

iLearnRW

0.0.1

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## **Chapter 1**

# **Main Page**

iLearnRW developer repository



## Chapter 2

# Log format

### Actions

- Add difficult word
- Remove difficult word

Profile	Marker	TimeStamp	Action	Value
child1	teacher1	2013-06-14	ADD	cat
child1	child1	2013-06-14	REMOVE	cat





## Chapter 3

# About

This document was generated using Doxygen from a number of (mainly) stub classes.

The documentation is published in the iLearnRW git repository. Currently located in the `playground/Data-Logger` directory.

To be able to build the documentation the following is required:

- Doxygen
- Latex
- Graphviz



## Chapter 4

# Todo List

**Class** [ilearnrw.datalogger.UserStore](#)

Replace storage backed with SQL database.



## Chapter 5

# Namespace Documentation

### 5.1 Package ilearnrw

#### Packages

- package [datalogger](#)  
*[DataLogger](#) package.*
- package [prototype](#)
- package [user](#)

### 5.2 Package ilearnrw.datalogger

[DataLogger](#) package.

#### Classes

- class [DataLogger](#)
- interface [IDataLogger](#)
- interface [ILoginProvider](#)
- interface [IProfileAccessUpdater](#)  
*Interface to update profiles in the iLearnRW system.*
- class [LoginDetails](#)
- class [ProfileAccessUpdater](#)
- class [UserStore](#)  
*The [UserStore](#) is used to create and store user objects persistantly.*

#### 5.2.1 Detailed Description

[DataLogger](#) package.

#### Note

Exactly what package the [IProfileAccessUpdater](#) should be part of is still unknown.

## 5.3 Package ilearnrw.prototype

### Packages

- package [application](#)

## 5.4 Package ilearnrw.prototype.application

### Classes

- class [ConsoleMenu](#)
- class [ConsoleMenuAction](#)
- class [DatabaseManager](#)
- class [Program](#)

## 5.5 Package ilearnrw.user

### Classes

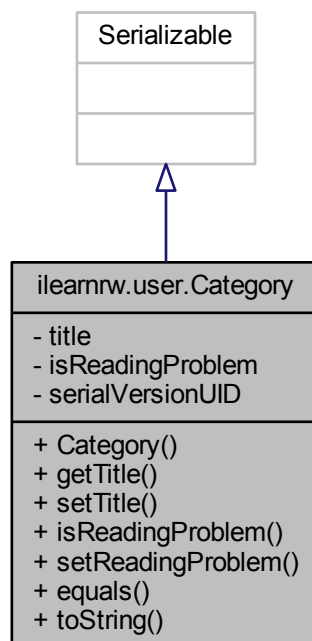
- class [Category](#)
- enum [GameAction](#)
- class [IlearnException](#)
- enum [LanguageCode](#)
- class [ProblemDefinition](#)
- class [ProblemDefinitionIndex](#)
- class [Subcategory](#)
- class [Tester](#)
- class [User](#)
- class [UserAction](#)
- class [UserDetails](#)
- class [UserPreferences](#)
- class [UserProblem](#)
- class [UserProblemsList](#)
- class [UserProfile](#)
- class [UserSession](#)

## Chapter 6

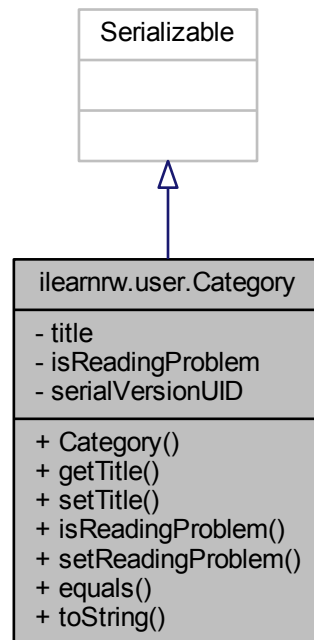
# Class Documentation

### 6.1 ilearnrw.user.Category Class Reference

Inheritance diagram for ilearnrw.user.Category:



Collaboration diagram for `ilearnrw.user.Category`:



## Public Member Functions

- [Category](#) (String [title](#), boolean [isReadingProblem](#))
- String [getTitle](#) ()
- void [setTitle](#) (String [title](#))
- boolean [isReadingProblem](#) ()
- void [setReadingProblem](#) (boolean [isReadingProblem](#))
- boolean [equals](#) (Object obj)
- String [toString](#) ()

## Private Attributes

- String [title](#)
- boolean [isReadingProblem](#)

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

## 6.1.1 Constructor & Destructor Documentation

### 6.1.1.1 `ilearnrw.user.Category.Category ( String title, boolean isReadingProblem )`

References [ilearnrw.user.Category.isReadingProblem\(\)](#), and [ilearnrw.user.Category.title](#).



Referenced by [ilearnrw.user.Category.equals\(\)](#).

## 6.1.2 Member Function Documentation

### 6.1.2.1 boolean ilearnrw.user.Category.equals ( Object *obj* )

References [ilearnrw.user.Category.Category\(\)](#), [ilearnrw.user.Category.getTitle\(\)](#), and [ilearnrw.user.Category.title](#).

### 6.1.2.2 String ilearnrw.user.Category.getTitle ( )

References [ilearnrw.user.Category.title](#).

Referenced by [ilearnrw.user.Category.equals\(\)](#), and [ilearnrw.user.Subcategory.equals\(\)](#).

### 6.1.2.3 boolean ilearnrw.user.Category.isReadingProblem ( )

Referenced by [ilearnrw.user.Category.Category\(\)](#), [ilearnrw.user.Category.setReadingProblem\(\)](#), and [ilearnrw.user.Category.toString\(\)](#).

### 6.1.2.4 void ilearnrw.user.Category.setReadingProblem ( boolean *isReadingProblem* )

References [ilearnrw.user.Category.isReadingProblem\(\)](#).

### 6.1.2.5 void ilearnrw.user.Category.setTitle ( String *title* )

References [ilearnrw.user.Category.title](#).

### 6.1.2.6 String ilearnrw.user.Category.toString ( )

References [ilearnrw.user.Category.isReadingProblem\(\)](#), and [ilearnrw.user.Category.title](#).

## 6.1.3 Member Data Documentation

### 6.1.3.1 boolean ilearnrw.user.Category.isReadingProblem [private]

### 6.1.3.2 final long ilearnrw.user.Category.serialVersionUID = 1L [static],[private]

### 6.1.3.3 String ilearnrw.user.Category.title [private]

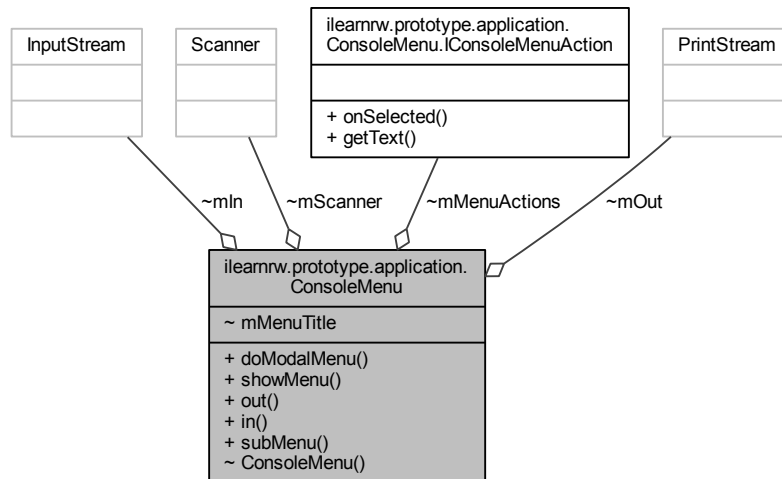
Referenced by [ilearnrw.user.Category.Category\(\)](#), [ilearnrw.user.Category.equals\(\)](#), [ilearnrw.user.Category.getTitle\(\)](#), [ilearnrw.user.Category.setTitle\(\)](#), and [ilearnrw.user.Category.toString\(\)](#).

