

Package ‘picsure’

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Type Package

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Title Simplified R library to communicate with HPDS-hosted services on a PIC-SURE network

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Description Library that is used to connect to access
HPDS-hosted services/data on a PIC-SURE network.

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Encoding UTF-8

LazyData true

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Depends R (>= 3.1.0),
R6,
httr,
jsonlite,
stringr,
hash,
purrr

R topics documented:

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addClause	<i>Add a clause to a query</i>
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Description

Add a clause to a query

Usage

```
addClause(
  query,
  keys,
  type = "FILTER",
  min = NULL,
  max = NULL,
  categories = NULL
)
```

Arguments

query	A query object
keys	A key or list of keys to add a clause for
type	One of: ("SELECT", "REQUIRE", "ANYOF", "FILTER")
min	Optional parameter for continuous "FILTER" clauses. Specifies the minimum value
max	Optional parameter for continuous "FILTER" clauses. Specifies the maximum value
categories	Optional parameter for categorical "FILTER" clauses to match

Value

A query object

Examples

```
# query <- picture::newQuery(session)
# query <- picture::addClause(query, "\demographics\AGE\ ", max = 10)

## query <- picture::newQuery(session)
# query <- picture::addClause(query, "\demographics\AGE\ ", "FILTER", min =18, max = 35)
# query <- picture::addClause(query, "\demographics\AGE\ ", "FILTER", categories = list("Yes", "Maybe"))
# count <- picture::getCount(query)
# results <- picture::getResults(query)

# query <- picture::newQuery(session)
# query <- picture::addClause(query, "\demographics\AGE\ ", "SELECT")
# results <- picture::getResults(query)

# query <- picture::newQuery(session)
# query <- picture::addClause(query, "\demographics\AGE\ ", "REQUIRE")
```

```
# results <- picture::getResults(query)

# query <- picture::newQuery(session)
# query <- picture::addClause(query, "\demographics\AGE\","ANYOF")
# results <- picture::getResults(query)
```

bdc.addClause	<i>Add a clause to a query</i>
---------------	--------------------------------

Description

Add a clause to a query

Usage

```
bdc.addClause(
  query,
  keys,
  type = "FILTER",
  min = NULL,
  max = NULL,
  categories = NULL
)
```

Arguments

query	A query object
keys	A key or list of keys to add a clause for
type	One of: ("SELECT", "REQUIRE", "ANYOF", "FILTER")
min	Optional parameter for continuous "FILTER" clauses. Specifies the minimum value
max	Optional parameter for continuous "FILTER" clauses. Specifies the maximum value
categories	Optional parameter for categorical "FILTER" clauses to match

Value

A query object

Examples

```
# query <- picture::bdc.newQuery(session)
# query <- picture::bdc.addClause(query, "\phs000001\pht000001\phv00000001\variable1\","FILTER", min = 1, max = 10)
# query <- picture::bdc.addClause(query, "\phs000001\pht000001\phv00000001\variable2\","FILTER", categories = c("A", "B", "C"))
# count <- picture::getCount(query)
# results <- picture::getResults(query)

# query <- picture::bdc.newQuery(session)
# query <- picture::bdc.addClause(query, "\phs000001\pht000001\phv00000001\variable3\","SELECT")
# results <- picture::getResults(query)
```

```
# query <- picture::bdc.newQuery(session)
# query <- picture::bdc.addClause(query, "\phs000001\pht000001\phv00000001\variable4\"," REQUIRE")
# results <- picture::getResults(query)

# query <- picture::bdc.newQuery(session)
# query <- picture::bdc.addClause(query, "\phs000001\pht000001\phv00000001\variable5\"," ANYOF")
# results <- picture::getResults(query)
```

`bdc.initializeSession` *Creates a session to access a PIC-SURE instance*

Description

Creates a session to access a PIC-SURE instance

Usage

```
bdc.initializeSession(url, token, psama_url = FALSE)
```

Arguments

<code>url</code>	Url to a PIC-SURE instance
<code>token</code>	A user token to access this instance. This can be found in the "User Profile" tab on the PIC-SURE site
<code>psama_url</code>	(Optional) URL to override the default PSAMA endpoint

Value

An object which provides access to a PIC-SURE instance

Examples

```
# session <- picture::bdc.initializeSession(url="http://your.server/PIC-SURE/", token="your-security-token")
```

`bdc.newQuery` *Creates a query object to query a PIC-SURE instance*

Description

Creates a query object to query a PIC-SURE instance

Usage

```
bdc.newQuery(session)
```

Arguments

<code>session</code>	Current PIC-SURE session
----------------------	--------------------------

Value

A query object

Examples

```
# query <- picture::bdc.newQuery(session)
```

bdc.searchPicture	<i>Performs a search of variables in PIC-SURE for a given keyword</i>
-------------------	---

