# Package 'amberr'

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**Type** Package

**Title** 'Amber' Electronic Data Capture Client

**Version** 1.1.0

**Depends** httr

**Imports** jsonlite, dplyr

**Description** 'Amber' is a server application for capturing electronic data records.
Rich forms are used to collect data. This 'Amber' client allows
to perform data extraction for reporting or data transfer at persistent location
purposes.

**License** GPL-3

**URL** <https://github.com/obiba/amberr/>,
<https://www.obiba.org/pages/products/amber/>

**BugReports** <https://github.com/obiba/amberr/issues/>

**RoxygenNote** 7.3.1

**Encoding** UTF-8

**NeedsCompilation** no

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**Repository** CRAN

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---

amber.campaign            *Get a campaign*

---

## Description

Get an interview design campaign by its name or identifier.

## Usage

```
amber.campaign(amber, id, study = NULL, interviewDesign = NULL, query = list())
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| id | Interview design's name or identifier |
| study | Study identifier (name or id), optional. |
| interviewDesign | |
| | Interview design identifier (name or id), optional. |
| query | A search query |

## Value

A campaign object as a named list

### See Also

Other studies functions: amber.campaigns(), amber.case_report_export(), amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(), amber.form_revision(), amber.form_revisions(), amber.forms(), amber.interview_design(), amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(), amber.studies(), amber.study()

### Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.campaign(a, id = "base", interviewDesign = "Adult trauma - baseline")
amber.logout(a)

## End(Not run)
```

---

amber.campaigns                 *Get the campaigns*

---

### Description

Get the interview design campaigns.

### Usage

```
amber.campaigns(
  amber,
  study = NULL,
  interviewDesign = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

### Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| interviewDesign | |
| | Interview design identifier (name or id), optional. |
| query | A search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

**Value**

A data.frame (or a named list of raw results when 'df' is FALSE)

**See Also**

Other studies functions: amber.campaign(), amber.case_report_export(), amber.case_report_form(),
amber.case_report_forms(), amber.case_reports(), amber.form(), amber.form_revision(),
amber.form_revisions(), amber.forms(), amber.interview_design(), amber.interview_designs(),
amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(),
amber.studies(), amber.study()

**Examples**

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.campaigns(a)
amber.campaigns(a, study="Liftup", interviewDesign = "Treocapa")
amber.logout(a)

## End(Not run)
```

---

amber.case_reports *Get the case report records*

---

**Description**

Get the case report records of one or several form(s).

**Usage**

```
amber.case_reports(
  amber,
  study = NULL,
  form = NULL,
  caseReportForm = NULL,
  from = NULL,
  to = NULL,
  pId = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| form | Form identifier (name or id), optional. |
| caseReportForm | Case report form identifier (name or id), optional. |
| from | From date (included), optional |
| to | To date (included), optional |
| pId | Patient/participant identifier |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other studies functions: `amber.campaign()`, `amber.campaigns()`, `amber.case_report_export()`, `amber.case_report_form()`, `amber.case_report_forms()`, `amber.form()`, `amber.form_revision()`, `amber.form_revisions()`, `amber.forms()`, `amber.interview_design()`, `amber.interview_designs()`, `amber.interview_export()`, `amber.interviews()`, `amber.participant()`, `amber.participants()`, `amber.studies()`, `amber.study()`

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")

# Find all case reports
amber.case_reports(a)

# Find all case reports in a range of time
amber.case_reports(a, from = "2022-01-12 00:00", to = "2022-02-13")

# Find all case reports for a specific participant/patient identifier
amber.case_reports(a, pId = "1231")

# Find all case reports having their identifier matching a regular expression
amber.case_reports(a, query = list(`data._id[$search]` = "^12"))

# Find all case reports which form data is equal to some value
# (will not work if the data are encrypted in the database)
amber.case_reports(a, query = list(data.PATIENT.ORIGIN_REGION = "xyz"))

# Export records collected with a study's form in a specific version
```

```
amber.case_reports(a,
  study = "Trauma Registry",
  form = "Adult trauma",
  query = list(revision = 6))

# Export records collected with a specific case report form
amber.case_reports(a, caseReportForm = "Adult trauma - test")

# Export records collected with a study's form in all versions used
amber.case_reports(a,
  study = "Trauma Registry",
  form = "Adult trauma")

amber.logout(a)

## End(Not run)
```

---

amber.case_report_export

*Export the case report records*

---

## Description

Export the case report records of one or several form(s).