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[Category.java](#)

## 6.2 ilearnrw.prototype.application.ConsoleMenu Class Reference

Collaboration diagram for ilearnrw.prototype.application.ConsoleMenu:



### Classes

- enum [EConsoleMenuActionResult](#)
- interface [IConsoleMenuAction](#)

### Public Member Functions

- void [doModalMenu](#) ()
- [EConsoleMenuActionResult](#) [showMenu](#) ()
- [PrintStream](#) [out](#) ()
- [Scanner](#) [in](#) ()
- [ConsoleMenu](#) [subMenu](#) (String menuTitle, [IConsoleMenuAction](#)[] menuActions)

### Package Functions

- [ConsoleMenu](#) ([PrintStream](#) outputStream, [InputStream](#) inStream, String menuTitle, [IConsoleMenuAction](#)[] menuActions)

### Package Attributes

- [PrintStream](#) [mOut](#)
- [InputStream](#) [mIn](#)
- [Scanner](#) [mScanner](#)
- String [mMenuTitle](#)
- [IConsoleMenuAction](#)[] [mMenuActions](#)

### 6.2.1 Constructor & Destructor Documentation

6.2.1.1 `ilearnrw.prototype.application.ConsoleMenu.ConsoleMenu ( PrintStream outStream, InputStream inStream, String menuTitle, IConsoleMenuAction[] menuActions )` [package]

References [ilearnrw.prototype.application.ConsoleMenu.mIn](#), [ilearnrw.prototype.application.ConsoleMenu.mMenuActions](#), [ilearnrw.prototype.application.ConsoleMenu.mMenuTitle](#), [ilearnrw.prototype.application.ConsoleMenu.mOut](#), and [ilearnrw.prototype.application.ConsoleMenu.mScanner](#).

Referenced by [ilearnrw.prototype.application.ConsoleMenu.subMenu\(\)](#).

### 6.2.2 Member Function Documentation

6.2.2.1 `void ilearnrw.prototype.application.ConsoleMenu.doModalMenu ( )`

References [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.menuBreak](#), [ilearnrw.prototype.application.ConsoleMenu.showMenu\(\)](#), and [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.showThisMenuAgain](#).

Referenced by [ilearnrw.prototype.application.Program.main\(\)](#).

6.2.2.2 `Scanner ilearnrw.prototype.application.ConsoleMenu.in ( )`

References [ilearnrw.prototype.application.ConsoleMenu.mScanner](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

6.2.2.3 `PrintStream ilearnrw.prototype.application.ConsoleMenu.out ( )`

References [ilearnrw.prototype.application.ConsoleMenu.mOut](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

6.2.2.4 `EConsoleMenuActionResult ilearnrw.prototype.application.ConsoleMenu.showMenu ( )`

References [ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction.getText\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.mMenuActions](#), [ilearnrw.prototype.application.ConsoleMenu.mMenuTitle](#), [ilearnrw.prototype.application.ConsoleMenu.mOut](#), [ilearnrw.prototype.application.ConsoleMenu.mScanner](#), [ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction.onSelected\(\)](#), and [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.showThisMenuAgain](#).

Referenced by [ilearnrw.prototype.application.ConsoleMenu.doModalMenu\(\)](#).

6.2.2.5 `ConsoleMenu ilearnrw.prototype.application.ConsoleMenu.subMenu ( String menuTitle, IConsoleMenuAction[] menuActions )`

References [ilearnrw.prototype.application.ConsoleMenu.ConsoleMenu\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.mIn](#), and [ilearnrw.prototype.application.ConsoleMenu.mOut](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

### 6.2.3 Member Data Documentation

#### 6.2.3.1 `InputStream ilearnrw.prototype.application.ConsoleMenu.mIn` [package]

Referenced by [ilearnrw.prototype.application.ConsoleMenu.ConsoleMenu\(\)](#), and [ilearnrw.prototype.application.ConsoleMenu.subMenu\(\)](#).

#### 6.2.3.2 `IConsoleMenuAction [] ilearnrw.prototype.application.ConsoleMenu.mMenuActions` [package]

Referenced by [ilearnrw.prototype.application.ConsoleMenu.ConsoleMenu\(\)](#), and [ilearnrw.prototype.application.ConsoleMenu.showMenu\(\)](#).

#### 6.2.3.3 `String ilearnrw.prototype.application.ConsoleMenu.mMenuTitle` [package]

Referenced by [ilearnrw.prototype.application.ConsoleMenu.ConsoleMenu\(\)](#), and [ilearnrw.prototype.application.ConsoleMenu.showMenu\(\)](#).

#### 6.2.3.4 `PrintStream ilearnrw.prototype.application.ConsoleMenu.mOut` [package]

Referenced by [ilearnrw.prototype.application.ConsoleMenu.ConsoleMenu\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.out\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.showMenu\(\)](#), and [ilearnrw.prototype.application.ConsoleMenu.subMenu\(\)](#).

#### 6.2.3.5 `Scanner ilearnrw.prototype.application.ConsoleMenu.mScanner` [package]

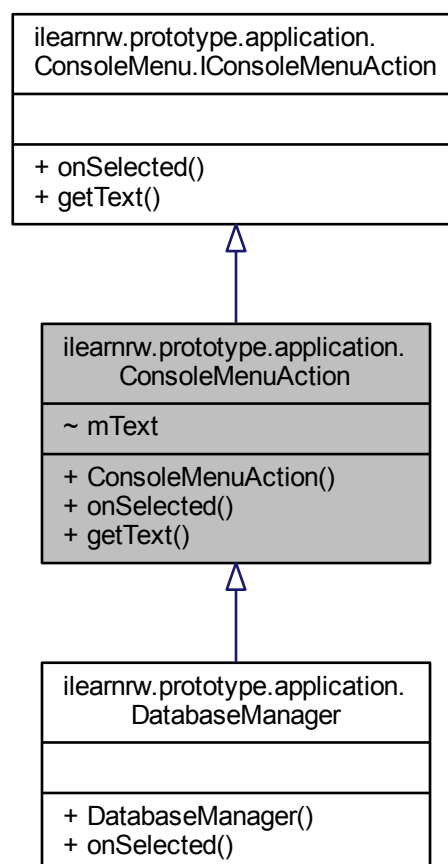
Referenced by [ilearnrw.prototype.application.ConsoleMenu.ConsoleMenu\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.in\(\)](#), and [ilearnrw.prototype.application.ConsoleMenu.showMenu\(\)](#).

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

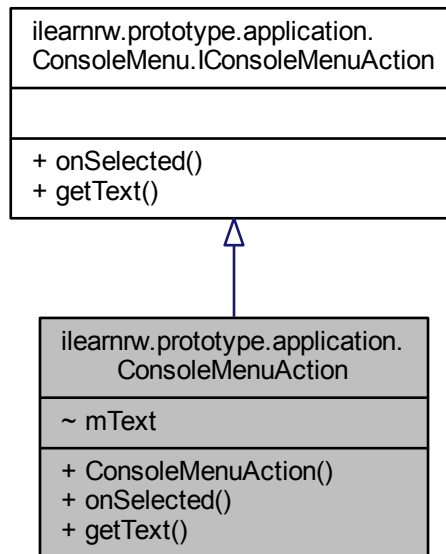
- `C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/ConsoleMenu.java`

## 6.3 ilearnrw.prototype.application.ConsoleMenuAction Class Reference

Inheritance diagram for ilearnrw.prototype.application.ConsoleMenuAction:



Collaboration diagram for `ilearnrw.prototype.application.ConsoleMenuAction`:



## Public Member Functions

- [ConsoleMenuAction](#) (String text)
- [EConsoleMenuActionResult onSelected](#) ([ConsoleMenu](#) menu)
- String [getText](#) ()

## Package Attributes

- String [mText](#)

### 6.3.1 Constructor & Destructor Documentation

#### 6.3.1.1 `ilearnrw.prototype.application.ConsoleMenuAction.ConsoleMenuAction ( String text )`

References [ilearnrw.prototype.application.ConsoleMenuAction.mText](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

### 6.3.2 Member Function Documentation

#### 6.3.2.1 `String ilearnrw.prototype.application.ConsoleMenuAction.getText ( )`

Implements [ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction](#).

References [ilearnrw.prototype.application.ConsoleMenuAction.mText](#).

### 6.3.2.2 EConsoleMenuActionResult ilearnrw.prototype.application.ConsoleMenuAction.onSelected ( ConsoleMenu menu )

Implements [ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction](#).

References [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.menuBreak](#).

