Workers can be assigned a Qualification previously created by [CreateQualificationType](#) or with the characteristics of a new QualificationType specified atomically. Qualifications can also be assigned conditional on each worker's value of a specified statistic (including assigning the value of the specified statistic as the worker's score for the Qualification).

`AssignQualifications()` and `assignqual()` are aliases.

## Value

A dataframe containing the list of workers, the QualificationTypeId, the value each worker was assigned, whether they were notified of their QualificationType assignment, and whether the request was valid.



**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[CreateQualificationType](#)

[UpdateQualificationScore](#)

**Examples**

```
## Not run:
# assign qualification to single worker
a <- AssignQualification("2YCIA0RYNJ9262B1D82MPTUEXAMPLE", "A1R09UJNWXMU65", values="50")

# assign a new qualification (defined atomically) to multiple workers
b <- AssignQualification(
workers=c("A1R09UJNWXMU65", "A9MZ9UJN4DMU78"),
title="Worked for me before",
description="This qualification is for people who have worked for me before",
keywords="Worked for me before")

# assign a qualification to a list of workers based upon their worker statistics
c <- AssignQualification("2YCIA0RYNJ9262B1D82MPTUEXAMPLE",
workers=c("A1R09UJNWXMU65", "A9MZ9UJN4DMU78", "AE4Q9UYN4UI97D"),
conditional.statistic="NumberAssignmentsApproved",
conditional.comparator=">", conditional.value="5",
conditional.period="LifeToDate", set.statistic.as.value=TRUE)

## End(Not run)
```

---

authenticate

*Authenticate an MTurk Request*

---

**Description**

An internal function to authenticate requests, deprecated as of v0.5.

**Usage**

```
authenticate(operation, secret,
             service = "AWSMechanicalTurkRequester", version = "2012-03-25")
```

**Arguments**

operation	A character string containing the operation to be performed.
secret	The AWS Secret Access Key used to encode the authentication signature.
service	The MTurk service to which the authenticated request will be sent. Supplied only for advanced users.
version	The version of the MTurk API that will be used. Default is the most current version.

**Details**

This is a former function that authenticated MTurk API requests. It is now deprecated because [request](#) now calculates the authentication signature internally and has added `service` and `version` arguments.

**Value**

A list containing the operation to be performed, a base64 encoded, HMAC signature character string, and a formatted timestamp.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[request](#)

---

Blocking Workers      *Block/Unblock Worker(s)*

---

**Description**

Block or unblock a worker. This prevents a worker from completing any HITs for you while they are blocked, but does not affect their ability to complete work for other requesters or affect their worker statistics. `GetBlockedWorkers` retrieves your list of currently blocked workers.

**Usage**

```
BlockWorker(workers, reasons, verbose = getOption('MTurkR.verbose'), ...)
```

```
UnblockWorker(workers, reasons = NULL, verbose = getOption('MTurkR.verbose'), ...)
```

```
GetBlockedWorkers(pagelimit = NULL, pagesize = NULL,
  verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

workers	A character string containing a WorkerId, or a vector of character strings containing multiple WorkerIds.
reasons	A character string containing a reason for blocking or unblocking a worker. This must have length 1 or length equal to the number of workers. It is required for BlockWorker and optional for UnblockWorker.
pagenumber	An optional integer (or character string) indicating which page of Blocked Workers search results should be returned. Most users can ignore this.
pagesize	An optional integer (or character string) indicating how many Blocked Workers should be returned per page of results. Most users can ignore this and the function will return the first 65,535 blocks.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

BlockWorker prevents the specified worker from completing any of your HITs. UnblockWorker reverses this operation.

GetBlockedWorkers retrieves currently blocked workers and the reason recorded for their block. This operation returns the first 65,535 blocked workers (the default for pagesize; access to additional blocked workers is available by specifying a pagenumber greater than 1.

BlockWorkers() and block() are aliases for BlockWorker. UnblockWorkers() and unblock() are aliases for UnblockWorker. blockedworkers() is an alias for GetBlockedWorkers.

**Value**

BlockWorker and UnblockWorker return a dataframe containing the list of workers, reasons (for blocking/unblocking them), and whether the request to block/unblock each of them was valid.

GetBlockedWorkers returns a dataframe containing the list of blocked workers and the recorded reason for the block.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference: Block](#)

[API Reference: Unblock](#)

[API Reference: GetBlockedWorkers](#)

**Examples**

```
## Not run:
BlockWorker("A1R09UEXAMPLE",reasons="Did not follow photo categorization HIT instructions.")
GetBlockedWorkers()
UnblockWorker("A1R09UEXAMPLE")

## End(Not run)
```

---

ChangeHITType

*Change HITType Properties of a HIT*


---

**Description**

Change the HITType of a HIT from one HITType to another (e.g., to change the title, description, or qualification requirements associated with a HIT). This will cause a HIT to no longer be grouped with HITs of the previous HITType and instead be grouped with those of the new HITType. You cannot change the payment associated with a HIT without expiring the current HIT and creating a new one.

**Usage**

```
ChangeHITType(hit = NULL, old.hit.type = NULL, new.hit.type = NULL,
              title = NULL, description = NULL, reward = NULL, duration = NULL,
              keywords = NULL,
              auto.approval.delay = NULL, qual.req = NULL,
              verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

hit	An optional character string containing the HITId whose HITTypeId is to be changed, or a vector of character strings containing each of multiple HITIds to be changed.
old.hit.type	An optional character string containing the HITTypeId (or a vector of HITTypeIds) whose HITs are to be changed to the new HITTypeId.
new.hit.type	An optional character string specifying the new HITTypeId that this HIT should be visibly grouped with (and whose properties, e.g. reward amount, this HIT should inherit).
title	An optional character string containing the title for the HITType. All HITs of this HITType will be visibly grouped to workers according to this title.
description	An optional character string containing a description of the HITType. This is visible to workers.
reward	An optional character string containing the per-assignment reward amount, in U.S. Dollars (e.g., "0.15").
duration	An optional character string containing the duration of each HIT, in seconds (for example, as returned by <a href="#">seconds</a> ).

keywords	An optional character string containing a comma-separated set of keywords by which workers can search for HITs of this HITType.
auto.approval.delay	An optional character string specifying the amount of time, in seconds (for example, as returned by <a href="#">seconds</a> ), before a submitted assignment is automatically granted.
qual.req	An optional character string containing one a <a href="#">QualificationRequirement</a> data structure, as returned by <a href="#">GenerateQualificationRequirement</a> .
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

This function changes the HITType of a specified HIT (or multiple specific HITs or all HITs of a specified HITType) to a new HITType. `hit` xor `old.hit.type` must be specified. Then, either a new HITTypeId can be specified or a new HITType can be created by atomically by specifying the characteristics of the new HITType.

`changehittype()` is an alias.

### Value

A dataframe listing the HITId of each HIT who HITType was changed, its old HITTypeId and new HITTypeId, and whether the request for each HIT was valid.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[CreateHIT](#)

[RegisterHITType](#)

### Examples

```
## Not run:
ChangeHITType(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ",
              new.hit.type="2KAVWAVKI62N29TGK5Q9FQH6BRJQIY")
ChangeHITType(old.hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW",
              new.hit.type="2KAVWAVKI62N29TGK5Q9FQH6BRJQIY")
ChangeHITType(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ",
              title="10 Question Survey",
              description="Complete a 10-question survey about news coverage and your opinions",
              reward=".20",
```

```

duration=seconds(hours=1),
keywords="survey, questionnaire, politics")

## End(Not run)

```

---

ContactWorker	<i>Contact Worker(s)</i>
---------------	--------------------------

---

### Description

Contact one or more workers. This sends an email with specified subject line and body text to one or more workers. This can be used to recontact workers in panel/longitudinal research or to send follow-up work. Most likely will need to be used in tandem with [GrantBonus](#) to implement panels.

### Usage

```

ContactWorker(subjects, msgs, workers, batch = FALSE,
              verbose = getOption('MTurkR.verbose'), ...)

```

### Arguments

subjects	A character string containing subject line of an email, or a vector of character strings of length equal to the number of workers to be contacted containing the subject line of the email for each worker. Maximum of 200 characters.
msgs	A character string containing body text of an email, or a vector of character strings of length equal to the number of workers to be contacted containing the body text of the email for each worker. Maximum of 4096 characters. Newlines can be specified with <code>\n</code> and tabs can be specified with <code>\t</code> in the message body.
workers	A character string containing a <code>WorkerId</code> , or a vector of character strings containing multiple <code>WorkerIds</code> .
batch	A logical (default is <code>FALSE</code> ), indicating whether workers should be contacted in batches of 100 (the maximum allowed by the API). This significantly reduces the time required to contact workers, but eliminates the ability to send customized messages to each worker.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

Send an email to one or more workers, either with a common subject and body text or subject and body customized for each worker.

In batch mode (when `batch=TRUE`), workers are contacted in batches of 100 with a single identical email. If one email fails (e.g., for one worker) the other emails should be sent successfully. That is to say, the request as a whole will be valid but will return additional information about which

workers were not contacted. This information can be found in the MTurkR log file and viewing the XML responses directly.

Note: It is only possible to contact workers who have performed work for you previously. When attempting to contact a worker who has not worked for you before, this function will indicate that the request was successful even though the email is not sent. The function will return a value of “HardFailure” for Valid when this occurs. The printed results may therefore appear contradictory because MTurk reports that requests to contact these workers are Valid, but they are not actually contacted. In batch, this means that a batch will be valid but individual ineligible workers will be reported as not contacted.

ContactWorkers() and contact() are aliases.

### Value

A dataframe containing the list of workers, subjects, and messages, and whether the request to contact each of them was valid.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### Examples

```
## Not run:
a <- "Complete a follow-up survey for $.50"
b <- "Thanks for completing my HIT!
I will pay a $.50 bonus if you complete a follow-up survey by Friday at 5:00pm.
The survey can be completed at
http://www.surveymonkey.com/s/pssurvey?c=A1R09UEXAMPLE."
c1 <- "A1R09UEXAMPLE"
d <- ContactWorker(subjects=a,msgs=b,workers=c)

c2 <- c("A1R09EXAMPLE1","A1R09EXAMPLE2","A1R09EXAMPLE3")
3 <- ContactWorker(subjects=a,msgs=b,workers=c2)

## End(Not run)
```

---

CreateHIT

*Create HIT*

---

### Description

Create a HIT. This is the most important function in the package. It creates a HIT based upon the specified parameters: (1) characteristics inherited from a HITType or specification of those parameters and (2) some kind of Question data structure.

