Remote Shell

1.0

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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2 Hierarchical Index

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

s.shell.BuiltInProcess	
s.shell.utils.Builtlns	
s.shell.client.ClientApplication	10
s.shell.utils.Filesystem	11
s.shell.utils.Logs.LogLevel	
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Chapter 3

Class Documentation

3.1 ss.shell.BuiltInProcess Class Reference

Public Member Functions

• BuiltInProcess (String username, String cwd, UserTypes type, ShellType shellType)

Constructor for the class.

• **BuiltInProcess** (String username, String cwd, UserTypes type, boolean isLoggedIn, ShellType shellType) Override constructor for the class.

• String getUsername ()

Gets the username of the current user.

• String **getCWD** ()

Gets the cwd of the current user.

• UserTypes **getUserType** ()

Gets the user type of the current user.

• boolean getIsLoggedIn ()

Gets the boolean of if the user is logged in or not.

• String getLogsOutput ()

Gets the output logs object.

void execute (String[] command)

Execute the correct command based on command.

3.1.1 Constructor & Destructor Documentation

3.1.1.1 BuiltInProcess() [1/2]

Constructor for the class.

Parameters

username	The current username. "guest" is default.	
cwd The current working directory. Home path is default		
type	The current type of the user. "standard" is default.	
shellType	The type of shell being run. "remote" or "local".	

3.1.1.2 BuiltInProcess() [2/2]

Override constructor for the class.

Parameters

username	The current username. "guest" is default.	
cwd The current working directory. Home path is default		
type The current type of the user. "standard" is default.		
is⇔ If the user is logged in or not.		
LoggedIn		
shellType The type of shell being run. "remote" or "local".		

3.1.2 Member Function Documentation

3.1.2.1 getCWD()

```
String ss.shell.BuiltInProcess.getCWD ( )
```

Gets the cwd of the current user.

Returns

cwd of the current user.

3.1.2.2 getIsLoggedIn()

```
boolean ss.shell.BuiltInProcess.getIsLoggedIn ( )
```

Gets the boolean of if the user is logged in or not.

Returns

the boolean of if the user is logged in or not.

3.1.2.3 getLogsOutput()

```
String ss.shell.BuiltInProcess.getLogsOutput ( )
```

Gets the output logs object.

Returns

the output logs object.

3.1.2.4 getUsername()

```
String ss.shell.BuiltInProcess.getUsername ( )
```

Gets the username of the current user.

Returns

username of the current user.

3.1.2.5 getUserType()

```
UserTypes ss.shell.BuiltInProcess.getUserType ( )
```

Gets the user type of the current user.

Returns

user type of the current user.

The documentation for this class was generated from the following file:

• Shell/src/main/java/ss/shell/BuiltInProcess.java

3.2 ss.shell.utils.BuiltIns Class Reference

Classes

• enum ShellType

The different types of shells that can be run on this program.

enum UserTypes

The different types of user groups.

Static Public Member Functions

• static boolean isBuiltIn (String command)

Check if a command is a built-in command.

· static boolean isProcessBuilder (String command)

Check if a command is a process builder command.

Static Public Attributes

static final String SUPER = "super"

Built in commands.

- static final String ADDUSER = "adduser"
- static final String **DELUSER** = "deluser"
- static final String LISTUSERS = "listusers"
- static final String CHPASS = "chpass"
- static final String CHUSERTYPE = "chusertype"
- static final String LOGIN = "login"
- static final String LOGOUT = "logout"
- static final String WHOAMI = "whoami"
- static final String MOVE = "move"
- static final String COPY = "copy"
- static final String CD = "cd"
- static final String SHOWDIR = "showdir"
- static final String HELP = "help"
- static final String **HISTORY** = "history"
- static final String[] COMMANDS = { SUPER, ADDUSER, DELUSER, LISTUSERS, CHPASS, CHUSERT ← YPE, LOGIN, LOGOUT, WHOAMI, MOVE, COPY, CD, SHOWDIR, HELP, HISTORY}
- static final String[] DESCS = {SUPER_DESC, ADDUSER_DESC, DELUSER_DESC, LISTUSERS_DESC, CHPASS_DESC, CHUSERTYPE_DESC, LOGIN_DESC, LOGOUT_DESC, WHOAMI_DESC, MOVE_DE
 — SC, COPY_DESC, CD_DESC, SHOWDIR_DESC, HELP_DESC, HISTORY_DESC}
- static final String PB_LS = "Is"

Process builder allowed commands.