## 6.3.3 Member Data Documentation

### 6.3.3.1 String ilearnrw.prototype.application.ConsoleMenuAction.mText [package]

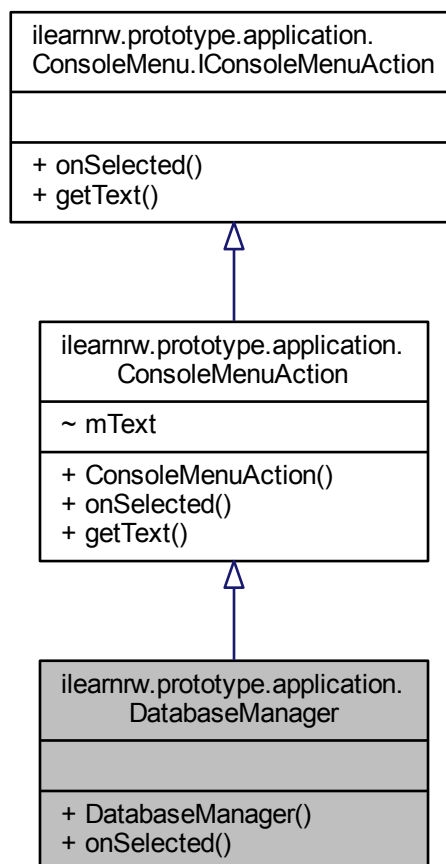
Referenced by [ilearnrw.prototype.application.ConsoleMenuAction.ConsoleMenuAction\(\)](#), and [ilearnrw.prototype.application.ConsoleMenuAction.getText\(\)](#).

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

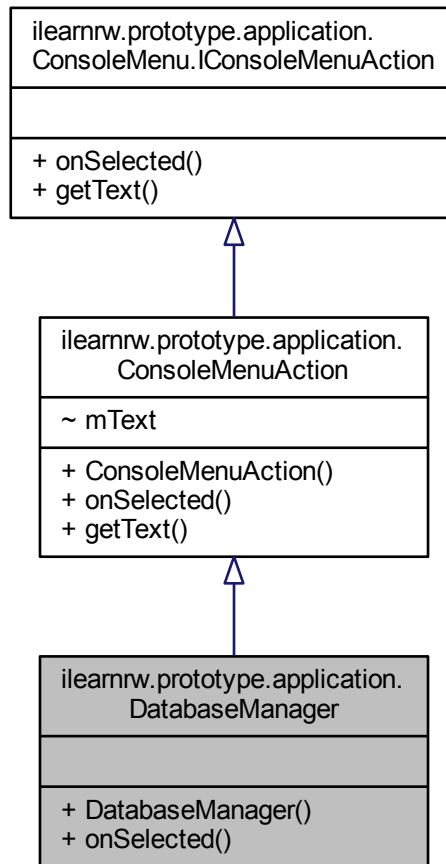
- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/[ConsoleMenuAction.java](#)

## 6.4 ilearnrw.prototype.application.DatabaseManager Class Reference

Inheritance diagram for ilearnrw.prototype.application.DatabaseManager:



Collaboration diagram for ilearnrw.prototype.application.DatabaseManager:



## Classes

- interface [ISelectUser](#)

## Public Member Functions

- [DatabaseManager](#) (String text)
- [EConsoleMenuActionResult onSelected](#) ([ConsoleMenu](#) menu)

## Additional Inherited Members

### 6.4.1 Constructor & Destructor Documentation

#### 6.4.1.1 ilearnrw.prototype.application.DatabaseManager.DatabaseManager ( String text )

### 6.4.2 Member Function Documentation



#### 6.4.2.1 EConsoleMenuActionResult ilearnrw.prototype.application.DatabaseManager.onSelected ( ConsoleMenu menu )

Implements [ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction](#).

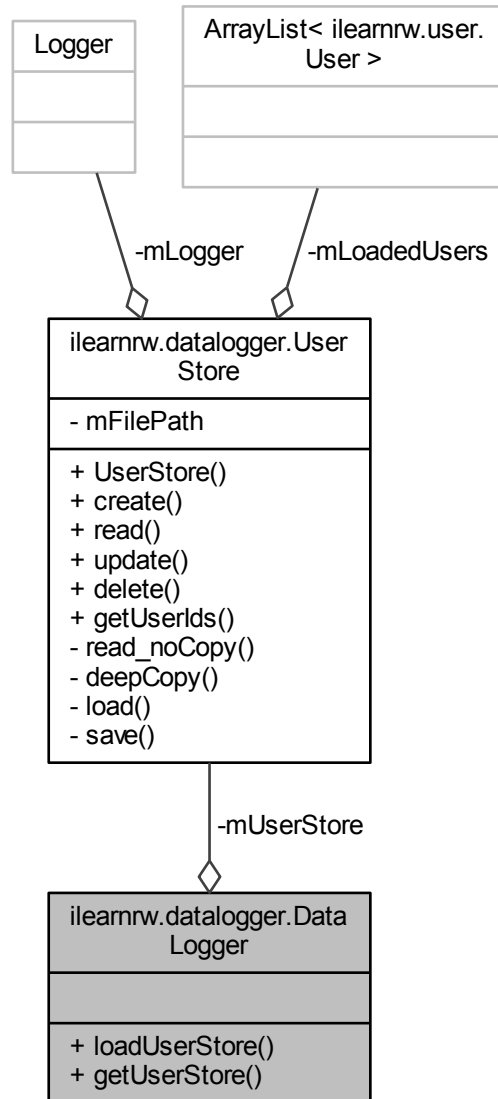
References [ilearnrw.prototype.application.ConsoleMenuAction.ConsoleMenuAction\(\)](#), [ilearnrw.datalogger.UserStore.create\(\)](#), [ilearnrw.datalogger.UserStore.delete\(\)](#), [ilearnrw.prototype.application.Program.gDataLogger](#), [ilearnrw.user.User.getDetails\(\)](#), [ilearnrw.user.User.getUserId\(\)](#), [ilearnrw.datalogger.UserStore.getUserIds\(\)](#), [ilearnrw.user.UserDetails.getUsername\(\)](#), [ilearnrw.datalogger.DataLogger.getUserStore\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.in\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.menu-Break](#), [ilearnrw.prototype.application.ConsoleMenu.out\(\)](#), [ilearnrw.datalogger.UserStore.read\(\)](#), [ilearnrw.prototype.application.DatabaseManager.ISelectUser.selectUser\(\)](#), [ilearnrw.user.UserDetails.setUsername\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.showThisMenuAgain](#), [ilearnrw.prototype.application.ConsoleMenu.subMenu\(\)](#), and [ilearnrw.datalogger.UserStore.update\(\)](#).

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

- [C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/DatabaseManager.java](#)

## 6.5 ilearnrw.datalogger.DataLogger Class Reference

Collaboration diagram for ilearnrw.datalogger.DataLogger:



### Public Member Functions

- boolean `loadUserStore` (String filePath)
- `UserStore` `getUserStore` ()

### Private Attributes

- `UserStore` `mUserStore` = null

### 6.5.1 Detailed Description

[DataLogger](#) class.

### 6.5.2 Member Function Documentation

#### 6.5.2.1 `UserStore` `ilearnrw.datalogger.DataLogger.getUserStore ( )`

##### Returns

The [UserStore](#) if loaded, null otherwise.

References [ilearnrw.datalogger.DataLogger.mUserStore](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

#### 6.5.2.2 `boolean` `ilearnrw.datalogger.DataLogger.loadUserStore ( String filePath )`

Loads the [UserStore](#) from disk.

##### Note

`filePath` does not have to exist. But the directory it is in has to.

##### Parameters

<i>filePath</i>	FilePath to a disk copy.
-----------------	--------------------------

##### Returns

true if successful. false if already loaded.

References [ilearnrw.datalogger.DataLogger.mUserStore](#).

Referenced by [ilearnrw.prototype.application.Program.main\(\)](#).

### 6.5.3 Member Data Documentation

#### 6.5.3.1 `UserStore` `ilearnrw.datalogger.DataLogger.mUserStore = null` `[private]`

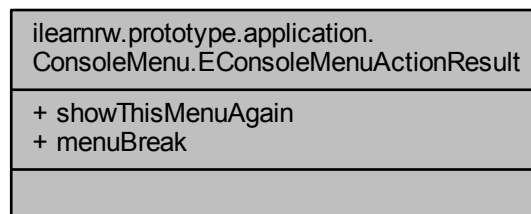
Referenced by [ilearnrw.datalogger.DataLogger.getUserStore\(\)](#), and [ilearnrw.datalogger.DataLogger.loadUserStore\(\)](#).

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

- `C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/DataLogger.java`

## 6.6 ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult Enum Reference

Collaboration diagram for ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult:



### Public Attributes

- [showThisMenuAgain](#)
- [menuBreak](#)

### 6.6.1 Member Data Documentation

#### 6.6.1.1 ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.menuBreak

Referenced by [ilearnrw.prototype.application.ConsoleMenu.doModalMenu\(\)](#), [ilearnrw.prototype.application.-Program.main\(\)](#), [ilearnrw.prototype.application.ConsoleMenuAction.onSelected\(\)](#), and [ilearnrw.prototype.-application.DatabaseManager.onSelected\(\)](#).