**Usage**

```
CreateHIT(hit.type = NULL, question = NULL, validate.question = FALSE,
          expiration, assignments = "1",
          assignment.review.policy = NULL, hit.review.policy = NULL,
          annotation = NULL, unique.request.token = NULL,
          title = NULL, description = NULL, reward = NULL, duration = NULL,
          keywords = NULL,
          auto.approval.delay = NULL, qual.req = NULL,
          hitlayoutid = NULL, hitlayoutparameters = NULL,
          response.group = NULL, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

<code>hit.type</code>	An optional character string specifying the HITTypeId that this HIT should be visibly grouped with (and whose properties, e.g. reward amount, this HIT should inherit).
<code>question</code>	A mandatory (unless layoutid is specified) character string containing a QuestionForm, HTMLQuestion, or ExternalQuestion data structure. In lieu of a question parameter, a hitlayoutid and, optionally, hitlayoutparameters can be specified.
<code>validate.question</code>	A logical specifying whether the question parameter should be validated against the relevant MTurk schema prior to creating the HIT (operation will fail if it does not validate, and will return validation information). Default is FALSE.
<code>expiration</code>	The time (in seconds) that the HIT should be available to workers. Must be between 30 and 31536000 seconds.
<code>assignments</code>	A character string specifying the number of assignments
<code>assignment.review.policy</code>	An optional character string containing an XML-formatted Assignment-level ReviewPolicy data structure. MTurkR currently does not provide functionality to generate a ReviewPolicy, but users who generate their own ReviewPolicy should be able to use this parameter.
<code>hit.review.policy</code>	An optional character string containing an XML-formatted HIT-level ReviewPolicy data structure. MTurkR currently does not provide functionality to generate a ReviewPolicy, but users who generate their own ReviewPolicy should be able to use this parameter.
<code>annotation</code>	An optional character string annotating the HIT. This is not visible to workers, but can be used as a label by which to identify the HIT from the API.
<code>unique.request.token</code>	An optional character string, included only for advanced users.
<code>title</code>	A character string containing the title for the HITType. All HITs of this HITType will be visibly grouped to workers according to this title. Maximum of 128 characters.
<code>description</code>	A character string containing a description of the HITType. This is visible to workers. Maximum of 2000 characters.



reward	A character string containing the per-assignment reward amount, in U.S. Dollars (e.g., “0.15”).
duration	A character string containing the amount of time workers have to complete an assignment for HITs of this HITType, in seconds (for example, as returned by <a href="#">seconds</a> ). Minimum of 30 seconds and maximum of 365 days.
keywords	An optional character string containing a comma-separated set of keywords by which workers can search for HITs of this HITType. Maximum of 1000 characters.
auto.approval.delay	An optional character string specifying the amount of time, in seconds (for example, as returned by <a href="#">seconds</a> ), before a submitted assignment is automatically granted. Maximum of 30 days.
qual.req	An optional character string containing one or more QualificationRequirements data structures, for example as returned by <a href="#">GenerateQualificationRequirement</a> .
hitlayoutid	An optional character string including a HITLayoutId retrieved from a HIT template generated in the Requester User Interface, <a href="https://requester.mturk.com/hit_templates">https://requester.mturk.com/hit_templates</a> . If the HIT template includes variable placeholders, must also specify hitlayoutparameters.
hitlayoutparameters	An optional character string containing URL query parameter-formatted HIT-Layout parameters, for example returned by <a href="#">GenerateHITLayoutParameter</a> . Must be specified along with a hitlayoutid.
response.group	An optional character string (or vector of character strings) specifying what details of each HIT to return of: “Request”, “Minimal”, “HITDetail”, “HITQuestion”, “HITAssignmentSummary”. For more information, see <a href="http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html">http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html</a> .
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

## Details

This function creates a new HIT and makes it available to workers. Characteristics of the HIT can either be specified by including a valid HITTypeId for “hit.type” or creating a new HITType by atomically specifying the characteristics of a new HITType.

When creating a HIT, some kind of Question data structure must be specified. Either, a QuestionForm, HTMLQuestion, or ExternalQuestion data structure can be specified for the question parameter or, if a HIT template created in the Requester User Interface (RUI) is being used, the appropriate hitlayoutid can be specified. If the HIT template contains variable placeholders, then the hitlayoutparameters should also be specified.

When creating a ExternalQuestion HITs, the [GenerateHITsFromTemplate](#) function can emulate the HIT template functionality by converting a template .html file into a set of individual HIT .html files (that would also have to be uploaded to a web server) and executing CreateHIT for each of these external files with an appropriate ExternalQuestion data structure specified for the question parameter.

`createhit()` and `create()` are aliases.

**Value**

A dataframe containing the HITId of the newly created HIT and other details as requested by the ResponseGroup option.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[ExtendHIT](#)

[ExpireHIT](#)

[DisableHIT](#)

[DisposeHIT](#)

**Examples**

```
## Not run:
a <- GenerateLayoutParameter("message","Text to display in HIT")
CreateHIT(hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW",
         hitlayoutid="23ZG00GQSCM61T1H5H9U0U00QWFFU",
         hitlayoutparameters=a)

b <- GenerateExternalQuestion("http://www.example.com/myhit.html","400")
CreateHIT(hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW", question=b$string)

CreateHIT(title="Survey",
         description="5 question survey",
         reward=".10",
         duration=seconds(days=4),
         keywords="survey, questionnaire",
         question=b$string)

## End(Not run)
```

---

CreateQualificationType

*Create QualificationType*

---

**Description**

Create a QualificationType. This creates a QualificationType, but does not assign it to any workers. All characteristics of the QualificationType (except name and keywords) can be changed later with [UpdateQualificationType](#).

**Usage**

```
CreateQualificationType(name, description, status, keywords = NULL,
                        retry.delay = NULL, test = NULL, answerkey = NULL,
                        test.duration = NULL,
                        validate.test = FALSE, validate.answerkey = FALSE,
                        auto = NULL, auto.value = NULL,
                        verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

name	A name for the QualificationType. This is visible to workers. It cannot be modified by <a href="#">UpdateQualificationType</a> .
description	A longer description of the QualificationType. This is visible to workers. Maximum of 2000 characters.
status	A character vector of “Active” or “Inactive”, indicating whether the QualificationType should be active and visible.
keywords	An optional character string containing a comma-separated set of keywords by which workers can search for the QualificationType. Maximum 1000 characters. These cannot be modified by <a href="#">UpdateQualificationType</a> .
retry.delay	An optional time (in seconds) indicating how long workers have to wait before requesting the QualificationType after an initial rejection.
test	An optional character string consisting of a QuestionForm data structure, used as a test a worker must complete before the QualificationType is granted to them.
answerkey	An optional character string consisting of an AnswerKey data structure, used to automatically score the test, perhaps as returned by <a href="#">GenerateAnswerKey</a> .
test.duration	An optional time (in seconds) indicating how long workers have to complete the test.
validate.test	A logical specifying whether the test parameter should be validated against the relevant MTurk schema prior to creating the QualificationType (operation will fail if it does not validate, and will return validation information). Default is FALSE.
validate.answerkey	A logical specifying whether the answerkey parameter should be validated against the relevant MTurk schema prior to creating the QualificationType (operation will fail if it does not validate, and will return validation information). Default is FALSE.
auto	A logical indicating whether the Qualification is automatically granted to workers who request it. Default is FALSE.
auto.value	An optional parameter specifying the value that is automatically assigned to workers when they request it (if the Qualification is automatically granted).
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

## Details

A function to create a `QualificationType`. Active `QualificationTypes` are visible to workers and to other requesters. All characteristics of the `QualificationType`, other than the name and keywords, can later be modified by [UpdateQualificationType](#). Qualifications can then be used to assign Qualifications to workers with [AssignQualification](#) and invoked as `QualificationRequirements` in [RegisterHITType](#) and/or [CreateHIT](#) operations.

`createqual()` is an alias.

## Value

A dataframe containing the `QualificationTypeId` of the newly created `QualificationType` and other details as specified in the request.

## Author(s)

Thomas J. Leeper

## References

[API Reference](#)

## See Also

[GetQualificationType](#)

[DisposeQualificationType](#)

[UpdateQualificationType](#)

[SearchQualificationTypes](#)

## Examples

```
## Not run:
qual1 <- CreateQualificationType(name="Worked for me before",
  description="This qualification is for people who have worked for me before",
  keywords="Worked for me before",sandbox=TRUE)
qual1

## End(Not run)
```

---

credentials

*Specify MTurk/AWS Credentials*

---

## Description

Specify your Amazon Web Services (including MTurk) access credentials: (1) Access Key ID and (2) Secret Access Key. These are used to authenticate requests to the MTurk API and must be specified before any operations can be successfully performed by MTurkR.

**Usage**

```
credentials(keypair = NULL)
```

**Arguments**

**keypair**            A two-item character vector containing the AWS Access Key ID and AWS Secret Access Key, in that order

**Details**

This is the first operation that needs to be performed before any MTurk API requests can be successfully performed in a given MTurkR session. The function simply stores the Access Key ID and the Secret Access Key as a two-item character vector in `getOption('MTurkR.keypair')`, which is called by default by all MTurkR operations. This operation can also be performed by loading [MTurkR.Wizard](#), which prompts for the keypair the first time it loads in a given R session.

**Value**

A two-item character vector containing an AWS Access Key ID in the first position and the corresponding Secret Access Key in the second position.

**Author(s)**

Thomas J. Leeper

**References**

[AWS Access Credentials](#)

**Examples**

```
## Not run:
credentials(keypair=c("AKIAJFYW03EEXAMPLE", "Bpyq5ZqpQGshEKfcfd8CwUXEXAMPLE/tD0oqYGvI"))

## End(Not run)
```

---

DisableHIT

*Disable HIT*

---

**Description**

Disabling a HIT is probably not what you want to do. `DisableHIT` automatically removes the HIT from the MTurk server, approves (and thus pays for) all submitted and pending assignments, and then permanently deletes all assignment data.

**Usage**

```
DisableHIT( hit = NULL, hit.type = NULL, response.group = NULL,
            verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

<code>hit</code>	A character string containing a HITId or a vector of character strings containing multiple HITIds.
<code>hit.type</code>	An optional character string containing a HITTypeId (or a vector of HITTypeIds).
<code>response.group</code>	An optional character string specifying what details of each HIT to return of: “Minimal”, “HITQuestion”, “HITDetail”, “HITAssignmentSummary”. For more information, see <a href="http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html">http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html</a> .
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

**Details**

Disable a HIT (and its assignment data). This is a somewhat risky function because it automatically approves all pending assignments and then disposes of everything. `DisposeHIT` is probably what most users will use to delete HIT and assignment data that is no longer needed.

`disable()` is an alias.

**Value**

A dataframe containing a list of HITs and whether the request to disable each of them was valid.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[CreateHIT](#)

[ExtendHIT](#)

[ExpireHIT](#)

[DisposeHIT](#)

**Examples**

```
## Not run: DisableHIT(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ")
## Not run: DisableHIT(hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW")
```

---

 DisposeHIT

*Dispose HIT*


---

### Description

Dispose of a HIT that is no longer needed. You can only dispose of HITs that are Reviewable, with all assignments either approved or rejected.

### Usage

```
DisposeHIT( hit = NULL, hit.type = NULL, response.group = NULL,
            verbose = getOption('MTurkR.verbose'), ...)
```

### Arguments

hit	A character string containing a HITId or a vector of character strings containing multiple HITIds.
hit.type	An optional character string containing a HITTypeId (or a vector of HITTypeIds).
response.group	An optional character string specifying what details of each HIT to return of: “Minimal”, “HITQuestion”, “HITDetail”, “HITAssignmentSummary”. For more information, see <a href="http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html">http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html</a> .
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

Dispose of a HIT (and its assignment data) when it is no longer needed. Must specify a HITId or a HITTypeId, but not both. HITTypeId uses the [SearchHITS](#) operation to locate HITs of the specified HITType before disposing of them.

`disposehit()` is an alias.

### Value

A dataframe containing a list of HITs and whether the request to dispose of each of them was valid.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

**See Also**

[CreateHIT](#)  
[ExtendHIT](#)  
[ExpireHIT](#)  
[DisableHIT](#)

**Examples**

```

## Not run:
DisposeHIT(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ")
DisposeHIT(hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW")

## End(Not run)

```

---

DisposeQualificationType  
*Dispose QualificationType*

---

**Description**

Dispose of a QualificationType. This deletes the QualificationType, Qualification scores for all workers, and all records thereof.

**Usage**

```
DisposeQualificationType(qual, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual	A character string containing a QualificationTypeId.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

A function to dispose of a QualificationType that is no longer needed. All information about the QualificationType and all workers' Qualifications of that type are permanently deleted.

`disposequal()` is an alias.

**Value**

A dataframe containing the QualificationTypeId and whether the request to dispose was valid.



**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GetQualificationType](#)

[CreateQualificationType](#)

[UpdateQualificationType](#)

[SearchQualificationTypes](#)

**Examples**

```
## Not run:
DisposeQualificationType("2YCIA0RYNJ9262B1D82MPTUEXAMPLE")

## End(Not run)
```

---

ExpireHIT

*Expire HIT*

---

**Description**

Force a HIT to expire immediately, as opposed to at its prespecified expiration time. Expired HITs can be extended with the [ExtendHIT](#) operation.

**Usage**

```
ExpireHIT(hit = NULL, hit.type = NULL, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

hit	A character string containing a HITId or a vector of character strings containing multiple HITIds.
hit.type	An optional character string containing a HITTypeId (or a vector of HITTypeIds).
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

A function to (prematurely) expire a HIT (or multiple HITs), thereby preventing any additional assignments from being completed. Pending assignments can still be submitted. An expired HIT can be reactivated by adding additional time to its expiration using [ExtendHIT](#).

`expire()` is an alias.

**Value**

A dataframe containing the HITId(s) and whether each expiration request was valid.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[CreateHIT](#)

[ExtendHIT](#)

[DisableHIT](#)

[DisposeHIT](#)

**Examples**

```
## Not run:  
ExpireHIT(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ")  
  
## End(Not run)
```

---

ExtendHIT

*Extend HIT*

---

**Description**

Extend the time remaining on a HIT or the number of assignments available for the HIT.

**Usage**

```
ExtendHIT(hit = NULL, hit.type = NULL, add.assignments = NULL, add.seconds = NULL,  
          unique.request.token = NULL, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

<code>hit</code>	An optional character string containing a HITId or a vector of character strings containing multiple HITIds.
<code>hit.type</code>	An optional character string containing a HITTypeId (or a vector of HITTypeIds).
<code>add.assignments</code>	An optional character string containing the number of assignments to add to the HIT. Must be between 1 and 1000000000.
<code>add.seconds</code>	An optional character string containing the amount of time to extend the HIT, in seconds (for example, returned by <a href="#">seconds</a> ). Must be between 1 hour (3600 seconds) and 365 days.
<code>unique.request.token</code>	An optional character string, included only for advanced users.
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

**Details**

A useful function for adding time and/or additional assignments to a HIT. If the HIT is already expired, this reactivates the HIT for the specified amount of time. If all assignments have already been submitted, this reactivates the HIT with the specified number of assignments and previously specified expiration. Must specify a HITId xor a HITTypeId. If multiple HITs or a HITTypeId are specified, each HIT is extended by the specified amount.