- static final String PB_CP = "cp"
- static final String PB MV = "mv"
- static final String PB_MKDIR = "mkdir"
- static final String PB RMDIR = "rmdir"
- static final String PB_HELP = "help"
- static final String PB_PWD = "pwd"
- static final String PB_PS = "ps"
- static final String PB_WHICH = "which"
- static final String[] **PB_COMMANDS** = { **PB_LS**, PB_CP, PB_MV, PB_MKDIR, PB_RMDIR, PB_HELP, P← B PWD, PB PS, PB WHICH}
- static final String[] PB_DESCS = {PB_LS_DESC, PB_CP_DESC, PB_MV_DESC, PB_MKDIR_DESC, P←
 B_RMDIR_DESC, PB_HELP_DESC, PB_PWD_DESC, PB_PS_DESC, PB_WHICH_DESC}
- static String **HOME_PATH** = System.getProperty("user.dir") + "/src/main/resources/home/"

3.2.1 Member Function Documentation

3.2.1.1 isBuiltIn()

Check if a command is a built-in command.

Parameters

command	Command to check.
---------	-------------------

Returns

True if command is a built-in command.

3.2.1.2 isProcessBuilder()

Check if a command is a process builder command.

Parameters

-		
ſ	command	Command to check.

Returns

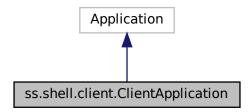
True if command is a process builder command.

The documentation for this class was generated from the following file:

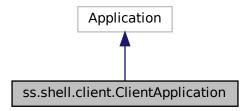
• Shell/src/main/java/ss/shell/utils/BuiltIns.java

3.3 ss.shell.client.ClientApplication Class Reference

Inheritance diagram for ss.shell.client.ClientApplication:



Collaboration diagram for ss.shell.client.ClientApplication:



Public Member Functions

• void start (Stage stage)

Static Public Member Functions

• static void main (String[] args)

The documentation for this class was generated from the following file:

• Shell/src/main/java/ss/shell/client/ClientApplication.java

3.4 ss.shell.utils.Filesystem Class Reference

Public Member Functions

• Filesystem (String username, String password, UserTypes type, ShellType shellType)

Constructor for the Filesystem (p. 11) class.

• Filesystem (String cwd)

Override constructor for the Filesystem (p. 11) class.

• boolean login ()

Logging in needs to check if the user has a directory and if they do, check if the password matches the user info file.

void createUser ()

Creating a user needs to check if the user has a directory.

• void deleteUser ()

Deletes the user directory and all of its contents.

• String **getPassword** ()

Gets the current password of the user.

• BuiltIns.UserTypes getUserType ()

Gets the current group type of the user.

• boolean **changePassword** (String newPassword)

Change the password for the user.

• boolean **changeUserType** (BuiltIns.UserTypes newType)

Change the group type for the user.

• boolean hasDirectory ()

Check if the user has a directory already.

• String[] getDirsInUserDir ()

Gets the directories in the user's directory.

File[] getLogs (String filename)

Gets the log files in the home directory (where they are stored).

• String[] getLogOutput (File[] logFiles)

Returns the lines inside the log files provided.

• String[] listUsers (File[] userFiles)

Lists the users from the user files in the home directory.

• String **getLogsOutput** ()

Gets the output logs object.

Static Public Member Functions

• static File[] getUserFiles ()

Gets all the user files from the home directory.

