

Package ‘SSSR’

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Type Package

Title Server Side Scripting with R

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Description A package for writing server side R scripts with session,application and cookie support

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SSSR-package

SSSR - Server Side Scripting with R

Description

SSSR is an R package for writing server side R scripts with form data handling; cookie, session and application variables support.

Details

Package: SSSR
 Type: Package
 Version: 1.0.5
 Date: 2011-07-27
 License: LGPL

Author(s)

Mehmet Hakan Satman

Maintainer: Mehmet Hakan Satman <mhsatman@istanbul.edu.tr>

References

Package uses RSQLite package for storing session and application parameters.

Examples

```
~#!/usr/bin/Rscript
#require("SSSR")
response.setContentType()
session.start()
response.startDocument()

name<-request.getGETParameter("name")
surname<-request.getGETParameter("surname")

if (nchar(name)>0 && nchar(surname)>0){
  session.setParameter("name",name)
  session.setParameter("surname",surname)
  response.print("Session variables were set to ",name," and ", surname)
}
```

application.delete *application.delete*

Description

Deletes all application variables.

Usage

```
application.delete()
```

Author(s)

Mehmet Hakan Satman

See Also

[session.delete](#) [application.setParameter](#) [application.getParameter](#) [application.getAllParameters](#)

Examples

```
#!/usr/bin/Rscript
response.setContentType()
session.start()
session.delete()
```

```
application.getAllParameters  
application.getAllParameters
```

Description

Returns a list of all application variables.

Usage

```
application.getAllParameters()
```

Author(s)

Mehmet Hakan Satman

See Also

[application.getParameter](#)

Examples

```
myVars<-application.getAllParameters()  
response.println("<pre>",myVars,"</pre>")
```

```
application.getParameter  
application.getParameter
```

Description

Returns values of a given application parameter.

Usage

```
application.getParameter(paramName)
```

Arguments

paramName Name for application variable.

Author(s)

Mehmet Hakan Satman

See Also

[application.setParameter](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR");

response.setContentType();
response.startDocument();

m<-as.integer(application.getParameter("pageCounter"))
if (is.na(m)) m<-0
m<-m+1
application.setParameter("pageCounter",m)
response.println("This page was visited ",m," times")
```

`application.setParameter`
application.setParameter

Description

Sets value of a given application parameter

Usage

```
application.setParameter(paramName, paramValue)
```

Arguments

paramName	Name of the application variable to set
paramValue	Value of the application variable

Details

Application variables are visible and accessible for all clients. Changing value of a given application parameter reflects all of the application that uses this parameter.

Author(s)

Mehmet Hakan Satman

See Also

[application.getParameter](#) [application.getAllParameters](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR");
response.setContentType();
response.startDocument();

m<-as.integer(application.getParameter("pageCounter"))
if (is.na(m)) m<-0
m<-m+1
application.setParameter("pageCounter",m)
response.println("This page was visited ",m," times")
```

dbutil.openConnection *dbutil.openConnection*

Description

Function for loading driver and opening a connection to SQLite database for SSSR's session and application variables functionality. Sets values of the public variables db_Connection and db_Driver.

Usage

```
dbutil.openConnection()
```

Details

Function initializes the SQLite driver for 128 concurrent connections. Default path for database is /tmp/rsessions. This folder is accessible with read and write rights for all users in Unix systems.

Note

SQLite package must be pre-installed.

Author(s)

Mehmet Hakan Satman

Examples

```
dbutil.openConnection()
```

dbutil.serialize	<i>dbutil.serialize</i>
------------------	-------------------------

Description

Serializes an R object to store it in SQLite database.

Usage

```
dbutil.serialize(obj)
```

Arguments

obj Object to serialize

Author(s)

Mehmet Hakan Satman

See Also

[dbutil.unSerialize](#)

Examples

```
x<-rnorm(3)
z<-dbutil.serialize(x)
cat(z)
```

dbutil.unSerialize	<i>dbutil.unSerialize</i>
--------------------	---------------------------

Description

Decodes an R object that serialized using dbutil.serialize function.

Usage

```
dbutil.unSerialize(serializedObject)
```

Arguments

serializedObject
 An R object that serialized using dbutil.serialize

Author(s)

Mehmet Hakan Satman

See Also[dbutil.serialize](#)**Examples**

```
x<-rnorm(3)
cat (x)
```

```
z<-dbutil.serialize(x)
cat(dbutil.unSerialize (z))
```

db_Connection	<i>db_Connection</i>
---------------	----------------------

Description

A public variable that points to SQLite database connection for SSSR's session and application variable functionality.

db_Driver	<i>db_Driver</i>
-----------	------------------

Description

Public variable that points to SQLite driver for SSSR's session and application variables functionality.

defaultSessId	<i>defaultSessId</i>
---------------	----------------------

Description

defaultSessId is a public variable that holds an empty string. When session starts, it's value set to RSESSID cookie. If RSESSID cookie has an empty value, randomly generated session id is used for defaultSessId.

documentStarted	<i>documentStarted</i>
-----------------	------------------------

Description

Public variable with default value FALSE. After calling response.startDocument() function, it's value set to TRUE

request.getCookie	<i>request.getCookie</i>
-------------------	--------------------------

Description

Returns value of a given cookie

Usage

```
request.getCookie(paramName)
```

Arguments

paramName	Cookie name
-----------	-------------

Details

request.getCookie function is used for handling session operations. Default cookie name for session operations is RSESSID.