#### 6.6.1.2 ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.showThisMenuAgain

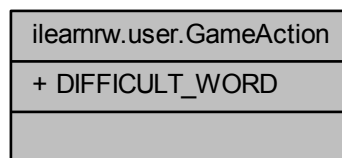
Referenced by [ilearnrw.prototype.application.ConsoleMenu.doModalMenu\(\)](#), [ilearnrw.prototype.application.-Program.main\(\)](#), [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#), and [ilearnrw.prototype.application.-ConsoleMenu.showMenu\(\)](#).

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

- [C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/ConsoleMenu.java](#)

## 6.7 ilearnrw.user.GameAction Enum Reference

Collaboration diagram for ilearnrw.user.GameAction:



### Public Attributes

- [DIFFICULT\\_WORD](#)

### 6.7.1 Member Data Documentation

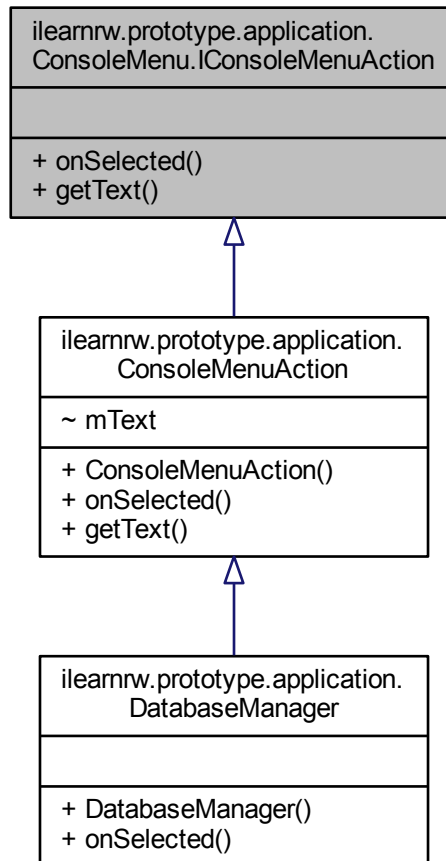
#### 6.7.1.1 ilearnrw.user.GameAction.DIFFICULT\_WORD

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

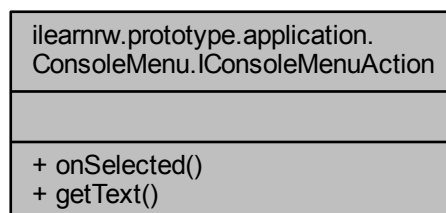
- [C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/GameAction.java](#)

## 6.8 ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction Interface Reference

Inheritance diagram for ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction:



Collaboration diagram for ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction:



## Public Member Functions

- [EConsoleMenuActionResult](#) [onSelected](#) ([ConsoleMenu](#) menu)
- String [getText](#) ()

### 6.8.1 Member Function Documentation

#### 6.8.1.1 String ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction.getText ( )

Implemented in [ilearnrw.prototype.application.ConsoleMenuAction](#).

Referenced by [ilearnrw.prototype.application.ConsoleMenu.showMenu\(\)](#).

#### 6.8.1.2 EConsoleMenuActionResult ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction.onSelected ( ConsoleMenu menu )

Implemented in [ilearnrw.prototype.application.DatabaseManager](#), and [ilearnrw.prototype.application.ConsoleMenuAction](#).

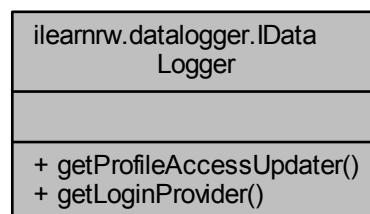
Referenced by [ilearnrw.prototype.application.ConsoleMenu.showMenu\(\)](#).

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/[ConsoleMenu.java](#)

## 6.9 ilearnrw.datalogger.IDataLogger Interface Reference

Collaboration diagram for ilearnrw.datalogger.IDataLogger:



## Public Member Functions

- [IProfileAccessUpdater](#) [getProfileAccessUpdater](#) ()
- [ILoginProvider](#) [getLoginProvider](#) ()

### 6.9.1 Member Function Documentation

#### 6.9.1.1 ILoginProvider ilearnrw.datalogger.IDataLogger.getLoginProvider ( )

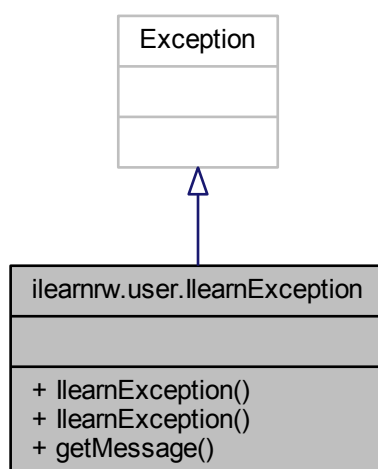
### 6.9.1.2 IProfileAccessUpdater ilearnrw.datalogger.IDataLogger.getProfileAccessUpdater ( )

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/[IDataLogger.java](#)

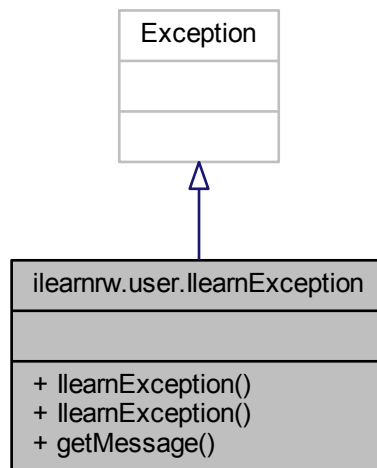
## 6.10 ilearnrw.user.IlearnException Class Reference

Inheritance diagram for ilearnrw.user.IlearnException:





Collaboration diagram for ilearnrw.user.IlearnException:



## Public Member Functions

- [IlearnException](#) (String message)
- [IlearnException](#) (String message, Throwable throwable)
- String [getMessage](#) ()

## 6.10.1 Constructor & Destructor Documentation

6.10.1.1 `ilearnrw.user.IlearnException.IlearnException ( String message )`

6.10.1.2 `ilearnrw.user.IlearnException.IlearnException ( String message, Throwable throwable )`

## 6.10.2 Member Function Documentation

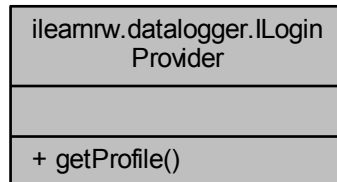
6.10.2.1 `String ilearnrw.user.IlearnException.getMessage ( )`

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

- `C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/IlearnException.java`

## 6.11 ilearnrw.datalogger.ILoginProvider Interface Reference

Collaboration diagram for ilearnrw.datalogger.ILoginProvider:



### Public Member Functions

- [UserProfile](#) `getProfile` (String *UserName*, String *Password*)

*Authenticates a User.*

### 6.11.1 Member Function Documentation

#### 6.11.1.1 [UserProfile](#) `ilearnrw.datalogger.ILoginProvider.getProfile` ( String *UserName*, String *Password* )

Authenticates a User.

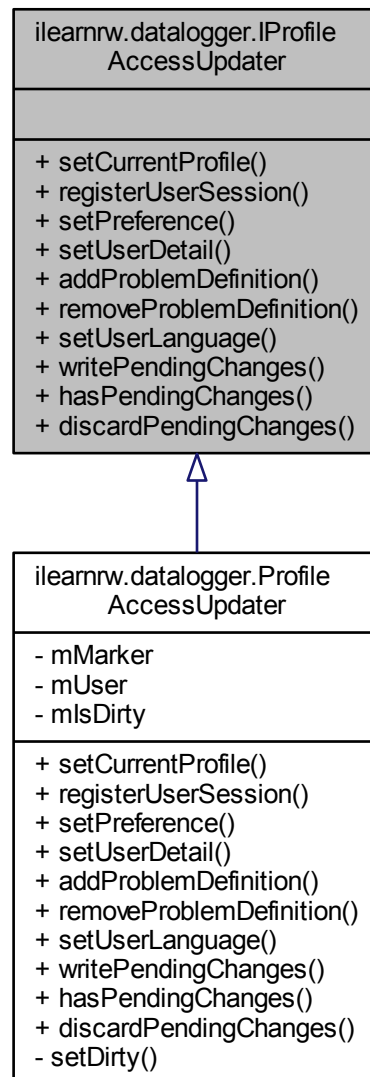
The documentation for this interface was generated from the following file:

- `C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/ILoginProider.java`

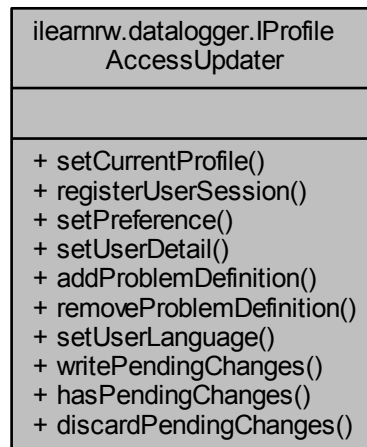
## 6.12 ilearnrw.datalogger.IProfileAccessUpdater Interface Reference

Interface to update profiles in the iLearnRW system.