3.4.1 Constructor & Destructor Documentation

3.4.1.1 Filesystem() [1/2]

```
ss.shell.utils.Filesystem.Filesystem (
String username,
String password,
UserTypes type,
ShellType shellType)
```

Constructor for the Filesystem (p. 11) class.

Parameters

username	The username of the user.
password	The password of the user (hashed).
type	The group type of the user.
shellType	The type of shell being run for.

3.4.1.2 Filesystem() [2/2]

```
ss.shell.utils.Filesystem.Filesystem ( {\tt String} \ \textit{cwd} \ )
```

Override constructor for the Filesystem (p. 11) class.

Parameters

CW	d	The current working directory of the user.
----	---	--

3.4.2 Member Function Documentation

3.4.2.1 changePassword()

```
boolean ss.shell.utils.Filesystem.changePassword ( {\tt String} \ newPassword \ )
```

Change the password for the user.

Parameters

newPassword	the new password for the user.
-------------	--------------------------------

Returns

true if the password was changed successfully.

3.4.2.2 changeUserType()

```
boolean ss.shell.utils.Filesystem.changeUserType ( {\tt BuiltIns.UserTypes}\ \ newType\ )
```

Change the group type for the user.

Parameters

newType	the new group type for the user.
---------	----------------------------------

Returns

true if the change was successful.

3.4.2.3 deleteUser()

```
void ss.shell.utils.Filesystem.deleteUser ( )
```

Deletes the user directory and all of its contents.

Also deletes the user info file.

3.4.2.4 getDirsInUserDir()

```
String [] ss.shell.utils.Filesystem.getDirsInUserDir ( )
```

Gets the directories in the user's directory.

Returns

list of directory names.

3.4.2.5 getLogOutput()

Returns the lines inside the log files provided.

Parameters

logFiles	the log files to read.
logFiles	the log files to read

Returns

the lines inside the log files.

3.4.2.6 getLogs()

Gets the log files in the home directory (where they are stored).

Parameters

```
filename the name of the log file to find.
```

Returns

the log file if it exists.

3.4.2.7 getLogsOutput()

```
String ss.shell.utils.Filesystem.getLogsOutput ( )
```

Gets the output logs object.

Returns

the output logs object.

3.4.2.8 getPassword()

```
String ss.shell.utils.Filesystem.getPassword ( )
```

Gets the current password of the user.

Returns

the current password of the user.

3.4.2.9 getUserFiles()

```
static File [] ss.shell.utils.Filesystem.getUserFiles ( ) [static]
```

Gets all the user files from the home directory.

Returns

the user files.

3.4.2.10 getUserType()

```
BuiltIns.UserTypes ss.shell.utils.Filesystem.getUserType ( )
```

Gets the current group type of the user.

Returns

the current group type of the user.

3.4.2.11 hasDirectory()

```
boolean ss.shell.utils.Filesystem.hasDirectory ( )
```

Check if the user has a directory already.

Returns

true if the user has a directory.

3.4.2.12 listUsers()

Lists the users from the user files in the home directory.

Parameters

```
userFiles the user files to read.
```

Returns

the users from the user files.

3.4.2.13 login()

```
boolean ss.shell.utils.Filesystem.login ( )
```

Logging in needs to check if the user has a directory and if they do, check if the password matches the user info file.

Returns

true if the user has a directory and the password matches.

The documentation for this class was generated from the following file:

· Shell/src/main/java/ss/shell/utils/Filesystem.java

3.5 ss.shell.utils.Logs.LogLevel Enum Reference

The severity level of the logs.

Public Attributes

- INFO
- WARNING
- ERROR

3.5.1 Detailed Description

The severity level of the logs.

The documentation for this enum was generated from the following file:

· Shell/src/main/java/ss/shell/utils/Logs.java

3.6 ss.shell.utils.Logs Class Reference

Classes

· enum LogLevel

The severity level of the logs.

• enum Store

Whether to store the logged output to the logs file.

Public Member Functions

void outputPrompt (String prompt, Store store)

Add the HTML prompt to the total output.