Description

Performs a search of variables in PIC-SURE for a given keyword

Usage

```
bdc.searchPicture(
  session,
  keyword = "",
  resultType = "DATA_FRAME",
  includeValues = FALSE,
  limit = 0,
  offset = 0
)
```

Arguments

session	Current session
keyword	Keyword to search for
resultType	Optional parameter to specify result type: Valid values: DATA_FRAME (default) which converts the response to a data frame DICTONARY which returns a list VARIABLE_PATHS which returns the unique variable paths
includeValues	Boolean to enable including all values with categorical variables. Default is FALSE. Use with caution, this can be a large amount of data
limit	Optonal, default 0, use to limit results. Returns the first N results
offset	Optional, default 0, use to paginate results. Returns results starting at N

Value

A PIC-SURE session

Examples

```
searchResults <- picture::bdc.searchPicture(session, "heart", resultType = "DATA_FRAME")
```

bdc.setResource	<i>Set the resource to use for queries.</i>
-----------------	---

Description

Set the resource to use for queries.

Usage

```
bdc.setResource(session, resourceName)
```

Arguments

session	Current session
resourceName	Name of resource to select. Valid values are OPEN or AUTH

Value

A PIC-SURE session

Examples

```
# session <- picture::bdc.setResource(session, 'AUTH')
```

deleteClause	<i>Deletes all clauses from this query for a given key</i>
--------------	--

Description

Deletes all clauses from this query for a given key

Usage

```
deleteClause(query, key)
```

Value

The updated query

getGenomicAnnotations *Returns the genomic annotations for this session, as a data frame*

Description

Returns the genomic annotations for this session, as a data frame

Usage

```
getGenomicAnnotations(session)
```

Arguments

session	Current PIC-SURE session
---------	--------------------------

getResources *Returns a list of resources for this session*

Description

Returns a list of resources for this session

Usage

```
getResources(session)
```

Arguments

session	Current PIC-SURE session
---------	--------------------------

getResultByQueryUUID *Executes a query with a given queryUUID*

Description

Executes a query with a given queryUUID

Usage

```
getResultByQueryUUID(session, queryUUID)
```

Arguments

session	The current session object
queryUUID	The unique id of the query to run

Value

The result of the query as a data frame

Examples

```
# result <- picture::getResultByQueryUUID(session, "e10882ae-542a-4e38-ae28-399e13ac38c1")
```

initializeSession	<i>Creates a session to access a PIC-SURE instance</i>
-------------------	--

Description

Creates a session to access a PIC-SURE instance

Usage

```
initializeSession(  
  url,  
  token,  
  psama_url = FALSE,  
  initializeDictionary = NULL,  
  defaultResource = NULL  
)
```

Arguments

url	Url to a PIC-SURE instance
token	A user token to access this instance. This can be found in the "User Profile" tab on the PIC-SURE site
psama_url	(Optional) URL to override the default PSAMA endpoint
initializeDictionary	(Optional, for internal use only) Function to override dictionary initialization

Value

An object which provides access to a PIC-SURE instance

Examples

```
# session <- picture::initializeSession(url="http://your.server/PIC-SURE/", token="your-security-token")
```

newQuery	<i>Creates a query object to query a PIC-SURE instance</i>
----------	--

Description

Creates a query object to query a PIC-SURE instance

Usage

```
newQuery(session)
```

Arguments

session	Current PIC-SURE session
---------	--------------------------

Value

A query object

Examples

```
# query <- picture::newQuery(session)
```

runQuery	<i>Executes a query</i>
----------	-------------------------

Description

Executes a query

Usage

```
runQuery(query, resultType = NULL)
```

Arguments

query	A query object
resultType	The result type to query for: "COUNT" queries only for the number of results "DATA_FRAME" queries for the entire result set

Value

The result of the query

Examples

```
# count <- picture::runQuery(query, "COUNT")  
# results <- picture::runQuery(query, "DATA_FRAME")
```

searchPicture	<i>Performs a search of variables in PIC-SURE for a given keyword</i>
---------------	---

Description

Performs a search of variables in PIC-SURE for a given keyword

Usage

```
searchPicture(session, keyword = "", resultType = "DATA_FRAME")
```

Arguments

session	Current session
keyword	Keyword to search for
resultType	Optional parameter to specify result type: Valid values: DATA_FRAME (default) which converts the response to a data frame DICTONARY which returns a list VARIABLE_PATHS which returns the unique variable paths

Value

A PIC-SURE session

Examples

```
searchResults <- picture::searchPicture(session, "heart", resultType = "DATA_FRAME")
```

showQuery	<i>Prints the JSON representation of a query object</i>
-----------	---

Description

Prints the JSON representation of a query object

Usage

```
showQuery(query)
```

Arguments

query	A query object
-------	----------------

Examples

```
# query <- picture::newQuery(session)
# query <- picture::addClause(query, "\demographics\AGE\\"", max = 10)
# picture::showQuery(query)
```

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