## Usage

```
amber.case_report_export(
  amber,
  study = NULL,
  form = NULL,
  caseReportForm = NULL,
  from = NULL,
  to = NULL,
  pId = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| form | Form identifier (name or id), optional. |
| caseReportForm | Case report form identifier (name or id), optional. |

| | |
|---|---|
| from | From date (included), optional |
| to | To date (included), optional |
| pId | Patient/participant identifier |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

### Value

A named list of data.frames, a data dictionary and a data data.frame per form revision (or a named list of raw results when 'df' is FALSE)

### See Also

Other studies functions: `amber.campaign()`, `amber.campaigns()`, `amber.case_report_form()`, `amber.case_report_forms()`, `amber.case_reports()`, `amber.form()`, `amber.form_revision()`, `amber.form_revisions()`, `amber.forms()`, `amber.interview_design()`, `amber.interview_designs()`, `amber.interview_export()`, `amber.interviews()`, `amber.participant()`, `amber.participants()`, `amber.studies()`, `amber.study()`

### Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")

# Find all case reports
amber.case_report_export(a)

# Find all case reports in a range of time
amber.case_report_export(a, from = "2022-01-12 00:00", to = "2022-02-13")

# Find all case reports for a specific participant/patient identifier
amber.case_report_export(a, pId = "1231")

# Find all case reports having their identifier matching a regular expression
amber.case_report_export(a, query = list(`data._id[$search]` = "^12"))

# Find all case reports which form data is equal to some value
# (will not work if the data are encrypted in the database)
amber.case_report_export(a, query = list(data.PATIENT.ORIGIN_REGION = "xyz"))

# Export records collected with a study's form in a specific version
amber.case_report_export(a,
  study = "Trauma Registry",
  form = "Adult trauma",
  query = list(revision = 6))

# Export records collected with a specific case report form
tables <- amber.case_report_export(a, caseReportForm = "Adult trauma - test")
```

```
# Export records collected with a study's form in all versions used
tables <- amber.case_report_export(a,
  study = "Trauma Registry",
  form = "Adult trauma")

# Result contains both data and dictionary
tables

# Tables are named with the <case report form name>-<revision> pattern
names(tables)

# Merge datasets from different versions if relevant
dplyr::bind_rows(lapply(tables, function (t) {
  t$data
}))

amber.logout(a)

## End(Not run)
```

---

amber.case_report_form

*Get a case report form*

---

### Description

Get a case report form by its name or identifier and its revision number (if any).

### Usage

```
amber.case_report_form(
  amber,
  id,
  study = NULL,
  form = NULL,
  revision = NULL,
  query = list()
)
```

### Arguments

| | |
|---|---|
| amber | An Amber object |
| id | Case report form's name or identifier |
| study | Study identifier (name or id), optional. |
| form | Form's name or identifier |
| revision | Revision number, optional, default is NULL (means that the case report form uses the latest form revision). |
| query | The search query, to desambiguate form lookup by name |

## Value

A case report form object as a named list

## See Also

Other studies functions: `amber.campaign()`, `amber.campaigns()`, `amber.case_report_export()`,
`amber.case_report_forms()`, `amber.case_reports()`, `amber.form()`, `amber.form_revision()`,
`amber.form_revisions()`, `amber.forms()`, `amber.interview_design()`, `amber.interview_designs()`,
`amber.interview_export()`, `amber.interviews()`, `amber.participant()`, `amber.participants()`,
`amber.studies()`, `amber.study()`

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.case_report_form(a, id = "Adult trauma - baseline", form = "Adult trauma", revision = 10)
amber.case_report_form(a, id = "61e69a22fea2df2f3108b508")
amber.logout(a)

## End(Not run)
```

---

amber.case_report_forms

*Get the case report forms*

---

## Description

Get the case reports of one or several form(s).

## Usage