`extend()` is an alias.

**Value**

A dataframe containing the HITId, assignment increment, time increment, and whether each extension request was valid.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[CreateHIT](#)

[ExpireHIT](#)

[DisableHIT](#)

[DisposeHIT](#)

**Examples**

```
## Not run:
ExtendHIT(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ",add.assignments="20")
ExtendHIT(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ",add.seconds=seconds(days=1)))

## End(Not run)
```

---

GenerateAnswerKey

*Generate AnswerKey Data Structure*


---

**Description**

Generate an AnswerKey data structure for a Qualification test.

**Usage**

```
GenerateAnswerKey(questions, scoring = NULL)
AnswerKeyTemplate(xml.parsed = NULL)
```

**Arguments**

questions	A dataframe containing QuestionIdentifiers, AnswerOptions, AnswerScores, and DefaultScores. See MTurk API Documentation.
scoring	An optional list containing QualificationValueMapping information. See MTurk API Documentation.
xml.parsed	A complete QuestionForm data structure parsed by xmlParse. Must specify this or the xml parameter.

**Details**

GenerateAnswerKey creates an AnswerKey data structure (possibly from a template created by AnswerKeyTemplate from a QuestionForm data structure), which serves to automatically score a Qualification test, as specified in the test parameter of [CreateQualificationType](#). An AnswerKey data structure is also returned by [GetQualificationType](#).

**Value**

GenerateAnswerKey returns a list containing an AnswerKey data structure as a parsed XML tree, character string containing that tree, and a url-encoded character string.

AnswerKeyTemplate returns a list that can be used in the questions parameter of GenerateAnswerKey. Placeholders are left for AnswerScore values to be manually entered prior to using it in GenerateAnswerKey.

**Author(s)**

Thomas J. Leeper

## References

[API Reference](#)

## See Also

[CreateQualificationType](#)

## Examples

```
## Not run:
qs <- list(list(QuestionIdentifier = "Question1",
               AnswerOption = list(SelectionIdentifier="A", AnswerScore=15),
               AnswerOption = list(SelectionIdentifier="B", AnswerScore=10),
               DefaultScore = 5),
           list(QuestionIdentifier = "Question2",
               AnswerOption = list(SelectionIdentifier="D", AnswerScore=10) ) )

scoring1 <- list(PercentageMapping=5)

scoring2 <- list(RangeMapping=list(list(InclusiveLowerBound=0,
                                       InclusiveUpperBound=20,
                                       QualificationValue=5),
                                   list(InclusiveLowerBound=21,
                                       InclusiveUpperBound=100,
                                       QualificationValue=10)),
               OutOfRangeQualificationValue=0)

ak1 <- GenerateAnswerKey(qs, scoring1)
ak2 <- GenerateAnswerKey(qs, scoring2)

## End(Not run)
```

---

GenerateExternalQuestion

*Generate ExternalQuestion*

---

## Description

Generate an ExternalQuestion data structure for use in the 'Question' parameter of the [CreateHIT](#) operation.

## Usage

```
GenerateExternalQuestion(url, frame.height)
```

**Arguments**

<code>url</code>	A character string containing the URL (served over HTTPS) of a HIT file stored anywhere other than the MTurk server.
<code>frame.height</code>	A character string containing the integer value (in pixels) of the frame height for the ExternalQuestion iframe.

**Details**

An ExternalQuestion is a HIT stored anywhere other than the MTurk server that is displayed to workers within an HTML iframe of the specified height. The URL should point to a page — likely an HTML form — that can retrieve several URL GET parameters for “AssignmentId” and “WorkerId”, which are attached by MTurk when opening the URL. The page should also be able to submit those parameters plus any assignment data to <https://www.mturk.com/mturk/externalSubmit> using either the HTTP GET or POST methods.

Note: `url` must be HTTPS. See [Wikipedia:HTTP Secure](#) for details.

**Value**

A character string containing a URL query parameter-formatted ExternalQuestion data structure.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[CreateHIT](#)

[GenerateHITLayoutParameter](#)

**Examples**

```
## Not run:  
GenerateExternalQuestion(url="http://www.example.com/myhit.html", frame.height="400")  
  
## End(Not run)
```

---

GenerateHITLayoutParameter

*Generate a HITLayout Parameter*

---

## Description

Generate a HITLayout parameter based upon the names of HIT template variables and the values to substitute for those variables in a single HIT. Used in collaboration with a HIT Layout ID ([https://requester.mturk.com/hit\\_templates](https://requester.mturk.com/hit_templates)) in the [CreateHIT](#) operation.

## Usage

GenerateHITLayoutParameter(names, values)

## Arguments

names	A character string containing the name of a HIT template variable or a vector of character strings containing the names of multiple HIT template variables.
values	A character string containing the value of a HIT template variable to be inserted for a specific HIT or a vector of character strings containing the values of multiple HIT template variables to be inserted for a specific HIT.

## Details

This function provides the content for the `hitlayoutparameters` option of [CreateHIT](#). Specifically, a HIT Template created in the MTurk Requester User Interface (RUI) has a number of placeholder variables for content to be inserted. This function supplies the content to be inserted into the template for one HIT. If multiple HITs are being created from one template, then `GenerateHITLayoutParameter` should be run once for each HIT.

Analogous functionality for producing .html files on the local workstation (e.g., to create multiple external HITs from the same template) is provided by [GenerateHITsFromTemplate](#).

## Value

A character string containing URL query parameter-formatted HITLayout parameters, to be used in the `hitlayoutparameters` parameter of [CreateHIT](#).

## Author(s)

Thomas J. Leeper

## References

[API Reference](#)

**See Also**[CreateHIT](#)[GenerateExternalQuestion](#)[GenerateHITsFromTemplate](#)**Examples**

```
## Not run:
a <- GenerateHITLayoutParameter(names="hitvariable",values="Text for HIT 1")
b <- GenerateHITLayoutParameter(names="hitvariable",values="Text for HIT 2")
c <- GenerateHITLayoutParameter(names=c("hitvariable1","hitvariable2"),
                                values=c("Headline for HIT1","Text for HIT 1"))

## End(Not run)
```

---

 GenerateHITsFromTemplate

*Generate HITs from a Template*

---

**Description**

Generate individual HIT .html files from a local .html HIT template file, in the same fashion as the MTurk Requester User Interface (RUI). This function facilitates the use of ExternalQuestion data structures.

**Usage**

```
GenerateHITsFromTemplate(template, input, filenames = NULL, write.files = FALSE)
```

**Arguments**

template	A file handle for an .html HIT template saved in the working directory.
input	A dataframe containing one row for each HIT to be created and columns named identically to the placeholders in the HIT template file. Operation will fail if variable names do not correspond.
filenames	An optional list of filenames for the HITs to be created. Must be equal to the number of rows in input.
write.files	A logical specifying whether HIT .html files should be created and stored in the working directory. Or, alternatively, whether HITs should be returned as character vectors in a list.

**Details**

Generate HITs from a HIT template (containing placeholders for input data). The tool provides functionality analogous to the MTurk RUI HIT template and can be performed on .html files generated therein.

hitsfromtemplate() is an alias.



**Value**

If `write.files=FALSE`, a list containing a character string for each HIT generated from the template. Otherwise, one or more HITs in the form of .html files stored in the working directory, with filenames specified by the `filenames` option or, if `filenames=NULL` of the form “NewHIT1.html”, “NewHIT2.html”, etc.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference: Operation](#)

[API Reference: ExternalQuestion Data Structure](#)

**Examples**

```
## Not run:
a <- data.frame(c("HIT text 1", "HIT text 2", "HIT text 3"))
names(a) <- "hitvariable"
GenerateHITsFromTemplate("mynewhit.html", input=a, write.files=TRUE)

## End(Not run)
```

---

GenerateHTMLQuestion    *Generate HTMLQuestion*

---

**Description**

Generate an HTMLQuestion data structure for use in the ‘Question’ parameter of [CreateHIT](#).

**Usage**

```
GenerateHTMLQuestion(character = NULL, file = NULL, frame.height = 450)
```

**Arguments**

<code>character</code>	An optional character string from which to construct the HTMLQuestion data structure.
<code>file</code>	An optional character string containing a filename from which to construct the HTMLQuestion data structure.
<code>frame.height</code>	A character string containing the integer value (in pixels) of the frame height for the HTMLQuestion iframe.

**Details**

Must specify either `character` or `file`.

**Value**

A list containing `xml.parsed`, an XML data structure, `string`, xml formatted as a character string, and `url.encoded`, character string containing a URL query parameter-formatted HTMLQuestion data structure for use in the question parameter of [CreateHIT](#).

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[CreateHIT](#)

[GenerateExternalQuestion](#)

[GenerateHITLayoutParameter](#)

**Examples**

```
## Not run:
GenerateHTMLQuestion(file="mynewhit.html")

## End(Not run)
```

---

GenerateNotification    *Generate Notification*

---

**Description**

Generate a HITType Notification data structure for use in [SetHITTypeNotification](#).

**Usage**

```
GenerateNotification(destination, transport = "Email", event.type,
                    version = "2006-05-05", event.number = "1", format = "REST")
```

**Arguments**

<code>destination</code>	Currently, a character string containing a complete email address (if <code>transport="Email"</code> or the SQS URL (if <code>transport="SQS"</code> ).
<code>transport</code>	Currently only "Email" and "SQS" are supported. AWS recommends the use of the SQS transport.
<code>event.type</code>	A character string containing one of: <code>AssignmentAccepted</code> , <code>AssignmentAbandoned</code> , <code>AssignmentReturned</code> , <code>AssignmentSubmitted</code> , <code>HITReviewable</code> , <code>HITExpired</code> , or <code>Ping</code> .

version	Version of the HITType Notification API to use. Intended only for advanced users.
event.number	Intended only for advanced users to construct custom Notifications.
format	Format of QualificationRequirement (SOAP or REST). Currently only REST is supported (as is the default).

### Details

Generate a Notification data structure for use in the `notification` option of [SetHITTypeNotification](#).

### Value

A character string containing a URL query parameter-formatted Notification data structure.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[SetHITTypeNotification](#)

[SendTestEventNotification](#)

### Examples

```
## Not run:  
a <- GenerateNotification("requester@example.com",event.type="HITExpired")  
  
## End(Not run)
```

---

GenerateQualificationRequirement

*Generate QualificationRequirement*

---

### Description

Generate a QualificationRequirement data structure for use with [CreateHIT](#) or [RegisterHITType](#).

### Usage

```
GenerateQualificationRequirement(qual,  
                                comparator,  
                                value,  
                                preview = NULL,  
                                qual.number = NULL)
```

**Arguments**

qual	A character string containing a QualificationTypeId, or a vector of QualificationTypeIds. This parameter also accepts shorthand labels for built-in QualificationTypes: “Approved” (percent of assignments approved), “NumberApproved” (number of assignments approved), “Locale”, “Adult”, and MTurk “masters” QualificationTypes (“Masters”, “Categorization”, or “Photo Moderation”).
comparator	A character string containing a comparator, or a vector of comparators, by which a worker’s score of a qualification is compared to the specified value. One of <, <=, >, >=, =, !=, “Exists”, “DoesNotExist”, “In”, “NotIn”. For “Masters”-type qualifications, only “Exists” is available.
value	A numeric or character string value (or vector of such) against which workers scores will be compared. Must be a non-negative integer, except when qualification=“Locale” (when it must be a two-digit country code) or when comparator is “Exists” or “DoesNotExist” (when it must be an empty character string). When using the “In” or “NotIn” comparators, each element in value can be a comma-separated string of up to 15 values (e.g., 15 discrete scores or 15 discrete locales to use for that Qualification).
preview	An optional logical specifying whether a worker must have the Qualification in order to preview the HIT on the MTurk worker site. The default is FALSE.
qual.number	An argument for primarily internal use.