Inheritance diagram for ilearnrw.datalogger.IProfileAccessUpdater:



Collaboration diagram for `ilearnrw.datalogger.IProfileAccessUpdater`:



## Classes

- class [PendingChangesAvailable](#)  
*Indicates that an action cannot be performed due to pending changes.*
- class [PermissionException](#)  
*The marker does not have permission to perform the requested change.*

## Public Member Functions

- boolean [setCurrentProfile](#) ([UserProfile](#) profile, [UserProfile](#) markerProfile) throws [PermissionException](#), [PendingChangesAvailable](#)  
*Sets the userprofile to work with and who will be the *marker* for the changes.*
- boolean [registerUserSession](#) ([UserSession](#) session)  
*Registers a new User session in the log.*
- boolean [setPreference](#) ([UserPreferences](#) preferences)  
*Registers a change to the users preferences.*
- boolean [setUserDetail](#) ([UserDetails](#) userDetails)  
*Updates a UserDetail.*
- boolean [addProblemDefinition](#) (String URI)  
*Adds a predefined ProblemDefinition to the user profile.*
- boolean [removeProblemDefinition](#) (String URI)  
*Removes a ProblemDefinition.*
- boolean [setUserLanguage](#) ([LanguageCode](#) Language)  
*Sets the userlanguage.*
- [UserProfile](#) [writePendingChanges](#) ()  
*Writes unwritten changes to the back end (persistent storage).*
- boolean [hasPendingChanges](#) ()  
*Checks if there are any changes pending.*
- boolean [discardPendingChanges](#) ()  
*Discards all pending changes.*

### 6.12.1 Detailed Description

Interface to update profiles in the iLearnRW system.

This interface assumes that `Apps` would get a read-only copy of the users profile and would then have to use this interface to make changes to the profile. When the profile has been updated a new readonly copy would have to be fetched.

A nice side-effect is that we can make sure to log all changes to the profile.

Updater also manages

Registry - Handles/stores users/profiles.

UserAdd/delete etc.. Get user (given userid, password)

### 6.12.2 Member Function Documentation

#### 6.12.2.1 `boolean ilearnrw.datalogger.IProfileAccessUpdater.addProblemDefinition ( String URI )`

Adds a predefined `ProblemDefinition` to the user profile.

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.2 `boolean ilearnrw.datalogger.IProfileAccessUpdater.discardPendingChanges ( )`

Discards all pending changes.

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.3 `boolean ilearnrw.datalogger.IProfileAccessUpdater.hasPendingChanges ( )`

Checks if there are any changes pending.

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.4 `boolean ilearnrw.datalogger.IProfileAccessUpdater.registerUserSession ( UserSession session )`

Registers a new User session in the log.

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.5 `boolean ilearnrw.datalogger.IProfileAccessUpdater.removeProblemDefinition ( String URI )`

Removes a `ProblemDefinition`.

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.6 `boolean ilearnrw.datalogger.IProfileAccessUpdater.setCurrentProfile ( UserProfile profile, UserProfile markerProfile ) throws PermissionException, PendingChangesAvailable`

Sets the userprofile to work with and who will be the `marker` for the changes.

Doing this once saves the application from passing the userprofile to all functions.

The `marker` can be the same as the profile to be edited.

## Exceptions

<a href="#"><i>PermissionException</i></a>	Thrown when the admin profile does not have permissions to update the profile.
<a href="#"><i>PendingChangesAvailable</i></a>	Thrown when there are pending changes are available.

## Parameters

<i>profile</i>	Profile of the user to update
<i>markerProfile</i>	Profile of the user who is doing the update

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.7 boolean ilearnrw.datalogger.IProfileAccessUpdater.setPreference ( **UserPreferences** *preferences* )

Registers a change to the users preferences.

Should changes to user preferences be logged so that teachers/experts can be notified/see that a preference has been changed?

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.8 boolean ilearnrw.datalogger.IProfileAccessUpdater.setUserDetail ( **UserDetails** *userDetails* )

Updates a UserDetail.

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.9 boolean ilearnrw.datalogger.IProfileAccessUpdater.setUserLanguage ( **LanguageCode** *Language* )

Sets the userlanguage.

Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

#### 6.12.2.10 **UserProfile** ilearnrw.datalogger.IProfileAccessUpdater.writePendingChanges ( )

Writes unwritten changes to the back end (persistent storage).

This will flush all pending operations in the same order as they are added. This is important if for example the same preference is set twice.

## Returns

The new profile after the changes has been applied.

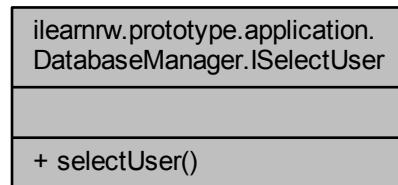
Implemented in [ilearnrw.datalogger.ProfileAccessUpdater](#).

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/[IProfileAccessUpdater.java](#)

## 6.13 ilearnrw.prototype.application.DatabaseManager.ISelectUser Interface Reference

Collaboration diagram for ilearnrw.prototype.application.DatabaseManager.ISelectUser:



### Public Member Functions

- [User selectUser](#) ([ConsoleMenu](#) menu)

### 6.13.1 Member Function Documentation

#### 6.13.1.1 User ilearnrw.prototype.application.DatabaseManager.ISelectUser.selectUser ( [ConsoleMenu](#) menu )

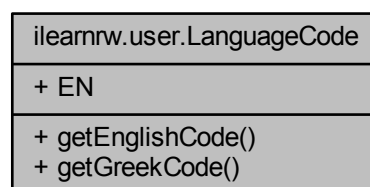
Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/[DatabaseManager.java](#)

## 6.14 ilearnrw.user.LanguageCode Enum Reference

Collaboration diagram for ilearnrw.user.LanguageCode:



### Static Public Member Functions

- static byte [getEnglishCode](#) ()
- static byte [getGreekCode](#) ()

## Public Attributes

- [EN](#)

### 6.14.1 Member Function Documentation

6.14.1.1 `static byte ilearnrw.user.LanguageCode.getEnglishCode ( ) [static]`

Referenced by [ilearnrw.user.UserDetails.setLanguage\(\)](#).

6.14.1.2 `static byte ilearnrw.user.LanguageCode.getGreekCode ( ) [static]`

### 6.14.2 Member Data Documentation

6.14.2.1 `ilearnrw.user.LanguageCode.EN`

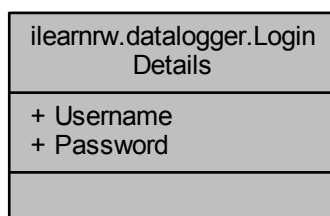
Referenced by [ilearnrw.user.UserProblemsList.loadProblems\(\)](#), [ilearnrw.user.UserDetails.setLanguage\(\)](#), and [ilearnrw.user.UserProfile.UserProfile\(\)](#).

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

- `C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/LanguageCode.java`

## 6.15 ilearnrw.datalogger.LoginDetails Class Reference

Collaboration diagram for `ilearnrw.datalogger.LoginDetails`:



## Public Attributes

- String [Username](#)
- String [Password](#)

### 6.15.1 Member Data Documentation

6.15.1.1 `String ilearnrw.datalogger.LoginDetails.Password`

Referenced by [ilearnrw.prototype.application.Program.getLoginDetails\(\)](#).



## 6.15.1.2 String ilearnrw.datalogger.LoginDetails.Username

Referenced by [ilearnrw.prototype.application.Program.getLoginDetails\(\)](#).