```
amber.case_report_forms(
  amber,
  study = NULL,
  form = NULL,
  revision = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| form | Form identifier (name or id), optional. |

| revision | Revision number, optional, default is NULL (means that the case report form uses the latest form revision). |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(), amber.case_report_form(), amber.case_reports(), amber.form(), amber.form_revision(), amber.form_revisions(), amber.forms(), amber.interview_design(), amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(), amber.studies(), amber.study()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.case_report_forms(a, form="61e69a22fea2df2f3108b508", skip=0, limit=10)
amber.case_report_forms(a, form="Adult trauma")
amber.case_report_forms(a, study="Trauma Registry", query = list(revision = 1))
amber.case_report_forms(a, query = list(revision = 1))
amber.logout(a)

## End(Not run)
```

---

amber.form                          *Get a form*

---

## Description

Get a form by name or identifier.

## Usage

```
amber.form(amber, id, study = NULL, query = list())
```

## Arguments

| amber | An Amber object |
| id | Form's name or identifier |
| study | Study name or identifier, optional |
| query | The search query, to desambiguate form lookup by name |

## Value

A form object as a named list

## See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(),
amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form_revision(),
amber.form_revisions(), amber.forms(), amber.interview_design(), amber.interview_designs(),
amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(),
amber.studies(), amber.study()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.form(a, id = "Adult trauma")
amber.form(a, id = "61e69a22fea2df2f3108b508")
amber.logout(a)

## End(Not run)
```

---

amber.forms                     *Get the forms*

---

## Description

Get the forms

## Usage

```
amber.forms(
  amber,
  study = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study name or identifier, optional |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(),
amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(),
amber.form_revision(), amber.form_revisions(), amber.interview_design(), amber.interview_designs(),
amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(),
amber.studies(), amber.study()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.forms(a)
amber.forms(a, study="Trauma Registry", skip = 0, limit = 10)
amber.logout(a)

## End(Not run)
```

---

amber.form_revision          *Get a form revision*

---

## Description

Get a form revision by its form name or identifier and its revision number.

## Usage

```
amber.form_revision(amber, form, revision, study = NULL)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| form | Form's name or identifier |
| revision | Revision number |
| study | Study identifier (name or id), optional. |

## Value

A form revision object as a named list

## See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(), amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(), amber.form_revisions(), amber.forms(), amber.interview_design(), amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(), amber.studies(), amber.study()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.form_revision(a, form = "Adult trauma", revision = 10)
amber.form_revision(a, form = "61e69a22fea2df2f3108b508", revision = 10)
amber.logout(a)

## End(Not run)
```

amber.form_revisions      *Get the form revisions*

## Description

Get the revisions of one or several form(s).

## Usage

```
amber.form_revisions(
  amber,
  study = NULL,
  form = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| form | Form identifier (name or id), optional. |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

**Value**

A data.frame (or a named list of raw results when 'df' is FALSE)

**See Also**

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(), amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(), amber.form_revision(), amber.forms(), amber.interview_design(), amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(), amber.studies(), amber.study()

**Examples**

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.form_revisions(a, form="61e69a22fea2df2f3108b508", skip = 0, limit = 10)
amber.form_revisions(a, form="Adult trauma")
amber.form_revisions(a, study="Trauma Registry", query = list(revision = 1))
amber.form_revisions(a, query = list(revision = 1))
amber.logout(a)

## End(Not run)
```

---

amber.group                 *Get a group*

---

**Description**

Get a user by name or identifier.

**Usage**

```
amber.group(amber, id)
```

**Arguments**

| | |
|---|---|
| amber | An Amber object |
| id | Group's name or identifier |

**Value**

A group object as a named list

**See Also**

Other users functions: amber.groups(), amber.user(), amber.users()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.group(a, id = "obiba.org")
amber.group(a, id = "615abb061799dd6a2cdbbb10")
amber.logout(a)

## End(Not run)
```

---

amber.groups                    *Get the groups*

---

## Description

Get the groups

## Usage

```
amber.groups(amber, query = list(), skip = 0, limit = 100, df = TRUE)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other users functions: amber.group(), amber.user(), amber.users()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.groups(a, skip = 0, limit = 10)
amber.logout(a)