**Details**

A convenience function to translate the details of a QualificationRequirement into the necessary structure for use in the qual.req parameter of [CreateHIT](#) or [RegisterHITType](#). The function accepts three required parameters: qual, comparator, and value. qual must be a valid QualificationTypeId for either a built-in QualificationType (see [ListQualificationTypes](#)) or a custom QualificationType (e.g., one created with [CreateQualificationType](#)). Multiple QualificationRequirements can be generated in one call — that is, if a requester intends to impose multiple QualificationRequirements on a single HITType, those requirements must be specified in a single call to [GenerateQualificationRequirements](#). Once attached to a HITType, only workers who meet all of the specified QualificationRequirements can complete assignments for a HIT of that HITType.

**Value**

Returns a character string (of class “QualificationRequirement”) containing URL-encoded QualificationRequirements.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**[CreateHIT](#)[RegisterHITType](#)**Examples**

```
a <- ListQualificationTypes()[2,2] # Number of HITs Approved
# one QualificationRequirement
q1 <- GenerateQualificationRequirement(a,">","90")
# two QualificationRequirements
q2 <- GenerateQualificationRequirement(c("Locale","Approved"),
                                       c("==" ,">"),
                                       c("US",90),
                                       preview = TRUE)
# one QualificationRequirement using the `In` comparator
q3 <- GenerateQualificationRequirement("Locale","In","US,UK")
# two QualificationRequirements using the `In` comparator
q4 <- GenerateQualificationRequirement(c("Locale","Approved"),
                                       c("==" ,">"),
                                       c("US,UK,DK",90),
                                       preview = c(TRUE,FALSE))
# `Exists` comparator
q5 <- GenerateQualificationRequirement("Approved", "Exists", "")
```

---

GenerateReviewPolicy    *Generate HIT and/or Assignment ReviewPolicies*

---

**Description**

Generate a HIT ReviewPolicy and/or Assignment ReviewPolicy data structure for use in [CreateHIT](#).

**Usage**

```
GenerateReviewPolicy(hitpolicy = NULL, assignpolicy = NULL)
```

**Arguments**

hitpolicy        An optional list.

assignpolicy    An optional list.

**Details**

Convert an R list into a ReviewPolicy data structure. See examples.

**Value**

Returns a list containing one or two named lists, HITReviewPolicy and/or AssignmentReviewPolicy as parsed XML, string, and url-encoded string.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference: QuestionForm](#)

[API Reference \(ReviewPolicies\)](#)

[API Reference \(Data Structure\)](#)

**Examples**

```
## Not run:
lista <- list(  QuestionIds=c("Question1","Question2","Question5"),
              QuestionIdAgreementThreshold=8,
              ExtendMinimumTimeInSeconds=3600)
hpolicy <- GenerateReviewPolicy(hitpolicy=lista)

## End(Not run)
## Not run:
listb <- list(  AnswerKey=list(  list(Key="QuestionId3",Value="B"),
                                list(Key="QuestionId7",Value="A"),
                                list(Key="QuestionId15",Value="C")),
              ExtendIfKnownAnswerScoreIsLessThan=80,
              ExtendMaximumAssignments=3)
apolicy <- GenerateReviewPolicy(assignpolicy=listb)

## End(Not run)
```

---

GetAssignment

*Get Assignment(s)*

---

**Description**

Get an assignment or multiple assignments for one or more HITs (or a HITType) as a dataframe.

**Usage**

```
GetAssignment(assignment = NULL, hit = NULL, hit.type = NULL, status = NULL,
              return.all = FALSE, pagenumber = "1", pagesize = "10",
              sortproperty = "SubmitTime", sortdirection = "Ascending",
              response.group = NULL, return.assignment.dataframe = TRUE,
              verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

<code>assignment</code>	An optional character string specifying the <code>AssignmentId</code> of an assignment to return.
<code>hit</code>	An optional character string specifying the <code>HITId</code> whose assignments are to be returned, or a vector of character strings specifying multiple <code>HITIds</code> all of whose assignments are to be returned.
<code>hit.type</code>	An optional character string specifying the <code>HITTypeId</code> (or a vector of <code>HITTypeIds</code> ) of one or more <code>HITs</code> whose assignments are to be returned.
<code>status</code>	An optional character string (of “Approved”, “Rejected”, “Submitted”), specifying whether only a subset of assignments should be returned. If <code>NULL</code> , all assignments are returned (the default). Only applies when <code>hit</code> or <code>hit.type</code> are specified; ignored otherwise.
<code>return.all</code>	If <code>TRUE</code> , all available assignments are returned. Otherwise, only assignments falling within the specified <code>pagenumber</code> and <code>pagesize</code> search results are returned.
<code>pagenumber</code>	An optional character string indicating which page of search results should be returned (only appropriate when specifying a single <code>HITId</code> ). Most users can ignore this.
<code>pagesize</code>	An optional character string indicating how many search results should be returned by each request (only appropriate when specifying a single <code>HITId</code> ), between 1 and 100. Most users can ignore this.
<code>sortproperty</code>	One of “AcceptTime”, “SubmitTime”, “AssignmentStatus”. Ignored if <code>return.all=TRUE</code> . Most users can ignore this.
<code>sortdirection</code>	Either “Ascending” or “Descending”. Ignored if <code>return.all=TRUE</code> . Most users can ignore this.
<code>response.group</code>	An optional character string (or vector of character strings) specifying what details to return. If <code>assignment</code> is specified, <code>response.group</code> can include any of “Request”, “Minimal”, “AssignmentFeedback”, “HITDetail”, and/or “HITQuestion”. If <code>hit</code> or <code>hit.type</code> is specified, <code>response.group</code> can include “Request”, “Minimal”, and/or “AssignmentFeedback”. For more information, see <a href="http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html">http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html</a> .
<code>return.assignment.dataframe</code>	A logical specifying whether the <code>Assignment</code> dataframe should be returned. Default is <code>TRUE</code> .
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

**Details**

This function returns the requested assignments. The function must specify an `AssignmentId` xor a `HITId` xor a `HITTypeId`. If an `AssignmentId` is specified, only that assignment is returned. If a `HIT` or `HITType` is specified, default behavior is to return all assignments through a series of sequential

(but invisible) API calls meaning that returning large numbers of assignments (or assignments for a large number of HITs in a single request) may be time consuming.

GetAssignments(), assignment(), and assignments() are aliases.

### Value

Optionally a dataframe containing Assignment data, including workers responses to any questions specified in the question parameter of the CreateHIT function.

### Author(s)

Thomas J. Leeper

### References

[API Reference: GetAssignment](#)

[API Reference: GetAssignmentsForHIT](#)

### See Also

[GetHIT](#)

[ApproveAssignment](#)

[ApproveAllAssignments](#)

[RejectAssignment](#)

### Examples

```
## Not run:
GetAssignment(assignments="26XXH0JPPSI23H54YVG7BKLEXAMPLE")
GetAssignment(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ", return.all=TRUE)
GetAssignment(hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW",
              return.all=FALSE, pagenumber="1", pagesize="50")

## End(Not run)
```

---

GetBonuses

*Get Bonus Payments*

---

### Description

Get details of bonuses paid to workers, by HIT, HITType, or Assignment.

### Usage

```
GetBonuses(assignment = NULL, hit = NULL, hit.type = NULL, return.all = TRUE,
           pagenumber = "1", pagesize = "100",
           verbose = getOption('MTurkR.verbose'), ...)
```



**Arguments**

<code>assignment</code>	An optional character string containing an <code>AssignmentId</code> whose bonuses should be returned.
<code>hit</code>	An optional character string containing a <code>HITId</code> whose bonuses should be returned.
<code>hit.type</code>	An optional character string containing a <code>HITTypeId</code> (or a vector of <code>HITTypeIds</code> ) whose bonuses should be returned.
<code>return.all</code>	A logical indicating whether all HITs (as opposed to a specified page of the search results) should be returned. Default is <code>TRUE</code> . Note: This is (temporarily) ignored.
<code>pagenumber</code>	An optional character string indicating which page of search results should be returned. Most users can ignore this.
<code>pagesize</code>	An optional character string indicating how many search results should be returned by each request, between 1 and 100. Most users can ignore this.
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

**Details**

Retrieve bonuses previously paid to a specified HIT, Assignment, or HITType.  
`bonuses()` is an alias.

**Value**

A dataframe containing the details of each bonus, specifically: `AssignmentId`, `WorkerId`, `Amount`, `CurrencyCode`, `FormattedPrice`, `Reason`, and `GrantTime`.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GrantBonus](#)

**Examples**

```
## Not run:
GetBonuses(hit="2MQB727M0IGF304GJ16S1F4VE3AYDQ")
GetBonuses(assignment="26XXH0JPPSI23H54YVG7BKL082DHNU")

## End(Not run)
```

---

GetFileUpload                      *Get Files Uploaded by Workers*

---

### Description

Get the URL for a file uploaded by a worker as part of a HIT, or download the file(s) directly to the working directory.

### Usage

```
GetFileUpload(assignment, questionIdentifier, download = FALSE, file.ext = NULL,
              open.file.in.browser = FALSE, verbose = getOption('MTurkR.verbose'), ...)
```

### Arguments

assignment	A character string containing an AssignmentId, or a vector of character strings each containing an AssignmentId.
questionIdentifier	A question identifier for a file upload question, as specified in the question parameter of CreateHIT or in the placeholder of a HIT template created in the RUI.
download	A logical specifying whether the file(s) should be downloaded and saved in the working directory. Default is FALSE.
file.ext	An optional character string specifying the file extension of the uploaded files (used only if download=TRUE).
open.file.in.browser	A logical specifying whether the file should be opened in the user's default web browser.
verbose	Optionally print the results of the API request to the standard output. Default is taken from getOption('MTurkR.verbose').
...	Additional arguments passed to <a href="#">request</a> .

### Details

Note that a FileUploadURL is only valid for 60 seconds (per MTurk documentation), so URLs should either be retrieved one at a time or files should be automatically downloaded to the working directory with the download=TRUE. If browser=TRUE, request is executed in the user's default web browser, whereas if open.file.in.browser=TRUE, the request is executed in R and the file itself is opened in the browser.

geturls() is an alias.

### Value

Depending on the specification, either a character string containing a temporary URL (which lasts 60 seconds) where the uploaded file can be downloaded, or the files themselves are opened in the user's default web browser, or directly downloaded and saved to the working directory.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**Examples**

```
## Not run:
GetFileUpload("26XXH0JPPSI23H54YVG7BKL082DHNU", "dictation", download=TRUE)

## End(Not run)
```

---

GetHIT

*Get HIT*

---

**Description**

Retrieve various details of a HIT as a dataframe. What details are returned depend upon the requested ResponseGroup.

**Usage**

```
GetHIT(hit, response.group = NULL,
       return.hit.dataframe = TRUE, return.qual.dataframe = TRUE,
       verbose = getOption('MTurkR.verbose'), ...)

HITStatus(hit = NULL, hit.type = NULL, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

<code>hit</code>	An optional character string specifying the HITId of the HIT to be retrieved. Must specify <code>hit</code> xor <code>hit.type</code> .
<code>hit.type</code>	An optional character string specifying the HITTypeId (or a vector of HITTypeIds) of the HIT(s) to be retrieved. Must specify <code>hit</code> xor <code>hit.type</code> , otherwise all HITs are returned in <code>HITStatus</code> .
<code>response.group</code>	An optional character string (or vector of character strings) specifying what details of each HIT to return of: “Request”, “Minimal”, “HITDetail”, “HITQuestion”, “HITAssignmentSummary”. For more information, see <a href="http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html">http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html</a> .
<code>return.hit.dataframe</code>	A logical indicating whether the dataframe of HITs should be returned. Default is TRUE.

```

return.qual.dataframe
    A logical indicating whether the list of each HIT's QualificationRequirements
    (stored as dataframes in that list) should be returned. Default is TRUE.

verbose
    Optionally print the results of the API request to the standard output. Default is
    taken from getOption('MturkR.verbose').

...
    Additional arguments passed to request.

```

## Details

GetHIT retrieves characteristics of a HIT. HITStatus is a wrapper that retrieves the Number of Assignments Pending, Number of Assignments Available, Number of Assignments Completed for the HIT(s), which is helpful for checking on the progress of currently available HITs. Specifying a `hit.type` causes the function to first search for available HITs of that HITType, then return the requested information for each HIT.

`gethit()` and `hit()` are aliases for GetHIT. `status()` is an alias for HITStatus.