• void outputShort (String output, Store store)

Add the HTML short to the total output.

• void outputInfo (String output, Store store, LogLevel level)

Add the HTML info to the total output.

• String **getOuterTop** ()

Get the top of the HTML string.

• String getOuterBottom ()

Get the bottom of the HTML string.

• String getOutputTotal ()

Get the total output HTML.

void addToOutputTotal (String output)

Directly add extra text to the total output string.

Static Public Member Functions

• static void printLine (String text, Store store)

Prints a line (with

) of text and stores output in the logs file.

• static void **printLine** (String text, **LogLevel** level)

Prints a line (with

) of text and stores output in the logs file.

• static void **print** (String text, **Store** store)

Prints a line of text and stores output in the logs file.

• static void logToFile (String text)

Stores text in the logs file with a date and time stamp.

• static void logToFile (String[] text)

Stores text in the logs file with a date and time stamp.

• static String **getTwoDigits** (int input)

Returns the full 2 digits of input string.

3.6.1 Member Function Documentation

3.6.1.1 addToOutputTotal()

```
void ss.shell.utils.Logs.addToOutputTotal ( String \ output \ )
```

Directly add extra text to the total output string.

Parameters

```
output Text to add.
```

3.6.1.2 getOuterBottom()

```
String ss.shell.utils.Logs.getOuterBottom ( )
```

Get the bottom of the HTML string.

Returns

The bottom of the HTML string.

3.6.1.3 getOuterTop()

```
String ss.shell.utils.Logs.getOuterTop ( )
```

Get the top of the HTML string.

Returns

The top of the HTML string.

3.6.1.4 getOutputTotal()

```
String ss.shell.utils.Logs.getOutputTotal ( )
```

Get the total output HTML.

Returns

The whole HTML string to output.

3.6.1.5 getTwoDigits()

Returns the full 2 digits of input string.

Parameters

```
input Input int.
```

Returns

Input string with 2 digits.

3.6.1.6 logToFile() [1/2]

Stores text in the logs file with a date and time stamp.

Parameters

text	Input text.
------	-------------

3.6.1.7 logToFile() [2/2]

Stores text in the logs file with a date and time stamp.

Parameters

text	Input text.
------	-------------

3.6.1.8 outputInfo()

Add the HTML info to the total output.

Parameters

output	Output.
store	Whether to store the output to logs.
level	Log level.

3.6.1.9 outputPrompt()

Add the HTML prompt to the total output.

Parameters

prompt	Prompt to output.
store	Whether to store the output to logs.

3.6.1.10 outputShort()

Add the HTML short to the total output.

Parameters

output	Output.
store	Whether to store the output to logs.

3.6.1.11 print()

Prints a line of text and stores output in the logs file.

Parameters

text	Input text.
store	Store (p. 26) output in logs file.

3.6.1.12 printLine() [1/2]

Prints a line (with

) of text and stores output in the logs file.

Parameters

text	Input text.
level	Log level.

3.6.1.13 printLine() [2/2]

Prints a line (with

) of text and stores output in the logs file.

Parameters

text	Input text.
store	Tell it not to store output in logs file.

The documentation for this class was generated from the following file:

· Shell/src/main/java/ss/shell/utils/Logs.java

3.7 ss.shell.Shell Class Reference

Public Member Functions

- **Shell** (String input, String username, String cwd, UserTypes type, boolean isLoggedIn) Constructor for the class.
- void **prompt** ()

Constructor method for the class.

boolean getDoExit ()

Gets the exit status.

• String getUsername ()

Gets the username of the current user.

• String getCWD ()

Gets the cwd of the current user.

UserTypes getUserType ()

Gets the user type of the current user.

• boolean getIsLoggedIn ()

Gets the boolean of if the user is logged in or not.

• String **getOutput** ()

Gets the total output of all the html from the logs object.

3.7.1 Constructor & Destructor Documentation

3.7.1.1 Shell()

```
ss.shell.Shell.Shell (
String input,
String username,
String cwd,
UserTypes type,
boolean isLoggedIn )
```

Constructor for the class.