## End(Not run)
```

---

amber.interviews          *Get the interview records*

---

### Description

Get the interviews of one or several interview design(s).

### Usage

```
amber.interviews(
  amber,
  study = NULL,
  interviewDesign = NULL,
  campaign = NULL,
  from = NULL,
  to = NULL,
  code = NULL,
  identifier = NULL,
  state = NULL,
  participantValid = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

### Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| interviewDesign | |
| | Interview design identifier (name or id), optional. |
| campaign | Campaign identifier (name or id), optional. |
| from | From date (included), optional |
| to | To date (included), optional |
| code | Participant interview code, optional |
| identifier | Participant identifier, optional |
| state | State of the interview: 'initiated', 'in_progress', 'completed' |
| participantValid | |
| | Participant is valid (logical): active and in the valid date range |
| query | A search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other studies functions: `amber.campaign()`, `amber.campaigns()`, `amber.case_report_export()`,
`amber.case_report_form()`, `amber.case_report_forms()`, `amber.case_reports()`, `amber.form()`,
`amber.form_revision()`, `amber.form_revisions()`, `amber.forms()`, `amber.interview_design()`,
`amber.interview_designs()`, `amber.interview_export()`, `amber.participant()`, `amber.participants()`,
`amber.studies()`, `amber.study()`

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")

# Find all interviews
amber.interviews(a)

# Find all interviews in a range of time
amber.interviews(a, from = "2022-01-12 00:00", to = "2022-02-13")

# Find all interviews for a specific participant/patient study identifier
amber.interviews(a, identifier = "1231")

# Find all interviews having their identifier matching a regular expression
amber.interviews(a, query = list(`data._id[$search]` = "^12"))

# Find all interviews which form data is equal to some value
# (will not work if the data are encrypted in the database)
amber.interviews(a, query = list(data.PATIENT.ORIGIN_REGION = "xyz"))

# Find interview records of a study
amber.interviews(a, study = "Trauma Registry")

amber.logout(a)

## End(Not run)
```

---

amber.interview_design

*Get an interview design*

---

## Description

Get an interview design by its name or identifier.

## Usage

```
amber.interview_design(amber, id, study = NULL, query = list())
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| id | Interview design's name or identifier |
| study | Study identifier (name or id), optional. |
| query | A search query |

## Value

An interview design object as a named list

## See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(), amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(), amber.form_revision(), amber.form_revisions(), amber.forms(), amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(), amber.participants(), amber.studies(), amber.study()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.interview_design(a, id = "Adult trauma - baseline")
amber.interview_design(a, id = "61e69a22fea2df2f3108b508")
amber.logout(a)

## End(Not run)
```

---

amber.interview_designs

*Get the interview designs*

---

## Description

Get the interview designs.

## Usage

```
amber.interview_designs(
  amber,
  study = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| query | A search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other studies functions: `amber.campaign()`, `amber.campaigns()`, `amber.case_report_export()`, `amber.case_report_form()`, `amber.case_report_forms()`, `amber.case_reports()`, `amber.form()`, `amber.form_revision()`, `amber.form_revisions()`, `amber.forms()`, `amber.interview_design()`, `amber.interview_export()`, `amber.interviews()`, `amber.participant()`, `amber.participants()`, `amber.studies()`, `amber.study()`

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.interview_designs(a)
amber.interview_designs(a, study="Liftup")
amber.logout(a)

## End(Not run)
```

---

amber.interview_export

*Export the interview records*

---

## Description

Export the interview records (data and dictionary) of interview step(s).

## Usage

```
amber.interview_export(
  amber,
  study = NULL,
  interviewDesign = NULL,
  campaign = NULL,
  from = NULL,
```

```
  to = NULL,
  completed = NULL,
  code = NULL,
  identifier = NULL,
  state = NULL,
  participantValid = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| interviewDesign | |
| | Interview design identifier (name or id), optional. |
| campaign | Campaign identifier (name or id), optional. |
| from | From date (included), optional |
| to | To date (included), optional |
| completed | When TRUE export data from completed interviews only (default is NULL) |
| code | Participant interview code |
| identifier | Patient/participant study identifier |
| state | State of the interview: 'initiated', 'in_progress', 'completed' |
| participantValid | |
| | Participant is valid (logical): active and in the valid date range |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A named list of data.frames, a data dictionary and a data data.frame per form revision (or a named list of raw results when 'df' is FALSE)