## Value

Optionally a dataframe containing the HITs and a list of each HIT's QualificationRequirements (stored as dataframes in that list in the order that HITs were retrieved.). The exact characteristics of each HIT returned depend upon the `response.group` parameter.

## Author(s)

Thomas J. Leeper

## References

[API Reference](#)

## See Also

[GetHITsForQualificationType](#)

[GetReviewableHITs](#)

[SearchHITs](#)

## Examples

```

## Not run:
GetHIT("2MQB727M0IGF304GJ16S1F4VE3AYDQ")
HITStatus("2MQB727M0IGF304GJ16S1F4VE3AYDQ")
hits <- c("2MQB727M0IGF304GJ16S1F4VE3AYDQ", "AM4DB727M0IGF304GJ16S1F4VE36JIQ")
HITStatus(hits)

## End(Not run)

```

---

GetHITSForQualificationType  
*Get HITs by Qualification*

---

### Description

Retrieve HITs according to the QualificationTypes that are required to complete those HITs.

### Usage

```
GetHITSForQualificationType(qual, response.group = NULL, return.all = TRUE,  
                             pagenumber = 1, pagesize = 100,  
                             verbose = getOption('MTurkR.verbose'), ...)
```

### Arguments

qual	A character string containing a QualificationTypeId.
response.group	An optional character string specifying what details of each HIT to return of: “Minimal”, “Request”. For more information, see <a href="http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html">http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html</a> .
return.all	A logical indicating whether all QualificationTypes (as opposed to a specified page of the search results) should be returned. Default is TRUE.
pagenumber	An optional character string indicating which page of search results should be returned. Most users can ignore this.
pagesize	An optional character string indicating how many search results should be returned by each request, between 1 and 100. Most users can ignore this.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

A function to retrieve HITs that require the specified QualificationType.  
`gethitsbyqual()` is an alias.

### Value

A data frame containing the HITId and other requested characteristics of the qualifying HITs.

### Author(s)

Thomas J. Leeper

**References**[API Reference](#)**See Also**[GetHIT](#)[SearchHITs](#)**Examples**

```
## Not run:
q <- ListQualificationTypes()[7,2] # Location requirement
GetHITsForQualificationType(q)

## End(Not run)
```

---

 GetQualificationRequests

*Get Qualification Requests*


---

**Description**

Retrieve workers' requests for a QualificationType.

**Usage**

```
GetQualificationRequests(qual = NULL, return.all = TRUE,
  pagenumber = "1", pagesize = "10",
  sortproperty = "SubmitTime", sortdirection = "Ascending",
  return.qual.dataframe = TRUE,
  verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual	An optional character string containing a QualificationTypeId to which the search should be restricted. If none is supplied, requests made for all QualificationTypes are returned.
return.all	A logical indicating whether all QualificationRequestss (as opposed to a specified page of the search results) should be returned. Default is TRUE.
pagenumber	An optional character string indicating which page of search results should be returned. Most users can ignore this.
pagesize	An optional character string indicating how many search results should be returned by each request, between 1 and 100. Most users can ignore this.
sortproperty	Either "SubmitTime" or "QualificationTypeId". Ignored if return.all=TRUE. Most users can ignore this.

<code>sortdirection</code>	Either “Ascending” or “Descending”. Ignored if <code>return.all=TRUE</code> . Most users can ignore this.
<code>return.qual.dataframe</code>	A logical indicating whether the <code>QualificationTypes</code> should be returned as a dataframe. Default is <code>TRUE</code> .
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

### Details

A function to retrieve pending Qualification Requests made by workers, either for a specified `QualificationType` or all `QualificationTypes`. Specifically, all active, custom `QualificationTypes` are visible to workers, and workers can request a `QualificationType` (e.g., when a HIT requires one they do not have). This function retrieves those requests so that they can be granted (with [GrantQualification](#)) or rejected (with [RejectQualification](#)).

`qualrequests()` is an alias.

### Value

A dataframe containing the `QualificationRequestId`, `WorkerId`, and other information (e.g., Qualification Test results) for each request.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[GrantQualification](#)

[RejectQualification](#)

### Examples

```
## Not run:
GetQualificationRequests()
GetQualificationRequests("2YCIA0RYNJ9262B1D82MPTUEXAMPLE")

## End(Not run)
```

---

GetQualifications      *Get Qualifications*

---

### Description

Get all Qualifications of a particular QualificationType assigned to Workers.

### Usage

```
GetQualifications(qual, status = NULL, return.all = TRUE,
                  pagenumber = 1, pagesize = 100,
                  verbose = getOption('MTurkR.verbose'), ...)
```

### Arguments

qual	A character string containing a QualificationTypeId for a custom (i.e., not built-in) QualificationType.
status	An optional character string specifying whether only “Granted” or “Revoked” Qualifications should be returned.
return.all	A logical indicating whether all Qualifications (as opposed to a specified page of the search results) should be returned. Default is TRUE.
pagenumber	An optional character string indicating which page of search results should be returned. Most users can ignore this.
pagesize	An optional character string indicating how many search results should be returned by each request, between 1 and 100. Most users can ignore this.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MTurkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

A function to retrieve Qualifications granted for the specified QualificationType. To retrieve a specific Qualification score (e.g., for one worker), use [GetQualificationScore](#).

A practical use for this is with automatically granted QualificationTypes. After workers request and receive an automatically granted Qualification that is tied to one or more HITs, `GetQualifications` can be used to retrieve the WorkerId’s for workers that are actively working on those HITs (even before they have submitted an assignment).

`getquals()` is an alias.

### Value

A dataframe containing the QualificationTypeId, WorkerId, and Qualification scores of workers assigned the Qualification.



**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GetQualificationScore](#)

[UpdateQualificationScore](#)

**Examples**

```
## Not run:
GetQualifications("2YCIA0RYNJ9262B1D82MPTUEXAMPLE")
GetQualifications("2YCIA0RYNJ9262B1D82MPTUEXAMPLE",status="Revoked")

## End(Not run)
```

---

GetQualificationScore *Get a Worker's Qualification Score*

---

**Description**

Get a Worker's score for a specific Qualification. You can only retrieve scores for custom QualificationTypes. Scores for built-in QualificationTypes should be retrieved with [GetWorkerStatistic](#).

**Usage**

```
GetQualificationScore(qual, workers, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual	A character string containing a QualificationTypeId for a custom QualificationType.
workers	A character string containing a WorkerId, or a vector of character strings containing multiple WorkerIds, whose Qualification Scores you want to retrieve.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

A function to retrieve one or more scores for a specified QualificationType. To retrieve all Qualifications of a given QualificationType, use [GetQualifications](#) instead. Both qual and workers can be vectors. If qual is not length 1 or the same length as workers, an error will occur.

qualscore() is an alias.

**Value**

A dataframe containing the WorkerId, QualificationTypeId, and the Qualification score for each request.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[UpdateQualificationScore](#)

[GetQualifications](#)

**Examples**

```
## Not run:  
GetQualificationScore("2YCIA0RYNJ9262B1D82MPTUEXAMPLE", "A1R09UJNWXMU65")  
  
## End(Not run)
```

---

GetQualificationType *Get QualificationType*

---

**Description**

Get the details of a Qualification Type.

**Usage**

```
GetQualificationType(qual, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual	A character string containing a QualificationTypeId.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

Retrieve characteristics of a specified QualificationType (as originally specified by [CreateQualificationType](#)). `qualtype()` is an alias.

**Value**

A dataframe containing the QualificationTypeId of the newly created QualificationType and other details as specified in the request.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[CreateQualificationType](#)

[UpdateQualificationType](#)

[DisposeQualificationType](#)

[SearchQualificationTypes](#)

**Examples**

```
## Not run:  
GetQualificationType("2YCIA0RYNJ9262B1D82MPTUEXAMPLE")  
  
## End(Not run)
```

---

GetReviewableHITs      *Get Reviewable HITs*

---

**Description**

Get HITs that are currently reviewable.

**Usage**

```
GetReviewableHITs(hit.type = NULL, status = NULL, response.group = "Minimal",  
return.all = TRUE, pagenumber = "1", pagesize = "10",  
sortproperty = "Enumeration", sortdirection = "Ascending",  
verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

<code>hit.type</code>	An optional character string containing a <code>HITTypeId</code> to consider when looking for reviewable HITs.
<code>status</code>	An optional character string of either “Reviewable” or “Reviewing” limiting the search to HITs of with either status.
<code>response.group</code>	A character string specifying what details of each HIT to return. API currently only supports “Minimal”. For more information, see <a href="http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html">http://docs.amazonwebservices.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_HITDataStructureArticle.html</a> .
<code>return.all</code>	A logical indicating whether all <code>QualificationTypes</code> (as opposed to a specified page of the search results) should be returned. Default is <code>TRUE</code> .
<code>pagenumber</code>	An optional character string indicating which page of search results should be returned. Most users can ignore this.
<code>pagesize</code>	An optional character string indicating how many search results should be returned by each request, between 1 and 100. Most users can ignore this.
<code>sortproperty</code>	One of “Title”, “Reward”, “Expiration”, “CreationTime”, “Enumeration”. Ignored if <code>return.all=TRUE</code> . Most users can ignore this.
<code>sortdirection</code>	Either “Ascending” or “Descending”. Ignored if <code>return.all=TRUE</code> . Most users can ignore this.
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

**Details**

A simple function to return the `HITIds` of HITs currently in “Reviewable” or “Reviewing” status. To retrieve additional details about each of these HITs, see [GetHIT](#). This is an alternative to [SearchHITS](#).

`reviewable()` is an alias.

**Value**

A dataframe containing only a column of `HITIds`.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GetHIT](#)

[GetHITSForQualificationType](#)

[SearchHITS](#)

**Examples**

```
## Not run:
GetReviewableHITs()

## End(Not run)
```

---

```
GetReviewResultsForHIT
```

*Get ReviewPolicy Results for a HIT*

---

**Description**

Get HIT- and/or Assignment-level ReviewPolicy Results for a HIT

**Usage**

```
GetReviewResultsForHIT(hit, assignment = NULL, policy.level = NULL,
  retrieve.results = TRUE, retrieve.actions = TRUE,
  verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

<code>hit</code>	A character string containing a HITId.
<code>assignment</code>	An optional character string containing an AssignmentId. If specified, only results pertaining to that assignment will be returned.
<code>policy.level</code>	Either HIT or Assignment. If omitted, the default behavior is to retrieve all data for both policy levels.
<code>retrieve.results</code>	Optionally retrieve ReviewResults. Default is TRUE.
<code>retrieve.actions</code>	Optionally retrieve ReviewActions. Default is TRUE.
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <a href="#">request</a> .

**Details**

A simple function to return the results of a ReviewPolicy. This is intended only for advanced users, who should reference MTurk documentation for further information.

`reviewresults` is an alias.

**Value**

A list containing up to four named dataframes, depending on what ReviewPolicy (or ReviewPolicies) were attached to the HIT: `AssignmentReviewResult`, `AssignmentReviewAction`, `HITReviewResult`, `HITReviewAction`.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

[API Reference \(ReviewPolicies\)](#)

[API Reference \(Data Structure\)](#)

**See Also**

[CreateHIT](#)

**Examples**

```
## Not run:
GetReviewResultsForHIT()

## End(Not run)
```

---

GetStatistic

*MTurk Worker and Requester Statistics*

---

**Description**

Get a requester statistic or a statistic for a particular worker. RequesterReport and WorkerReport provide wrappers that return all available statistics.

**Usage**

```
GetStatistic(statistic, period = "LifeToDate", count = NULL,
             response.group = NULL, verbose = getOption('MTurkR.verbose'), ...)
RequesterReport(period = "LifeToDate", verbose = getOption('MTurkR.verbose'), ...)

GetWorkerStatistic(worker, statistic, period = "LifeToDate", count = NULL,
                  response.group = NULL, verbose = getOption('MTurkR.verbose'), ...)
WorkerReport(worker, period = "LifeToDate",
             verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

worker	A character string containing a WorkerId.
statistic	A character string containing the name of a statistic. Statistics can be retrieved from <a href="#">ListStatistics</a> .
period	One of: "OneDay", "SevenDays", "ThirtyDays", "LifeToDate". Default is "LifeToDate".

count	If period="OneDay", the number of days to return. Default is 1 (the most recent day).
response.group	An optional character string (or vector of character strings) specifying what details to return of "Request", "Minimal", or "Parameters". For more information, see <a href="http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html">http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html</a> .
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

Retrieve a specific requester or worker statistic. The list of available statistics can be retrieved by calling [ListStatistics](#). Useful for monitoring workers or one's own use of the requester system. `statistic()` is an alias for `GetStatistic`. `workerstatistic()` is an alias for `GetWorkerStatistic`.