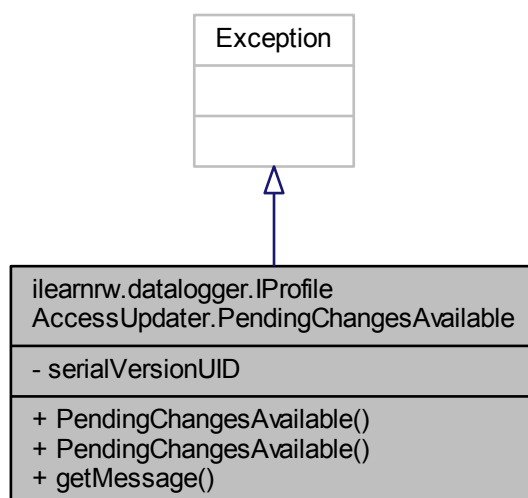
The documentation for this class was generated from the following file:

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/[LoginDetails.java](#)

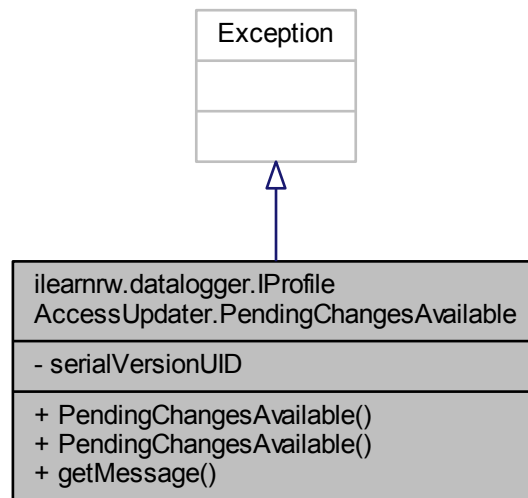
## 6.16 ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable Class Reference

Indicates that an action cannot be performed due to pending changes.

Inheritance diagram for ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable:



Collaboration diagram for `ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable`:



## Public Member Functions

- [PendingChangesAvailable](#) (String message)
- [PendingChangesAvailable](#) (String message, Throwable throwable)
- String [getMessage](#) ()

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

## 6.16.1 Detailed Description

Indicates that an action cannot be performed due to pending changes.

If the action was to be performed the pending changes would be lost.

## 6.16.2 Constructor & Destructor Documentation

6.16.2.1 `ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable.PendingChangesAvailable ( String message )`

6.16.2.2 `ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable.PendingChangesAvailable ( String message, Throwable throwable )`

## 6.16.3 Member Function Documentation

6.16.3.1 `String ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable.getMessage ( )`

## 6.16.4 Member Data Documentation

```
6.16.4.1 final long ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable.serialVersionUID = 1L [static],  
[private]
```

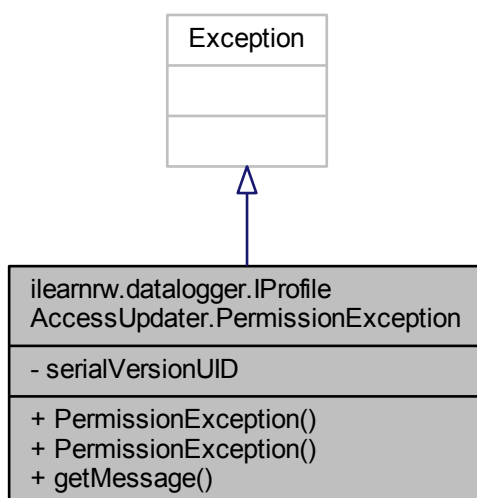
The documentation for this class was generated from the following file:

- <C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/IProfileAccessUpdater.java>

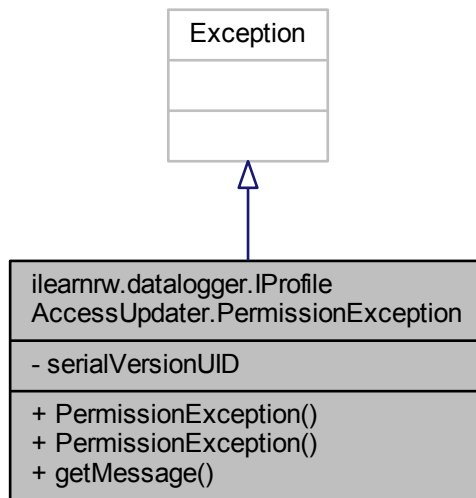
## 6.17 ilearnrw.datalogger.IProfileAccessUpdater.PermissionException Class Reference

The marker does not have permission to perform the requested change.

Inheritance diagram for ilearnrw.datalogger.IProfileAccessUpdater.PermissionException:



Collaboration diagram for `ilearnrw.datalogger.IProfileAccessUpdater.PermissionException`:



## Public Member Functions

- [PermissionException](#) (String message)
- [PermissionException](#) (String message, Throwable throwable)
- String [getMessage](#) ()

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

## 6.17.1 Detailed Description

The marker does not have permission to perform the requested change.

## 6.17.2 Constructor & Destructor Documentation

6.17.2.1 `ilearnrw.datalogger.IProfileAccessUpdater.PermissionException.PermissionException ( String message )`

6.17.2.2 `ilearnrw.datalogger.IProfileAccessUpdater.PermissionException.PermissionException ( String message, Throwable throwable )`

## 6.17.3 Member Function Documentation

6.17.3.1 `String ilearnrw.datalogger.IProfileAccessUpdater.PermissionException.getMessage ( )`

## 6.17.4 Member Data Documentation

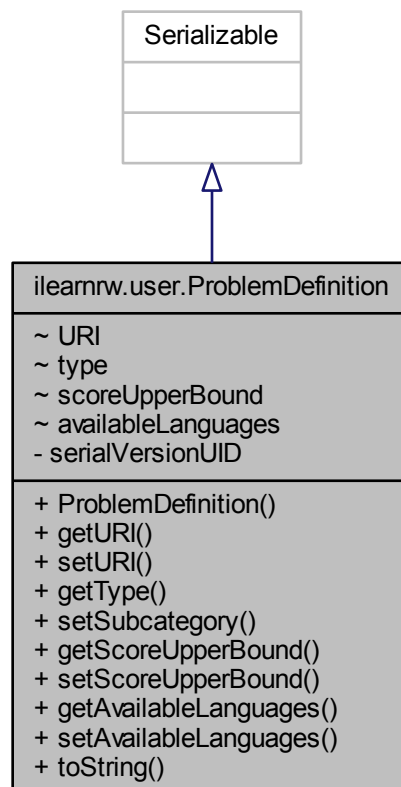
6.17.4.1 `final long ilearnrw.datalogger.IProfileAccessUpdater.PermissionException.serialVersionUID = 1L` [static],  
[private]

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

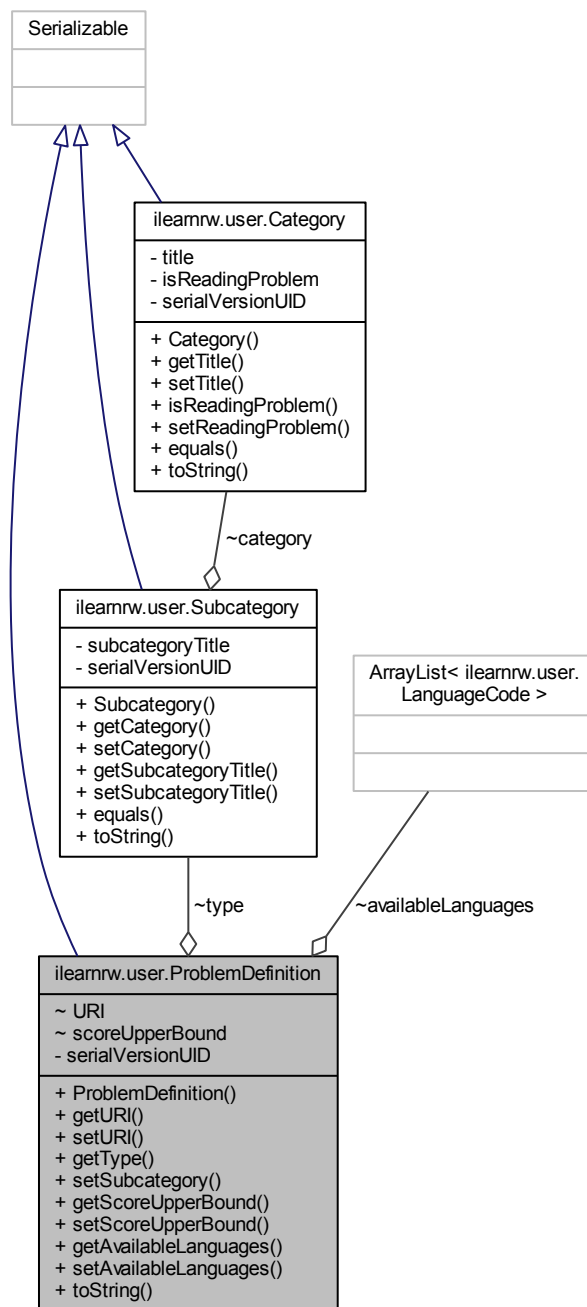
- `C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/IProfileAccessUpdater.java`

