Package 'REDCapR'

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Title Interaction between R and REDCap

Description Encapsulates functions to streamline calls from R

Version 0.1

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URL http://ouhsc.edu/bbmc/

Depends R(>= 2.14.0),stats

Imports methods,RCurl

Suggests devtools,ggplot2,knitr,plyr,scales,testit,testthat,xtable

License GPL

LazyData TRUE

VignetteBuilder knitr

Collate 'REDCapR-package.R' 'redcap_read.R' 'redcap_write.R'

R topics documented:

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Description

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redcap_read	*Read records from a REDCap project.*

Description

This function uses REDCap's API to select and return data.

Usage

```
redcap_read(redcap_uri, token, records = NULL,
  records_collapsed = NULL, fields = NULL,
  fields_collapsed = NULL, verbose = TRUE,
  cert_location = NULL)
```

Arguments

redcap_uri	The URI of the REDCap project. Required.
token	The user-specific string that serves as the password for a project. Required.
records	An array, where each element corresponds to the ID of a desired record. Optional.
records_collapsed	
	A single string, where the desired ID values are separated by commas. Optional.
fields	An array, where each element corresponds a desired project field. Optional.
fields_collapsed	
	A single string, where the desired field names are separated by commas. Optional.
verbose	A boolean value indicating if `messages` should be printed to the R console during the operation. Optional.
cert_location	If present, this string should point to the location of the cert files required for SSL. If the value is missing or NULL, the server's identity will not be verified.

Details

I like how PyCap creates a 'project' object with methods that read and write from REDCap. However this isn't a style that R clients typically use. I like the logic that it's associated with a particular REDCap project that shouldn't change between calls. As a compromise, I think I'll wrap the uri, token, and cert location into a single `S4` object that's passed to these methods. It will make these calls take less space.

Value

Currently, a list is returned with the following elements,

1. `data`: an R `data.frame` of the desired records and columns.
2. `raw_csv`: the text of comma separated values returned by REDCap through `RCurl`.
3. `records_collapsed`: the desired records IDs, collapsed into a single string, separated by commas.
4. `fields_collapsed`: the desired field names, collapsed into a single string, separated by commas.
5. `elapsed_seconds`: the duration of the function.
6. `status_message`: a boolean value indicating if the operation was apparently successful.

Author(s)

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References

The 'API Examples' page on the REDCap wiki (https://iwg.devguard.com/trac/redcap/wiki/ApiExamples). A user account is required.

Examples

```
## Not run:
library(REDCapR) #Load the package into the current R session.
uri <- "https://ouhsc.edu/redcap-test"
token <- "ReadThisFromAnEncryptedSomethingButNotHardCodedSourceCode"
certs <- "./Dal/Certs/ca-bundle.crt"

#Return all records and all variables.
ds_all_rows_all_fields <- redcap_read(redcap_uri=uri, token=token, cert_location=certs)$data

#Return only records with IDs of 101, 102, 103, and 104
desired_records_v1 <- c(101, 102, 103, 104)
ds_some_rows_v1 <- redcap_read(
    redcap_uri=uri,
    token=token,
    records=desired_records_v1,
    cert_location=certs
)$data

#Return only records with IDs of 101, 102, 103, and 104 (alternate way)
desired_records_v2 <- "101, 102, 103, 104"
ds_some_rows_v2 <- redcap_read(
    redcap_uri=uri,
    token=token,
    records_collapsed=desired_records_v2,
    cert_location=certs
)$data

#Return only the fields recordid, dob, gender, and apgar
desired_fields_v1 <- c("recordid", "dob", "gender", "apgar")
ds_some_fields_v1 <- redcap_read(
    redcap_uri=uri,
    token=token,
    fields=desired_fields_v1,
    cert_location=certs
)$data

#Return only the fields recordid, dob, gender, and apgar (alternate way)
desired_fields_v2 <- "recordid, dob, gender, apgar"
ds_some_fields_v2 <- redcap_read(
    redcap_uri=uri,
    token=token,
    fields_collapsed=desired_fields_v2,
    cert_location=certs
)$data
```

```
## End(Not run) #End DontRun
```

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