### Value

A dataframe containing the requested Statistic (and WorkerId, if `GetWorkerStatistic` or `WorkerReport` are called), and the value thereof. `GetStatistic` and `GetWorkerStatistic` return only the requested statistic. `RequesterReport` and `WorkerReport` return all of the requester and worker statistics, respectively, that are available in [ListStatistics](#).

### Author(s)

Thomas J. Leeper

### References

[API Reference: Requester Statistics](#)

[API Reference: Worker Statistics](#)

### See Also

[ListStatistics](#)

### Examples

```
## Not run:
GetStatistic("NumberHITsSubmitted", "OneDay")
RequesterReport("ThirtyDays")
GetWorkerStatistic("A1R09UJNWXMU65", "PercentHITsApproved", "LifeToDate")
WorkerReport("A1R09UJNWXMU65", "SevenDays")

## End(Not run)
```

GrantBonus

*Pay Bonus to Worker***Description**

Pay a bonus to one or more workers. This function spends money from your MTurk account and will fail if insufficient funds are available.

**Usage**

```
GrantBonus(workers, assignments, amounts, reasons,
           verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

workers	A character string containing a WorkerId, or a vector of character strings containing multiple WorkerIds.
assignments	A character string containing an AssignmentId for an assignment performed by that worker, or a vector of character strings containing the AssignmentId for an assignment performed by each of the workers specified in workers.
amounts	A character string containing an amount (in U.S. Dollars) to bonus the worker(s), or a vector (of length equal to the number of workers) of character strings containing the amount to be paid to each worker.
reasons	A character string containing a reason for bonusing the worker(s), or a vector (of length equal to the number of workers) of character strings containing the reason to bonus each worker. The reason is visible to each worker.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

A simple function to grant a bonus to one or more workers. The function is somewhat picky in that it requires a WorkerId, the AssignmentId for an assignment that worker has completed, an amount, and a reason for the bonus, for each bonus to be paid. Optionally, the amount and reason can be specified as single (character string) values, which will be used for each bonus.

`bonus()` and `paybonus()` are aliases.

**Value**

A dataframe containing the WorkerId, AssignmentId, amount, reason, and whether each request to bonus was valid.

**Author(s)**

Thomas J. Leeper



**References**[API Reference](#)**See Also**[GetBonuses](#)**Examples**

```
## Not run:
a <- "A1R09UEXAMPLE"
b <- "26XXH0JPPSI23H54YVG7BKLEXAMPLE"
c <- ".50"
d <- "Thanks for your great work on my HITs!"
GrantBonus(workers=a, assignments=b, amounts=c, reasons=d)

## End(Not run)
## Not run:
a <- c("A1R09EXAMPLE1", "A1R09EXAMPLE2", "A1R09EXAMPLE3")
b <-
c("26XXH0JPPSI23H54YVG7BKLEXAMPLE1",
"26XXH0JPPSI23H54YVG7BKLEXAMPLE2",
"26XXH0JPPSI23H54YVG7BKLEXAMPLE3")
c <- c(".50", ".10", ".25")
d <- "Thanks for your great work on my HITs!"
GrantBonus(workers=a, assignments=b, amounts=c, reasons=d)

## End(Not run)
```

---

GrantQualification	<i>Grant Qualification Request</i>
--------------------	------------------------------------

---

**Description**

Grant a Worker's request for a Qualification.

**Usage**

```
GrantQualification(qual.requests, values, verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual.requests	A character string containing a QualificationRequestId (for example, returned by <a href="#">GetQualificationRequests</a> ), or a vector of QualificationRequestIds.
values	A character string containing the value of the Qualification to be assigned to the worker, or a vector of values of length equal to the number of QualificationRequests.

verbose      Optionally print the results of the API request to the standard output. Default is taken from `getOption('MturkR.verbose')`.

...          Additional arguments passed to [request](#).

### Details

Qualifications are publicly visible to workers on the MTurk website and workers can request Qualifications (e.g., when a HIT requires a `QualificationType` that they have not been assigned). `QualificationRequests` can be retrieved via [GetQualificationRequests](#). This function grants specified qualification requests. Requests can be rejected with [RejectQualifications](#).

`GrantQualifications()` and `grantqual()` are aliases.

### Value

A dataframe containing the `QualificationRequestId` and whether each request was valid.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[GetQualificationRequests](#)

[RejectQualification](#)

### Examples

```
## Not run:
GrantQualification("2YCIA0RYNJ9262B1D82MPTUEXAMPLE", "100")

## End(Not run)
```

### Description

These functions provide lists (of `QualificationTypes`, `Requester` and `Worker Statistics`) useful when creating HITs and `QualificationTypes`, and other functions to open specific pages of the MTurk Requester User Interface (RUI), or in the case of `ViewAvailableHITs`, the MTurk worker site.

**Usage**

ListOperations(op = NULL)

ListQualificationTypes(qual = NULL)

ListStatistics(stat = NULL, value.type = NULL, type = NULL)

ViewAvailableHITs(query = NULL, requester = NULL, min.reward = NULL, qualified = NULL)

OpenWorkerPage(workerid = NULL)

OpenManageHITPage(hit = NULL)

OpenDownloadPage(hit, download = FALSE)

OpenQualificationPage()

**Arguments**

op	For ListOperations: a number indicating which of the operations to return. Probably not useful.
qual	For ListQualificationTypes: a character string containing the name of a built-in QualificationType. If specified, ListQualificationTypes returns only the QualificationTypeId of that QualificationType.
stat	For ListStatistics: an optional character string specifying the name of an MTurk statistic. If specified, only details of that statistic are returned.
value.type	For ListStatistics: an optional character string specifying whether “Double”-type or “Long”-type statistics should be returned. If NULL, both types are returned. Probably not useful.
type	For ListStatistics: an optional character string specifying whether “GetRequesterStatistic”-type or “GetRequesterWorkerStatistic”-type statistics should be returned. If NULL, both types are returned.
query	For ViewAvailableHITs: an optional character string containing a search query used to search through HITs available on the MTurk worker site.
requester	For ViewAvailableHITs: an optional character string containing a RequesterId whose HITs are to be searched, for example to see how one’s own HITs appear to workers on the MTurk worker site.
min.reward	For ViewAvailableHITs: an optional character string containing a minimum reward (in U.S. Dollars) criterion to be used when searching available HITs on the worker site.
qualified	For ViewAvailableHITs: an optional logical specifying whether only HITs for which you are qualified should be searched.
workerid	For OpenWorkerPage: an optional character string containing the WorkerId of a worker whose Requester User Interface (RUI) management page is to be opened. If NULL, function opens the list of workers.
hit	For OpenManageHITPage: an optional character string containing the HITId of a HIT whose Requester User Interface (RUI) management page is to be opened. If NULL, function opens the list of all HITs. For OpenDownloadPage: a mandatory

character string containing a HITID of a HIT whose assignment data download page should be opened.

download For `OpenDownloadPage`: a logical indicating whether the HIT results should be downloaded directly or whether the Requester User Interface (RUI) `ManageHIT` page should be opened (the default).

### Details

A set of convenience functions to either display various information about MTurk semantics or open specified parts of the Requester User Interface (RUI).

### Value

Either a dataframe containing the requested information (in the case of `ListOperations`, `ListQualificationTypes`, `ListStatistics`) or nothing internal to R, but the specified webpage is opened in the user's default web browser (in the case of `OpenWorkerPage`, `OpenManageHITPage`, `OpenDownloadPage`, or `OpenQualificationPage`).

### Author(s)

Thomas J. Leeper

### Examples

```
## Not run:
ListOperations()
ListQualificationTypes()
ListStatistics()
ViewAvailableHITs(min.reward=".50")

OpenWorkerPage()
OpenWorkerPage("A1R09UEXAMPLE")
OpenManageHITPage()
OpenDownloadPage("267SI2KYEPLS8QWZYPXWP3EXAMPLE", download=TRUE)
OpenQualificationPage()

## End(Not run)
```

---

mturkhelp

*Get some help*

---

### Description

Functions to obtain help with the MTurk API (as opposed to the MTurkR package itself). `mturkhelp` makes help requests directly to the API, while `APIReference` simply loads the API documentation.

## Usage

```
mturkhelp(about, helptype = NULL, keypair = getOption('MTurkR.keypair'),
           print = getOption('MTurkR.print'),
           log.requests = getOption('MTurkR.log'),
           validation.test = getOption('MTurkR.test'))
```

```
APIReference()
```

## Arguments

about	A character string containing a help query.
helptype	Optionally either “Operation” or “ResponseGroup”.
keypair	A two-item character vector containing an AWS Access Key ID in the first position and the corresponding Secret Access Key in the second position. Set default with <a href="#">credentials</a> .
print	Optionally print the results of the API request to the standard output. Default is TRUE.
log.requests	A logical specifying whether API requests should be logged. Default is TRUE. See <a href="#">readlogfile</a> for details.
validation.test	A logical specifying whether only the pre-request checks should be conducted and the request URL returned (without executing the request). Default is FALSE.

## Details

Some basic functions to get help with the MTurk API (as opposed to the MTurkR package). While intended to be user-friendly, sophisticated use of MTurkR may require some understanding of the MTurk API, which is easily accessed [here](#).

## Value

Nothing. For `mturkhelp`: help information is printed to the standard output. For `APIReference`: the MTurk API documentation is opened in the user’s default browser.

## Author(s)

Thomas J. Leeper

## References

[Getting Started Guide](#)

[Developer Guide](#)

[API Reference](#)

[Quick Reference](#)

**Examples**

```
## Not run:
mturkhelp(about="GrantBonus",helptype="Operation")
APIReference()

## End(Not run)
```

---

MTurkR.Wizard

*Interactive MTurkR Mode*


---

**Description**

An interactive, menu-based wizard to perform MTurkR functions. Designed for beginners and those with aversion to the programming required elsewhere in the package.

**Usage**

```
MTurkR.Wizard(style="tcltk", sandbox = getOption('MTurkR.sandbox'))
wizard.simple(graphics = FALSE, sandbox = NULL, ...)
```

**Arguments**

style	The default tcltk, opens a full-featured GUI for MTurkR. simple opens a simpler, text-based wizard (provided by wizard.simple) for performing some functions; simpleGUI opens the same simpler wizard, with graphical rather than text-based menus.
graphics	Optionally use graphical menus, if available, for the simple wizard. See <a href="#">menu</a> . Default is FALSE.
sandbox	Optionally execute all requests in the MTurk sandbox rather than the live server. Default (in MTurkR.Wizard) is FALSE; the default in wizard.simple is NULL (with the wizard prompting for a value on load.
...	Additional arguments passed to <a href="#">request</a> .

**Details**

An interactive, menu-based wizard (with optionally graphical menus) to perform most MTurkR operations. It is intended as a way for MTurk (and MTurkR) beginners to quickly create and monitor HITs; approve and reject assignments; notify, bonus, and block/unblock workers; manage Qualifications; monitor MTurk statistics; and interact with the MTurk Requester User Interface (RUI). All functionality accepts basic inputs interactively and executes requests without programming individual commands.

Two particularly helpful features are worth highlighting. The wizard provides a point-and-click interface for approving and rejecting individual assignments, that interactively displays assignment content and executes approval/rejection decisions with ease. The wizard also provides analogous functionality for granting and rejecting qualification requests.

The wizard remains under active development and detailed documentation will hopefully be available under a subsequent release.

`mturkr.wizard()` is an alias for `MTurkR.Wizard`.

### Value

Currently returns nothing.

### Author(s)

Thomas J. Leeper

### Examples

```
## Not run:
MTurkR.Wizard()

## End(Not run)
```

---

readlogfile	<i>Read the MTurkR Logfile</i>
-------------	--------------------------------

---

### Description

A log of all MTurk API requests are stored in a tab-separated value file called ‘MTurkRLog.tsv’ in, by default, the current working directory. This function reads this MTurkR logfile into R as a dataframe, using `read.delim`.

### Usage

```
readlogfile(path = getOption('MTurkR.logdir'), filename="MTurkRlog.tsv")
```

### Arguments

<code>path</code>	An optional character string specifying the path of a directory containing an MTurkR log file.
<code>filename</code>	The name of the MTurkR log file. The default is ‘MTurkRlog.tsv’.

### Details

By default, MTurkR stores a record of all MTurk API requests in a local file in the working directory (though this can be reset with `options('MTurkR.logdir')`). This function reads the locally stored MTurkR log file (‘MTurkRlog.tsv’) into R as a dataframe. This is useful for error checking and reviewing prior requests. A convenient, visual interface for the logfile is provided by [MTurkR.Wizard](#).