## 6.18 ilearnrw.user.ProblemDefinition Class Reference

Inheritance diagram for ilearnrw.user.ProblemDefinition:



Collaboration diagram for ilearnrw.user.ProblemDefinition:



## Public Member Functions

- `ProblemDefinition` (String `URI`, `Subcategory` type, int `scoreUpperBound`, ArrayList< `LanguageCode` > `availableLanguages`)
- String `getURI` ()
- void `setURI` (String `uRI`)
- `Subcategory` `getType` ()
- void `setSubcategory` (`Subcategory` type)

- int [getScoreUpperBound](#) ()
- void [setScoreUpperBound](#) (int [scoreUpperBound](#))
- ArrayList< [LanguageCode](#) > [getAvailableLanguages](#) ()
- void [setAvailableLanguages](#) (ArrayList< [LanguageCode](#) > [availableLanguages](#))
- String [toString](#) ()

### Package Attributes

- String [URI](#)
- [Subcategory](#) type
- int [scoreUpperBound](#)
- ArrayList< [LanguageCode](#) > [availableLanguages](#)

### Static Private Attributes

- static final long [serialVersionUID](#) = 1L

## 6.18.1 Constructor & Destructor Documentation

6.18.1.1 `ilearnrw.user.ProblemDefinition.ProblemDefinition ( String URI, Subcategory type, int scoreUpperBound, ArrayList< LanguageCode > availableLanguages )`

References [ilearnrw.user.ProblemDefinition.availableLanguages](#), [ilearnrw.user.ProblemDefinition.scoreUpperBound](#), [ilearnrw.user.ProblemDefinition.type](#), and [ilearnrw.user.ProblemDefinition.URI](#).

## 6.18.2 Member Function Documentation

6.18.2.1 `ArrayList<LanguageCode> ilearnrw.user.ProblemDefinition.getAvailableLanguages ( )`

References [ilearnrw.user.ProblemDefinition.availableLanguages](#).

Referenced by [ilearnrw.user.UserProblemsList.loadProblems\(\)](#).

6.18.2.2 `int ilearnrw.user.ProblemDefinition.getScoreUpperBound ( )`

References [ilearnrw.user.ProblemDefinition.scoreUpperBound](#).

Referenced by [ilearnrw.user.UserProblem.UserProblem\(\)](#).

6.18.2.3 `Subcategory ilearnrw.user.ProblemDefinition.getType ( )`

References [ilearnrw.user.ProblemDefinition.type](#).

6.18.2.4 `String ilearnrw.user.ProblemDefinition.getURI ( )`

References [ilearnrw.user.ProblemDefinition.URI](#).

6.18.2.5 `void ilearnrw.user.ProblemDefinition.setAvailableLanguages ( ArrayList< LanguageCode > availableLanguages )`

References [ilearnrw.user.ProblemDefinition.availableLanguages](#).

6.18.2.6 void `ilearnrw.user.ProblemDefinition.setScoreUpperBound ( int scoreUpperBound )`

References [ilearnrw.user.ProblemDefinition.scoreUpperBound](#).

6.18.2.7 void `ilearnrw.user.ProblemDefinition.setSubcategory ( Subcategory type )`

References [ilearnrw.user.ProblemDefinition.type](#).

6.18.2.8 void `ilearnrw.user.ProblemDefinition.setURI ( String uRI )`

References [ilearnrw.user.ProblemDefinition.URI](#).

6.18.2.9 String `ilearnrw.user.ProblemDefinition.toString ( )`

References [ilearnrw.user.ProblemDefinition.availableLanguages](#), [ilearnrw.user.ProblemDefinition.scoreUpperBound](#), [ilearnrw.user.ProblemDefinition.type](#), and [ilearnrw.user.ProblemDefinition.URI](#).

### 6.18.3 Member Data Documentation

6.18.3.1 ArrayList<LanguageCode> `ilearnrw.user.ProblemDefinition.availableLanguages` [package]

Referenced by [ilearnrw.user.ProblemDefinition.getAvailableLanguages\(\)](#), [ilearnrw.user.ProblemDefinition.ProblemDefinition\(\)](#), [ilearnrw.user.ProblemDefinition.setAvailableLanguages\(\)](#), and [ilearnrw.user.ProblemDefinition.toString\(\)](#).

6.18.3.2 int `ilearnrw.user.ProblemDefinition.scoreUpperBound` [package]

Referenced by [ilearnrw.user.ProblemDefinition.getScoreUpperBound\(\)](#), [ilearnrw.user.ProblemDefinition.ProblemDefinition\(\)](#), [ilearnrw.user.ProblemDefinition.setScoreUpperBound\(\)](#), and [ilearnrw.user.ProblemDefinition.toString\(\)](#).

6.18.3.3 final long `ilearnrw.user.ProblemDefinition.serialVersionUID = 1L` [static], [private]

6.18.3.4 Subcategory `ilearnrw.user.ProblemDefinition.type` [package]

Referenced by [ilearnrw.user.ProblemDefinition.getType\(\)](#), [ilearnrw.user.ProblemDefinition.ProblemDefinition\(\)](#), [ilearnrw.user.ProblemDefinition.setSubcategory\(\)](#), and [ilearnrw.user.ProblemDefinition.toString\(\)](#).

6.18.3.5 String `ilearnrw.user.ProblemDefinition.URI` [package]

Referenced by [ilearnrw.user.ProblemDefinition.getURI\(\)](#), [ilearnrw.user.ProblemDefinition.ProblemDefinition\(\)](#), [ilearnrw.user.ProblemDefinition.setURI\(\)](#), and [ilearnrw.user.ProblemDefinition.toString\(\)](#).

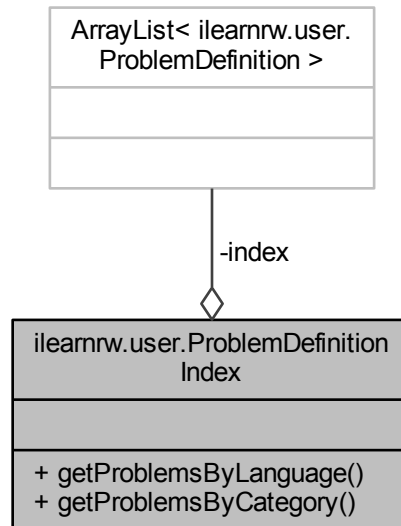
The documentation for this class was generated from the following file:

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[ProblemDefinition.java](#)



## 6.19 ilearnrw.user.ProblemDefinitionIndex Class Reference

Collaboration diagram for ilearnrw.user.ProblemDefinitionIndex:



### Public Member Functions

- `ArrayList< ProblemDefinition > getProblemsByLanguage (LanguageCode x)`
- `ArrayList< ProblemDefinition > getProblemsByCategory (Category x)`

### Private Attributes

- `ArrayList< ProblemDefinition > index`

### 6.19.1 Member Function Documentation

6.19.1.1 `ArrayList<ProblemDefinition> ilearnrw.user.ProblemDefinitionIndex.getProblemsByCategory ( Category x )`

References [ilearnrw.user.ProblemDefinitionIndex.index](#).

6.19.1.2 `ArrayList<ProblemDefinition> ilearnrw.user.ProblemDefinitionIndex.getProblemsByLanguage ( LanguageCode x )`

References [ilearnrw.user.ProblemDefinitionIndex.index](#).