Parameters

input	The user input from the form.
username	The current username. "guest" is default.
cwd	The current working directory. Home path is default.
type	The current type of the user. "standard" is default.
is⊷	If the user is logged in or not.
LoggedIn	

3.7.2 Member Function Documentation

3.7.2.1 getCWD()

```
String ss.shell.Shell.getCWD ( )
```

Gets the cwd of the current user.

Returns

cwd of the current user.

3.7.2.2 getDoExit()

```
boolean ss.shell.Shell.getDoExit ( )
```

Gets the exit status.

Returns

if the user has entered an exit command.

3.7.2.3 getIsLoggedIn()

```
boolean ss.shell.Shell.getIsLoggedIn ( )
```

Gets the boolean of if the user is logged in or not.

Returns

the boolean of if the user is logged in or not.

3.7.2.4 getOutput()

```
String ss.shell.Shell.getOutput ( )
```

Gets the total output of all the html from the logs object.

Returns

the output html.

3.7.2.5 getUsername()

```
String ss.shell.Shell.getUsername ( )
```

Gets the username of the current user.

Returns

username of the current user.

3.7.2.6 getUserType()

```
UserTypes ss.shell.Shell.getUserType ( )
```

Gets the user type of the current user.

Returns

user type of the current user.

3.7.2.7 prompt()

```
void ss.shell.Shell.prompt ( )
```

Constructor method for the class.

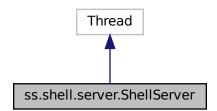
Handles all the logic to do with picking the command type.

The documentation for this class was generated from the following file:

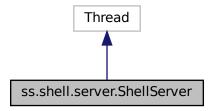
• Shell/src/main/java/ss/shell/Shell.java

3.8 ss.shell.server.ShellServer Class Reference

Inheritance diagram for ss.shell.server.ShellServer:



Collaboration diagram for ss.shell.server.ShellServer:



Public Member Functions

- ShellServer (String name, int port)
 - ShellServer (p. 24) constructor.
- void run ()

Run the server (overrides thread runnable).

• void stopServer (ServerSocket server)

Stops the server.

Static Public Member Functions

• static void main (String[] args)

Starts the servers.

3.8.1 Detailed Description

Author

pedro

Joshua

3.8.2 Constructor & Destructor Documentation

3.8.2.1 ShellServer()

```
ss.shell.server.ShellServer.ShellServer ( {\tt String} \ name, \\ {\tt int} \ port \ )
```

ShellServer (p. 24) constructor.

Parameters

name	The name of the server.
port	The port to listen on.

3.8.3 Member Function Documentation

3.8.3.1 main()

Starts the servers.

Parameters

```
args Java main args.
```

3.8.3.2 stopServer()

Stops the server.

Parameters

server The socket to close.

The documentation for this class was generated from the following file:

• Shell/src/main/java/ss/shell/server/ShellServer.java

3.9 ss.shell.utils.BuiltIns.ShellType Enum Reference

The different types of shells that can be run on this program.

Public Attributes

- LOCAL
- REMOTE

3.9.1 Detailed Description

The different types of shells that can be run on this program.

The documentation for this enum was generated from the following file:

· Shell/src/main/java/ss/shell/utils/BuiltIns.java

3.10 ss.shell.utils.Logs.Store Enum Reference

Whether to store the logged output to the logs file.

Public Attributes

- · YES
- NO

3.10.1 Detailed Description

Whether to store the logged output to the logs file.

The documentation for this enum was generated from the following file:

Shell/src/main/java/ss/shell/utils/Logs.java

3.11 ss.shell.utils.BuiltIns.UserTypes Enum Reference

The different types of user groups.

Public Attributes

- STANDARD
- SUPERUSER

3.11.1 Detailed Description

The different types of user groups.

The documentation for this enum was generated from the following file:

• Shell/src/main/java/ss/shell/utils/BuiltIns.java

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