### Value

A dataframe containing details of previous (logged) MTurk API requests (including RequestId, Operation performed, REST query parameters, and MTurk response XML as a character string).

**Author(s)**

Thomas J. Leeper

**See Also**

[request](#)

**Examples**

```
## Not run:
log <- readlogfile()

## End(Not run)
```

---

RegisterHITType

*Register a HITType*

---

**Description**

Register a HITType on MTurk, in order to create one or more HITs to show up as a group to workers.

**Usage**

```
RegisterHITType(title, description, reward, duration, keywords = NULL,
  auto.approval.delay = NULL, qual.req = NULL,
  verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

title	A character string containing the title for the HITType. All HITs of this HITType will be visibly grouped to workers according to this title. Maximum of 128 characters.
description	A character string containing a description of the HITType. This is visible to workers. Maximum of 2000 characters.
reward	A character string containing the per-assignment reward amount, in U.S. Dollars (e.g., “0.15”).
duration	A character string containing the amount of time workers have to complete an assignment for HITs of this HITType, in seconds (for example, as returned by <a href="#">seconds</a> ). Minimum of 30 seconds and maximum of 365 days.
keywords	An optional character string containing a comma-separated set of keywords by which workers can search for HITs of this HITType. Maximum of 1000 characters.
auto.approval.delay	An optional character string specifying the amount of time, in seconds (for example, as returned by <a href="#">seconds</a> ), before a submitted assignment is automatically granted. Maximum of 30 days.



qual.req	An optional character string containing one or more <code>QualificationRequirements</code> data structures, for example as returned by <a href="#">GenerateQualificationRequirement</a> .
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

All HITs of a given HITType are visibly grouped together for workers and share common properties (e.g., reward amount, `QualificationRequirements`). This function registers a HITType in the MTurk system, which can then be used when creating individual HITs. If a requester wants to change these properties for a specific HIT, the HIT should be changed to a new HITType (see [ChangeHITType](#)).

`hittype()` is an alias.

### Value

A character string containing the `HITTypeId` of the newly registered HITType.

### Author(s)

Thomas J. Leeper

### References

[API Reference: Operation](#)

[API Reference: Concept](#)

### See Also

[CreateHIT](#)

[ChangeHITType](#)

### Examples

```
## Not run:
RegisterHITType(title="10 Question Survey",
  description=
    "Complete a 10-question survey about news coverage and your opinions",
  reward=".20",
  duration=seconds(hours=1),
  keywords="survey, questionnaire, politics")

## End(Not run)
```

---

RejectAssignment	<i>Reject Assignment</i>
------------------	--------------------------

---

### Description

Reject a Worker's assignment (or multiple assignments) submitted for a HIT. Feedback should be provided for why an assignment was rejected.

### Usage

```
RejectAssignment(assignments, feedback = NULL,
                 verbose = getOption('MTurkR.verbose'), ...)
```

### Arguments

assignments	A character string containing an AssignmentId, or a vector of multiple character strings containing multiple AssignmentIds, to reject.
feedback	An optional character string containing any feedback for a worker. This must have length 1 or length equal to the number of workers.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MTurkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

Reject assignments, by AssignmentId (as returned by [GetAssignment](#)). More advanced functionality to quickly reject many or all assignments (ala [ApproveAllAssignments](#)) is intentionally not provided.

`RejectAssignments()` and `reject()` are aliases.

### Value

A dataframe containing the list of AssignmentIds, feedback (if any), and whether or not each rejection request was valid.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[ApproveAssignment](#)

**Examples**

```
## Not run:
RejectAssignment(assignments="26XXH0JPPSI23H54YVG7BKLEXAMPLE")

## End(Not run)
```

---

RejectQualification    *Reject a Worker's Qualification Request*

---

**Description**

Reject a Worker's request for a Qualification.

**Usage**

```
RejectQualification(qual.request, reason = NULL,
                    verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual.request	A character string containing a QualificationRequestId, or a vector of character strings containing multiple QualificationRequestIds (e.g., as returned by <a href="#">GetQualificationRequests</a> ).
reason	An optional character string, or vector of character strings of length equal to length of the qual.requests parameter, supplying each worker with a reason for rejecting their request for the Qualification. Workers will see this message. Maximum of 1024 characters.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MTurkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

Qualifications are publicly visible to workers on the MTurk website and workers can request Qualifications (e.g., when a HIT requires a QualificationType that they have not been assigned). QualificationRequests can be retrieved via [GetQualificationRequests](#). This function rejects specified qualification requests.

RejectQualifications() and rejectrequest() are aliases.

**Value**

A dataframe containing the QualificationRequestId, reason for rejection (if applicable), and whether each request was valid.

**Author(s)**

Thomas J. Leeper

**References**[API Reference](#)**See Also**[GetQualificationRequests](#)[GrantQualification](#)**Examples**

```
## Not run:
RejectQualification("2YCIA0RYNJ9262B1D82MPTUEXAMPLE",
                    reason="I am not currently granting this QualificationType.")

## End(Not run)
```

---

`request`*Execute an MTurk API Request*

---

**Description**

This is the workhorse function that makes authenticated HTTP requests to the MTurk API. It is not exported as of v0.5.

**Usage**

```
request(operation, GETparameters = NULL,
        keypair = getOption('MTurkR.keypair'),
        browser = getOption('MTurkR.browser'),
        log.requests = getOption('MTurkR.log'),
        sandbox = getOption('MTurkR.sandbox'),
        verbose = getOption('MTurkR.verbose'),
        validation.test = getOption('MTurkR.test'),
        service = "AWSMechanicalTurkRequester",
        version = "2012-03-25")
```

**Arguments**

<code>operation</code>	The MTurk API operation to be performed.
<code>GETparameters</code>	An optional character string containing URL query parameters that specify options for the request.
<code>keypair</code>	A two-element character vector containing an AWS Access Key ID and an AWS Secret Access Key. Default is from <code>options('MTurkR.keypair')</code> .
<code>browser</code>	Optionally open the request in the default web browser, rather than opening in R. Default is FALSE.

log.requests	A logical specifying whether API requests should be logged. Default is TRUE. See <a href="#">readlogfile</a> for details.
sandbox	Optionally execute the request in the MTurk sandbox rather than the live server. Default is FALSE.
verbose	Whether errors produced by the MTurk API request should be printed.
validation.test	Currently a logical that causes request to return the URL of the specified REST request. Default is FALSE. May additionally validate the request (and supply information about that validation) in the future.
service	The MTurk service to which the authenticated request will be sent. Supplied only for advanced users.
version	The version of the MTurk API to use. Default is “2012-03-25”, under which the MTurkR package was built.

### Details

This is an internal function that executes MTurk API requests. It is made available for use by advanced users to execute custom API requests.

### Value

A list of class “MTurkResponse” containing:

operation	A character string identifying the MTurk API operation performed.
request.id	The Request ID created by the API request.
request.url	The URL of the MTurk API REST request.
valid	A logical indicating whether or not the request was valid and thus executed as intended.
xml	A character string containing the XML API response.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

---

 RevokeQualification *Revoke a Qualification from a Worker*


---

**Description**

Revoke a Qualification from a worker or multiple workers. This deletes their qualification score and any record thereof.

**Usage**

```
RevokeQualification(qual, worker, reason = NULL,
                    verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual	A character string containing a QualificationTypeId.
worker	A character string containing a WorkerId, or a vector of character strings containing multiple WorkerIds.
reason	An optional character string, or vector of character strings of length equal to length of the workers parameter, supplying each worker with a reason for revoking their Qualification. Workers will see this message.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

A simple function to revoke a Qualification assigned to one or more workers. `RevokeQualifications()` and `revokequal()` are aliases.

**Value**

A dataframe containing the QualificationTypeId, WorkerId, reason (if applicable), and whether each request was valid.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GrantQualification](#)

[RejectQualification](#)

**Examples**

```
## Not run:
a <- "2YCIA0RYNJ9262B1D82MPTUEXAMPLE"
b <- "A1R09UJNWXMU65"
c <- "Performance has dropped below required level"
RevokeQualification(qual=a,worker=b,reason=c)

## End(Not run)
```

---

SearchHITs

*Search your HITs*


---

**Description**

Search for your HITs and return those HITs as R objects.

**Usage**

```
SearchHITs(response.group = NULL, return.all = TRUE,
            pagenumber = "1", pagesize = "10",
            sortproperty = "Enumeration", sortdirection = "Ascending",
            return.hit.dataframe = TRUE, return.qual.dataframe = TRUE,
            verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

- |                                   |   |
|-----------------------------------|---|
| <code>response.group</code>       | An optional character string (or vector of character strings) specifying what details of each HIT to return of: "Request", "Minimal", "HITDetail", "HITQuestion", "HITAssignmentSummary". For more information, see <a href="http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html">http://docs.aws.amazon.com/AWSMechTurk/latest/AWSMturkAPI/ApiReference_CommonParametersArticle.html</a> . |
| <code>return.all</code>           | A logical indicating whether all HITs (as opposed to a specified page of the search results) should be returned. Default is TRUE.   |
| <code>pagenumber</code>           | An optional character string indicating which page of search results should be returned. Most users can ignore this.  |
| <code>pagesize</code>             | An optional character string indicating how many search results should be returned by each request, between 1 and 100. Most users can ignore this.  |
| <code>sortproperty</code>         | One of "Title", "Reward", "Expiration", "CreationTime", "Enumeration". Ignored if <code>return.all=TRUE</code> . Most users can ignore this.  |
| <code>sortdirection</code>        | Either "Ascending" or "Descending". Ignored if <code>return.all=TRUE</code> . Most users can ignore this.   |
| <code>return.hit.dataframe</code> | A logical indicating whether the dataframe of HITs should be returned. Default is TRUE.   |

<code>return.qual.dataframe</code>	A logical indicating whether the list of each HIT's <code>QualificationRequirements</code> (stored as dataframes in that list) should be returned. Default is <code>TRUE</code> .
<code>verbose</code>	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
<code>...</code>	Additional arguments passed to <code>request</code> .

### Details

Retrieve your current HITs (and, optionally, characteristics thereof). To view HITs on the MTurk requester website, see [OpenManageHITPage](#). To view HITs on the MTurk worker website, use [ViewAvailableHITs](#).

`searchhits()` is an alias.

### Value

Optionally a dataframe containing the HITs and a list of each HIT's `QualificationRequirements` (stored as dataframes in that list).

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[GetHIT](#)

[GetReviewableHITs](#)

[SearchQualificationTypes](#)

[ViewAvailableHITs](#)

### Examples

```
## Not run:  
SearchHITs()  
  
## End(Not run)
```



---

 SearchQualificationTypes

*Search QualificationTypes*


---

### Description

Search for available QualificationTypes, including yours and others available on the MTurk system created by other requesters.

### Usage

```
SearchQualificationTypes(query = NULL, only.mine = TRUE, only.requestable = FALSE,
  return.all = FALSE, pagenumber = "1", pagesize = "10",
  sortproperty = "Name", sortdirection = "Ascending",
  return.qual.dataframe = TRUE,
  verbose = getOption('MTurkR.verbose'), ...)
```

### Arguments

query	An optional character string containing a search query to be used to search among available QualificationTypes.
only.mine	A logical indicating whether only your QualificationTypes should be returned (the default). If FALSE, QualificationTypes created by all requesters will be returned.
only.requestable	A logical indicating whether only requestable QualificationTypes should be returned. Default is FALSE.
return.all	A logical indicating whether all QualificationTypes (as opposed to a specified page of the search results) should be returned. Default is TRUE.
pagenumber	An optional character string indicating which page of search results should be returned. Most users can ignore this.
pagesize	An optional character string indicating how many search results should be returned by each request, between 1 and 100. Most users can ignore this.
sortproperty	API currently only supports "Name". Most users can ignore this.
sortdirection	Either "Ascending" or "Descending". Ignored if return.all=TRUE. Most users can ignore this.
return.qual.dataframe	A logical indicating whether the QualificationTypes should be returned as a dataframe. Default is TRUE.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

Retrieve available `QualificationTypes`, optionally only those `QualificationTypes` created by you and/or those that meet specific search criteria specified in the query parameter. Given that the total number of `QualificationTypes` available from all requesters could be infinitely large, specifying both `only.mine=FALSE` and `return.all=FALSE` will be time-consuming and may cause memory problems.

`searchquals()` is an alias.