## See Also

Other studies functions: `amber.campaign()`, `amber.campaigns()`, `amber.case_report_export()`, `amber.case_report_form()`, `amber.case_report_forms()`, `amber.case_reports()`, `amber.form()`, `amber.form_revision()`, `amber.form_revisions()`, `amber.forms()`, `amber.interview_design()`, `amber.interview_designs()`, `amber.interviews()`, `amber.participant()`, `amber.participants()`, `amber.studies()`, `amber.study()`

**Examples**

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")

# Extract data from all interviews
amber.interview_export(a)

# Extract data from all completed interviews
amber.interview_export(a, completed = TRUE)

# Extract data from all interviews in a range of time
amber.interview_export(a, from = "2022-01-12 00:00", to = "2022-02-13")

# Extract data from all interviews for a specific participant/patient
# study identifier
amber.interview_export(a, identifier = "1231")

# Extract data from all interviews having their participant study
# identifier matching a regular expression
amber.interview_export(a, query = list(`identifier[$search]` = "^12"))

# Extract data from all interviews having their participant attributes
# matching a value
# (will not work if the data are encrypted in the database)
amber.interview_export(a, query = list(data.country = "fr"))

# Export records collected with a study's interview design
tables <- amber.interview_export(a,
  study = "liftup",
  interviewDesign = "treocapa_lt")

# Result contains both data and dictionary
tables

# Tables are named with the <interview design name>-<form name>-<revision> pattern
names(tables)

# Merge datasets from different versions if relevant
dplyr::bind_rows(lapply(tables, function (t) {
  t$data
}))

amber.logout(a)

## End(Not run)
```

---

amber.login                    *Opan a connection with Amber*

---

**Description**

Open a connection with Amber and returns an Amber object. When the two-factor authentication mechanism is enabled, the user will be prompt for one-time password input.

**Usage**

```
amber.login(
  username = getOption("amber.username", "anonymous"),
  password = getOption("amber.password", "password"),
  url = getOption("amber.url"),
  opts = getOption("amber.opts", list())
)
```

**Arguments**

| | |
|---|---|
| username | User name in Amber. Can be provided by "amber.username" option. |
| password | User password in Amber. Can be provided by "amber.password" option. |
| url | Amber url. Can be provided by "amber.url" option. Secure http (https) connection is required. |
| opts | Curl options. Can be provided by "amber.opts" option. |

**Value**

An Amber object

An amber connection object to be used in further function calls

**Examples**

```
## Not run:
# login using credentials from amber.username and amber.password options
a <- amber.login("https://amber-demo.obiba.org")
# login by providing credentials
a <- amber.login("administrator", "password", "https://amber-demo.obiba.org")

## End(Not run)
```

---

| amber.logout | *Close connection with Amber* |
|---|---|

---

**Description**

Close connection and release resources of Amber.

**Usage**

```
amber.logout(amber)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |

## Value

No value

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.logout(a)

## End(Not run)
```

---

amber.participant          *Get a participant*

---

## Description

Get an interview design campaign participant by its code or identifier.

## Usage

```
amber.participant(
  amber,
  code,
  study = NULL,
  interviewDesign = NULL,
  campaign = NULL,
  query = list()
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| code | Participant's code |
| study | Study identifier (name or id), optional. |
| interviewDesign | |
| | Interview design identifier (name or id), optional. |
| campaign | Campaign identifier (name or id), optional. |
| query | A search query |

## Value

A participant object as a named list

## See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(), amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(), amber.form_revision(), amber.form_revisions(), amber.forms(), amber.interview_design(), amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participants(), amber.studies(), amber.study()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.campaign(a, id = "base", interviewDesign = "Adult trauma - baseline")
amber.logout(a)

## End(Not run)
```

---

amber.participants          *Get the participants*

---

## Description

Get the participants of one or several interview design campaign(s).

## Usage