Author(s)

Mehmet Hakan Satman

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

response.println("Cookie is ",request.getCookie("RSESSID"))
```

`request.getGETParameter`*request.getGETParameter*

Description

Returns value of a given form variable that sent with GET method. Beside using forms, this function can be used to handle variables defined in URL. For instance, variables var1 and var2 in `http://host/cgi-bin/file.r?var1=val1&var2=val2` can be caught using `request.getGETParameter("var1")` and `request.getGETParameter("var2")`

Usage

```
request.getGETParameter(paramName)
```

Arguments

paramName Parameter name defined in HTML form element or URL.

Author(s)

Mehmet Hakan Satman

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
response.startDocument()

#Suppose that URL is http://host/file.r?var1=hello
response.println(request.getGETParameter("var1"))
```

`request.getParameter` *request.getParameter*

Description

Returns value of a given parameter from form variables.

Usage

```
request.getParameter(aQueryString, paramName, delimiter = "&")
```

Arguments

aQueryString	Received form data using post or get method
paramName	Parameter name
delimiter	Delimiter for parsing variables.

Note

This function is a proxy for handling form data. Use `request.getPOSTParameter` or `request.getGETParameter`, instead.

Author(s)

Mehmet Hakan Satman

See Also

[request.getPOSTParameter](#) [request.getGETParameter](#)

Examples

```
myVar<-request.getParameter("num=8&str=ABC", "str", "&")
```

`request.getPOSTParameter`
request.getPOSTParameter

Description

Returns value of a given parameter that sent from web forms using post method.

Usage

```
request.getPOSTParameter(paramName)
```

Arguments

paramName	Parameter name
-----------	----------------

Details

`request.getPOSTParameter` and `request.getGETParameter` functions are wrappers for `request.getParameter` function.

Author(s)

Mehmet Hakan Satman

See Also

[request.getParameter](#) [request.GETParameter](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
response.startDocument()

response.print("<form method=post>")
response.print("<input type=hidden name=formvar1 value=\"hello\">")
response.print("<input type=submit>")

myVar<-request.getPOSTParameter("formvar1")
response.println("Form variable is: ",myVar)
```

response.print

response.print

Description

Sends values of given parameters and strings that separated with commas.

Usage

```
response.print(...)
```

Arguments

... Comma separated values, variables, etc.

Author(s)

Mehmet Hakan Satman

See Also

[response.println](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
response.startDocument()

x<-rnorm(10)
s<-"hi this is server side R"
response.print(x,"<br>",s,"<br>",quantile(x,0.95))
```

`response.println` *response.println*

Description

A wrapper method for `response.print()`. This function puts a return character after all of the given parameters sent to clients.

Usage

```
response.println(...)
```

Arguments

... Parameters that seperated with commas

Author(s)

Mehmet Hakan Satman

See Also

[response.print](#)

Examples

```
response.println("Hello World!")
```

`response.sendError` *response.sendError*

Description

Shows a formatted error message and aborts operations.

Usage

```
response.sendError(errStr)
```

Arguments

`errStr` A description for error.

Author(s)

Mehmet Hakan Satman

See Also

[response.print](#) [response.println](#)

Examples

```
response.sendError("Please login!")
```

`response.sendRedirect` *response.sendRedirect*

Description

Redirects to another page

Usage

```
response.sendRedirect(aUrl)
```

Arguments

`aUrl` An url to browse

Details

`response.sendRedirect` function sends a redirect directive to browser using the HTTP headers. So, it must be used before `response.startDocument` function.

Author(s)

Mehmet Hakan Satman

See Also

[response.setCookie](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
x<-session.getParameter("site");
if (nchar(x)<1) response.sendRedirect("http://www.google.com")

response.startDocument()
```

`response.setContentType` *response.setContentType*

Description

Defines content type of web document.

Usage

```
response.setContentType(contentType = "text/html")
```

Arguments

`contentType` Default value is "text/html". If produced content is not text but an image, value can be set to "image/png"

Author(s)

Mehmet Hakan Satman

See Also

[response.sendRedirect](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType("text/csv")
response.startDocument()

response.println("1;2;3;")
response.println("3;5;1;")
```

`response.setCookie` *response.setCookie*

Description

Sets value of a given cookie name

Usage

```
response.setCookie(cookieName, cookieValue)
```

Arguments

cookieName	Cookie name
cookieValue	Value for given cookie name

Details

Must be called before `response.startDocument` function.