### Value

A dataframe containing the `QualificationTypeId` of the newly created `QualificationType` and other details as specified in the request.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[GetQualificationType](#)

[CreateQualificationType](#)

[UpdateQualificationType](#)

[DisposeQualificationType](#)

[SearchHITS](#)

### Examples

```
## Not run:
SearchQualificationTypes(only.mine=TRUE,return.all=TRUE)
SearchQualificationTypes(query="MIT",only.mine=FALSE,return.all=FALSE)

## End(Not run)
```

---

seconds

*Convert arbitrary times to seconds*

---

### Description

A convenience function to convert arbitrary numbers of days, hours, minutes, and/or seconds into seconds.

**Usage**

```
seconds(days = NULL, hours = NULL, minutes = NULL, seconds = NULL)
```

**Arguments**

days	An optional number of days.
hours	An optional number of hours.
minutes	An optional number of minutes.
seconds	An optional number of seconds.

**Details**

A convenience function to convert arbitrary numbers of days, hours, minutes, and/or seconds into seconds. For example, to be used in setting a HIT expiration time. MTurk only accepts times (e.g., for HIT expirations, or the duration of assignments) in seconds. This function returns an integer value equal to the number of seconds of the input, and can be used atomically within other MTurkR calls (e.g., [CreateHIT](#)).

**Value**

An integer equal to the requested amount of time in seconds.

**Author(s)**

Thomas J. Leeper

**Examples**

```
seconds(hours=5, seconds=15)
seconds(days=1)
```

---

SendTestEventNotification  
*Test a Notification*

---

**Description**

Test a HITType Notification, for example, to try out a HITType Notification before creating a HIT.

**Usage**

```
SendTestEventNotification(notification, test.event.type,
                           verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

notification	A character string containing a URL query parameter-formatted Notification structure (e.g., returned by <a href="#">GenerateNotification</a> ).
test.event.type	A character string containing one of: AssignmentAccepted, AssignmentAbandoned, AssignmentReturned, AssignmentSubmitted, HITReviewable, HITExpired (the default), Ping.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

Test a Notification configuration. The test mimics whatever the Notification configuration will do when the event described in `test.event.type` occurs. For example, if a Notification has been configured to send an email anytime an Assignment is Submitted, testing for an AssignmentSubmitted event should trigger an email. Similarly, testing for an AssignmentReturned event should do nothing.

`notificationtest` is an alias.

**Value**

Potentially either an email sent to the email address specified in the `notification` parameter, or an AWS Simple Queue Service event. Otherwise, nothing.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GenerateNotification](#)  
[SetHITTypeNotification](#)

**Examples**

```
## Not run:
a <- GenerateNotification("requester@example.com",event.type="HITExpired")
SendTestEventNotification(a,test.event.type="HITReviewable") # no notification email will be sent
SendTestEventNotification(a,test.event.type="HITExpired") # notification email will be sent

## End(Not run)
```

---

SetHITAsReviewing      *Set HIT as “Reviewing”*

---

### Description

Update the status of a HIT, from “Reviewable” to “Reviewing” or the reverse.

### Usage

```
SetHITAsReviewing(hit = NULL, hit.type = NULL, revert = FALSE,
                  verbose = getOption('MTurkR.verbose'), ...)
```

### Arguments

hit	An optional character string containing a HITId, or a vector of character strings containing HITIds, whose status are to be changed.
hit.type	An optional character string specifying a HITTypeId (or a vector of HITTypeIds), all the HITs of which should be set as “Reviewing” (or the reverse).
revert	An optional logical to revert the HIT from “Reviewing” to “Reviewable”.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MTurkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

### Details

A function to change the status of one or more HITs (or all HITs of a given HITType) to “Reviewing” or the reverse. This affects what HITs are returned by [GetReviewableHITs](#). Must specify a HITId xor a HITTypeId.

`reviewing()` is an alias.

### Value

A dataframe containing HITId, status, and whether the request to change the status of each was valid.

### Author(s)

Thomas J. Leeper

### References

[API Reference](#)

### See Also

[GetReviewableHITs](#)

**Examples**

```
## Not run:
SetHITAsReviewing("2MQB727M0IGF304GJ16S1F4VE3AYDQ")

## End(Not run)
```

---

SetHITTypeNotification

*Configure a HITType Notification*

---

**Description**

Configure a notification to be sent when specific actions occur for the specified HITType.

**Usage**

```
SetHITTypeNotification(hit.type, notification = NULL, active = NULL,
                       verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

hit.type	A character string specifying the HITTypeId of the HITType for which notifications are being configured.
notification	A character string containing a URL query parameter-formatted Notification structure (e.g., returned by <a href="#">GenerateNotification</a> ).
active	A logical indicating whether the Notification is active or inactive.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

Configure a notification to be sent to the requester whenever an event (specified in the Notification object) occurs. This is useful for receiving email notifications about, for example, when assignments are submitted or HITs are completed.

Note: The API operation underlying SetHITTypeNotification and [SendTestEventNotification](#) has been deprecated by Amazon is not receiving ongoing development, but remains available for backward compatibility.

setnotification() is an alias.

**Value**

A dataframe containing details of the Notification and whether or not the request was successfully executed by MTurk.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference: Operation](#)

[API Reference: Concept](#)

**See Also**

[GenerateNotification](#)

[SendTestEventNotification](#)

**Examples**

```
## Not run:
a <- GenerateNotification("requester@example.com",event.type="HITExpired")
SetHITTypeNotification(hit.type="2FFNCWYB49F9BBJWA4SJUNST50FSOW",notification=a,active=TRUE)

## End(Not run)
```

---

UpdateQualificationScore

*Update a worker's score for a QualificationType*

---

**Description**

Update a worker's score for a QualificationType that you created. Scores for built-in QualificationTypes (e.g., location, worker statistics) cannot be updated.

**Usage**

```
UpdateQualificationScore(qual, workers, values = NULL, increment = NULL,
  verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual	A character string containing a QualificationTypeId.
workers	A character string containing a WorkerId, or a vector of character strings containing multiple WorkerIds.
values	A character string containing an integer value to be assigned to the worker, or a vector of character strings containing integer values to be assigned to each worker (and thus must have length equal to the number of workers).
increment	An optional character string specifying, in lieu of "values", the amount that each worker's current QualificationScore should be increased.
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MTurkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

A function to update the Qualification score assigned to one or more workers for the specified custom QualificationType. The simplest use is to specify a QualificationTypeId, a WorkerId, and a value to be assigned to the worker. Scores for multiple workers can be updated in one request.

Additionally, the increment parameter allows you to increase (or decrease) each of the specified workers scores by the specified amount. This might be useful, for example, to keep a QualificationType that records how many of a specific style of HIT a worker has completed and increase the value of each worker's score by 1 after they complete a HIT.

updatequalscore() is an alias.

**Value**

A dataframe containing the QualificationTypeId, WorkerId, Qualification score, and whether the request to update each was valid.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GetQualificationScore](#)

[GetQualifications](#)

**Examples**

```
## Not run:
UpdateQualificationScore("2YCIA0RYNJ9262B1D82MPTUEXAMPLE", "A1R09UJNWXMU65", values="95")
UpdateQualificationScore("2YCIA0RYNJ9262B1D82MPTUEXAMPLE", "A1R09UJNWXMU65", increment="1")

## End(Not run)
```

---

UpdateQualificationType

*Update a Worker QualificationType*

---

**Description**

Update characteristics of a QualificationType.



**Usage**

```
UpdateQualificationType(qual, description = NULL, status = NULL,
                        retry.delay = NULL, test = NULL, answerkey = NULL,
                        test.duration = NULL,
                        validate.test = FALSE, validate.answerkey = FALSE,
                        auto = NULL, auto.value = NULL,
                        verbose = getOption('MTurkR.verbose'), ...)
```

**Arguments**

qual	A character string containing a QualificationTypeId.
description	A character string describing the Qualification. This is visible to workers. Maximum of 2000 characters.
status	A character vector of “Active” or “Inactive”, indicating whether the QualificationType should be active and visible.
retry.delay	An optional time (in seconds) indicating how long workers have to wait before requesting the QualificationType after an initial rejection.
test	An optional character string consisting of a QuestionForm data structure, used as a test a worker must complete before the QualificationType is granted to them.
answerkey	An optional character string consisting of an AnswerKey data structure, used to automatically score the test. If a previous test with an associated AnswerKey is updated, the new test will not have an AnswerKey unless a new one is included in the same call (even if it is identical to the previous AnswerKey).
test.duration	An optional time (in seconds) indicating how long workers have to complete the test.
validate.test	A logical specifying whether the test parameter should be validated against the relevant MTurk schema prior to creating the QualificationType (operation will fail if it does not validate, and will return validation information). Default is FALSE.
validate.answerkey	A logical specifying whether the answerkey parameter should be validated against the relevant MTurk schema prior to creating the QualificationType (operation will fail if it does not validate, and will return validation information). Default is FALSE.
auto	A logical indicating whether the Qualification is automatically granted to workers who request it. Default is FALSE.
auto.value	An optional parameter specifying the value that is automatically assigned to workers when they request it (if the Qualification is automatically granted).
verbose	Optionally print the results of the API request to the standard output. Default is taken from <code>getOption('MturkR.verbose')</code> .
...	Additional arguments passed to <a href="#">request</a> .

**Details**

A function to update the characteristics of a `QualificationType`. Name and keywords cannot be modified after a `QualificationType` is created.

`updatequal()` is an alias.

**Value**

A dataframe containing the `QualificationTypeId` of the newly created `QualificationType` and other details as specified in the request.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference](#)

**See Also**

[GetQualificationType](#)

[CreateQualificationType](#)

[DisposeQualificationType](#)

[SearchQualificationTypes](#)

**Examples**

```
## Not run:
qual1 <- CreateQualificationType(title="Worked for me before",
  description="This qualification is for people who have worked for me before",
  keywords="Worked for me before", sandbox=TRUE)
qual2 <- UpdateQualificationType(qual.test,
  description="This qualification is for everybody!",
  auto=TRUE, auto.value="5", sandbox=TRUE)

## End(Not run)
```

---

XML

*Parse MTurk XML to Dataframe*

---

**Description**

Parse MTurk XML Responses to R data.frames.

**Usage**

```

as.data.frame.AnswerKey(xml.parsed)
as.data.frame.Assignments(xml.parsed,
                           return.assignment.xml = FALSE)
as.data.frame.BonusPayments(xml.parsed)
as.data.frame.ExternalQuestion(xml.parsed)
as.data.frame.HITs(xml.parsed,
                   return.hit.xml = FALSE,
                   return.qual.list = TRUE,
                   sandbox = getOption('MTurkR.sandbox'))
as.data.frame.HTMLQuestion(xml.parsed)
as.data.frame.QualificationRequests(xml.parsed)
as.data.frame.QualificationRequirements(xml.parsed = NULL,
                                       xmlnodeset = NULL,
                                       hit.number = NULL,
                                       sandbox = getOption('MTurkR.sandbox'))
as.data.frame.Qualifications(xml.parsed)
as.data.frame.QualificationTypes(xml.parsed)
as.data.frame.QuestionFormAnswers(xml.parsed)
as.data.frame.QuestionForm(xml.parsed)
as.data.frame.ReviewResults(xml.parsed)
as.data.frame.WorkerBlock(xml.parsed)

```

**Arguments**

<code>xml.parsed</code>	A full MTurk XML response parsed by the <code>xmlParse</code> .
<code>xmlnodeset</code>	An XML nodeset.
<code>return.assignment.xml</code>	A logical indicating whether workers' responses to HIT questions should be returned.
<code>return.hit.xml</code>	A logical indicating whether the HIT XML should be returned. Default is FALSE.
<code>return.qual.list</code>	A logical indicating whether the <code>QualificationRequirement</code> list should be returned. Default is TRUE.
<code>hit</code>	An optional parameter included for advanced users, to return only one of the specified HITs.
<code>hit.number</code>	An optional parameter included for advanced users, to return only one of the specified HITs.
<code>sandbox</code>	A logical indicating whether <code>GetQualificationType</code> , called internally, should query the sandbox for user-defined <code>QualificationTypes</code> .

**Details**

Mostly internal functions to convert XML-formatted MTurk responses into more useful R dataframes. These are mostly internal to the extent that most users will never call them directly, but they may be useful if one needs to examine information stored in the MTurkR log file, or if [request](#) is used directly.

**Value**

A dataframe (or list of dataframes, in some cases) containing the request data.

**Author(s)**

Thomas J. Leeper

**References**

[API Reference: Data Structures](#)

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