```
amber.participants(
  amber,
  study = NULL,
  interviewDesign = NULL,
  campaign = NULL,
  code = NULL,
  identifier = NULL,
  valid = NULL,
  query = list(),
  skip = 0,
  limit = 100,
  df = TRUE
)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| study | Study identifier (name or id), optional. |
| interviewDesign | |
| | Interview design identifier (name or id), optional. |
| campaign | Campaign identifier (name or id), optional. |

| | |
|---|---|
| code | Participant interview code, optional |
| identifier | Participant identifier, optional |
| valid | Participant is valid (logical): active and in the valid date range |
| query | A search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(),
amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(),
amber.form_revision(), amber.form_revisions(), amber.forms(), amber.interview_design(),
amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(),
amber.studies(), amber.study()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")

# Find all participants
amber.participants(a)

# Find all participants for a specific participant/patient study identifier
amber.participants(a, identifier = "1231")

# Find all participants which data is equal to some value
# (will not work if the data are encrypted in the database)
amber.participants(a, query = list(data.country = "fr"))

# Find the participants of a study interview campaign
amber.participants(a, study = "Liftup", campaign = "base")

amber.logout(a)

## End(Not run)
```

---

amber.studies                    *Get the studies*

---

### Description

Get the studies

### Usage

```
amber.studies(amber, query = list(), skip = 0, limit = 100, df = TRUE)
```

### Arguments

| | |
|---|---|
| amber | An Amber object |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

### Value

A data.frame (or a named list of raw results when 'df' is FALSE)

### See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(),
amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(),
amber.form_revision(), amber.form_revisions(), amber.forms(), amber.interview_design(),
amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(),
amber.participants(), amber.study()

### Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.studies(a, skip=0, limit=10)
amber.logout(a)

## End(Not run)
```

---

amber.study        *Get a study*

---

### Description

Get a study by name or identifier.

### Usage

```
amber.study(amber, id)
```

### Arguments

| | |
|---|---|
| amber | An Amber object |
| id | Study's name or identifier |

### Value

A study object as a named list

### See Also

Other studies functions: amber.campaign(), amber.campaigns(), amber.case_report_export(),
amber.case_report_form(), amber.case_report_forms(), amber.case_reports(), amber.form(),
amber.form_revision(), amber.form_revisions(), amber.forms(), amber.interview_design(),
amber.interview_designs(), amber.interview_export(), amber.interviews(), amber.participant(),
amber.participants(), amber.studies()

### Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.study(a, id = "Trauma Registry")
amber.study(a, id = "6151b5234268f582926d37f44")
amber.logout(a)

## End(Not run)
```

---

amber.subjects                    *Get subjects*

---

### Description

Get the users and groups as subjects: an identifier, a type and a name.

### Usage

```
amber.subjects(amber, query = list(), df = TRUE)
```

### Arguments

| | |
|---|---|
| amber | An Amber object |
| query | The search query |
| df | Return a data.frame (default is TRUE) |

### Value

A data.frame (or a list of raw results when 'df' is FALSE)

### Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.subjects(a)
amber.logout(a)

## End(Not run)
```

---

amber.user                        *Get a user*

---

### Description

Get a user by email or identifier.

### Usage

```
amber.user(amber, id)
```

### Arguments

| | |
|---|---|
| amber | An Amber object |
| id | User's email or identifier |

## Value

A user object as a named list

## See Also

Other users functions: amber.group(), amber.groups(), amber.users()

## Examples

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.user(a, id = "jim@muse.com")
amber.user(a, id = "6151b512268f582926d37f90")
amber.logout(a)

## End(Not run)
```

---

amber.users                     *Get the users*

---

## Description

Get the users

## Usage

```
amber.users(amber, query = list(), skip = 0, limit = 100, df = TRUE)
```

## Arguments

| | |
|---|---|
| amber | An Amber object |
| query | The search query |
| skip | Number of items to skip |
| limit | Max number of items |
| df | Return a data.frame (default is TRUE) |

## Value

A data.frame (or a named list of raw results when 'df' is FALSE)

## See Also

Other users functions: amber.group(), amber.groups(), amber.user()

**Examples**

```
## Not run:
a <- amber.login("https://amber-demo.obiba.org")
amber.users(a, skip = 0, limit = 10)
amber.logout(a)

## End(Not run)
```

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