Author(s)

Mehmet Hakan Satman

See Also

[request.getCookie](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
response.setCookie("name", "Misra")
response.startDocument()

#Refresh page after cookie value set
response.println(request.getCookie("name"))
```

`response.startDocument`

response.startDocument

Description

Finalizes HTTP headers and let the document starts

Usage

```
response.startDocument()
```

Author(s)

Mehmet Hakan Satman

See Also

[response.sendRedirect](#) [response.setCookie](#) [session.start](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
response.startDocument()
```

session.delete	<i>session.delete</i>
----------------	-----------------------

Description

Deletes all of the session entries for current user.

Usage

```
session.delete()
```

Author(s)

Mehmet Hakan Satman

See Also

[session.setParameter](#) [session.getParameter](#) [application.delete](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

#Logging out
response.println("You are logging out")
session.delete()
```

```
session.deleteParameter  
session.deleteParameter
```

Description

Deletes given session parameter.

Usage

```
session.deleteParameter(paramName)
```

Arguments

paramName	Parameter name to delete
-----------	--------------------------

Author(s)

Mehmet Hakan Satman

See Also

[session.delete](#)

Examples

```
#!/usr/bin/Rscript  
require("SSSR")  
response.setContentType()  
session.start()  
response.startDocument()  
  
#Logging out  
response.println("You are logging out")  
session.deleteParameter("username")
```

```
session.getAllParameters  
session.getAllParameters
```

Description

Returns a list of all session parameters for current user.

Usage

```
session.getAllParameters()
```

Author(s)

Mehmet Hakan Satman

See Also

[application.getAllParameters](#) [session.getParameter](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

session.setParameter("x",rnorm(3))

response.println("All session variables are:")
response.println("<pre>")
response.println(session.getAllParameters())
response.println("</pre>")
```

`session.getParameter` *session.getParameter*

Description

Returns value of a given session parameter

Usage

```
session.getParameter(paramName)
```

Arguments

paramName Session parameter name

Details

Pages that uses `session.getParameter` and `session.setParameter` must include a line of codes of `session.start()`

Author(s)

Mehmet Hakan Satman

See Also

[session.setParameter](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

session.setParameter("x",rnorm(3))
response.println("x is ",session.getParameter("x"))
```

```
session.getRandomSessionID
session.getRandomSessionID
```

Description

Returns a randomly generated string length of 20 chars.

Usage

```
session.getRandomSessionID()
```

Details

Function controls if generated session id was used before. If used, re-generates another session id. Function iterates this step while last generated session id is unique. This function is called by `session.start`, so normal user should not use this.

Author(s)

Mehmet Hakan Satman

See Also

[session.start](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

sess<-session.getRandomSessionID()
response.println("id is ",sess)
```

session.getSessionId *session.getSessionId*

Description

Returns the session id for current user

Usage

```
session.getSessionId()
```

Author(s)

Mehmet Hakan Satman

See Also

[session.getRandomSessionID](#) [session.start](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

sess<-session.getSessionId()
response.println("id is ",sess)
```

session.setParameter *session.setParameter*

Description

Sets a session variable for current user

Usage

```
session.setParameter(paramName, paramValue)
```

Arguments

paramName	Parameter name to set
paramValue	Value of a given session parameter name

Note

session.getParameter

Author(s)

Mehmet Hakan Satman

See Also

[session.getParameter](#) [session.getAllParameters](#) [application.getParameter](#) [application.getAllParameters](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

name<-request.getGETParameter("name")
surname<-request.getGETParameter("surname")

if (nchar(name)>0 && nchar(surname)>0){
  session.setParameter("name",name)
  session.setParameter("surname",surname)
  response.print("Session variables were set to ",name," and ", surname)
}
```

session.start

session.start

Description

Initializes database, catches or generates cookies for session operations.

Usage

```
session.start()
```

Details

Must be called before response.startDocument

Author(s)

Mehmet Hakan Satman

See Also

[response.startDocument](#) [session.getParameter](#) [session.setParameter](#) [session.getAllParameters](#) [session.delete](#)

Examples

```
#!/usr/bin/Rscript
require("SSSR")
response.setContentType()
session.start()
response.startDocument()

name<-request.getGETParameter("name")
surname<-request.getGETParameter("surname")

if (nchar(name)>0 && nchar(surname)>0){
  session.setParameter("name",name)
  session.setParameter("surname",surname)
  response.print("Session variables were set to ",name," and ", surname)
}
```

std_in

std_in

Description

A public variable that stores the data came from STDIN device.

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