### 6.19.2 Member Data Documentation

6.19.2.1 `ArrayList<ProblemDefinition> ilearnrw.user.ProblemDefinitionIndex.index` [private]

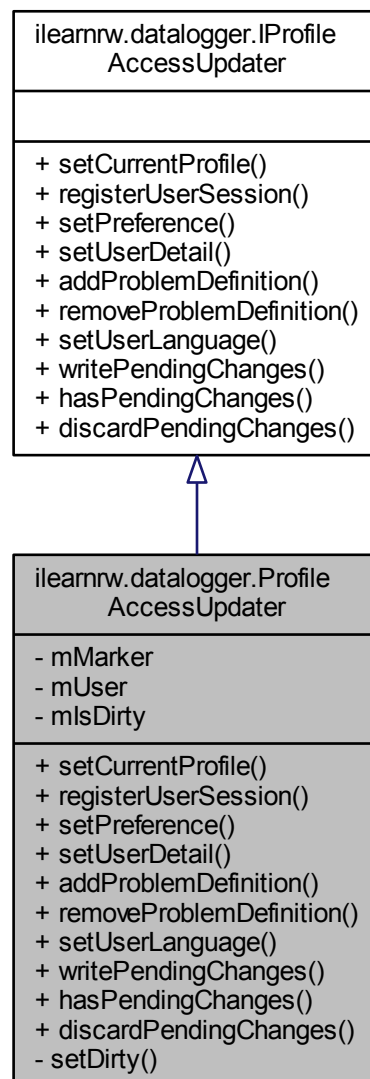
Referenced by `ilearnrw.user.ProblemDefinitionIndex.getProblemsByCategory()`, and `ilearnrw.user.ProblemDefinitionIndex.getProblemsByLanguage()`.

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

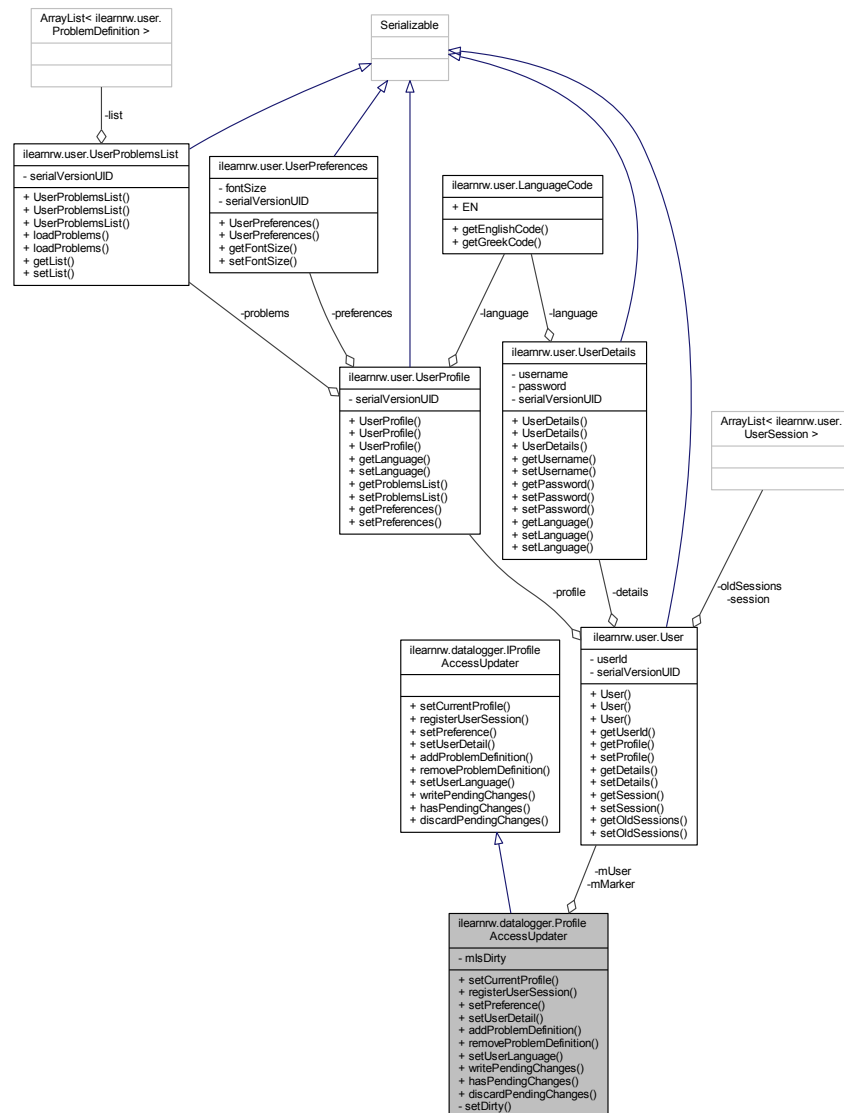
- `C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/ProblemDefinitionIndex.java`

## 6.20 ilearnrw.datalogger.ProfileAccessUpdater Class Reference

Inheritance diagram for `ilearnrw.datalogger.ProfileAccessUpdater`:



Collaboration diagram for ilearnrw.datalogger.ProfileAccessUpdater:



## Public Member Functions

- boolean **setCurrentProfile** ([UserProfile](#) profile, [UserProfile](#) markerProfile) throws `PermissionException`, - `PendingChangesAvailable`  
*Sets the userprofile to work with and who will be the `marker` for the changes.*
- boolean **registerUserSession** ([UserSession](#) session)  
*Registers a new User session in the log.*
- boolean **setPreference** ([UserPreferences](#) pref)  
*Registers a change to the users preferences.*
- boolean **setUserDetail** ([UserDetails](#) userDetails)  
*Updates a UserDetail.*
- boolean **addProblemDefinition** (String URI)  
*Adds a predefined ProblemDefinition to the user profile.*
- boolean **removeProblemDefinition** (String URI)

- Removes a ProblemDefinition.*  
 • boolean [setUserLanguage](#) ([LanguageCode](#) Language)  
*Sets the userlanguage.*
- [UserProfile](#) [writePendingChanges](#) ()  
*Writes unwritten changes to the back end (persistent storage).*
- boolean [hasPendingChanges](#) ()  
*Checks if there are any changes pending.*
- boolean [discardPendingChanges](#) ()  
*Discards all pending changes.*

### Private Member Functions

- void [setDirty](#) ()

### Private Attributes

- [User](#) [mMarker](#)  
*The currently selected marker profile.*
- [User](#) [mUser](#)  
*The profile to be updated.*
- boolean [mIsDirty](#)  
*Access to storage-backend.*

## 6.20.1 Detailed Description

### Note

This class currently does not make use of the potential to log every action and the marker.

## 6.20.2 Member Function Documentation

### 6.20.2.1 boolean [ilearnrw.datalogger.ProfileAccessUpdater.addProblemDefinition](#) ( [String](#) *URI* )

Adds a predefined ProblemDefinition to the user profile.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

### 6.20.2.2 boolean [ilearnrw.datalogger.ProfileAccessUpdater.discardPendingChanges](#) ( )

Discards all pending changes.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

### 6.20.2.3 boolean [ilearnrw.datalogger.ProfileAccessUpdater.hasPendingChanges](#) ( )

Checks if there are any changes pending.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

### 6.20.2.4 boolean [ilearnrw.datalogger.ProfileAccessUpdater.registerUserSession](#) ( [UserSession](#) *session* )

Registers a new User session in the log.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

**6.20.2.5** boolean ilearnrw.datalogger.ProfileAccessUpdater.removeProblemDefinition ( String *URI* )

Removes a ProblemDefinition.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

**6.20.2.6** boolean ilearnrw.datalogger.ProfileAccessUpdater.setCurrentProfile ( UserProfile *profile*, UserProfile *markerProfile* ) throws **PermissionException**, **PendingChangesAvailable**

Sets the userprofile to work with and who will be the `marker` for the changes.

Doing this once saves the application from passing the userprofile to all functions.

The `marker` can be the same as the profile to be edited.

**Exceptions**

<i>PermissionException</i>	Thrown when the admin profile does not have permissions to update the profile.
<i>PendingChangesAvailable</i>	Thrown when there are pending changes are available.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

**6.20.2.7** void ilearnrw.datalogger.ProfileAccessUpdater.setDirty ( ) [private]

References [ilearnrw.datalogger.ProfileAccessUpdater.mIsDirty](#).

Referenced by [ilearnrw.datalogger.ProfileAccessUpdater.setPreference\(\)](#).

**6.20.2.8** boolean ilearnrw.datalogger.ProfileAccessUpdater.setPreference ( UserPreferences *preferences* )

Registers a change to the users preferences.

Should changes to user preferences be logged so that teachers/experts can be notified/see that a preference has been changed?

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

References [ilearnrw.datalogger.ProfileAccessUpdater.setDirty\(\)](#).

**6.20.2.9** boolean ilearnrw.datalogger.ProfileAccessUpdater.setUserDetail ( UserDetails *userDetails* )

Updates a UserDetail.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

**6.20.2.10** boolean ilearnrw.datalogger.ProfileAccessUpdater.setUserLanguage ( LanguageCode *Language* )

Sets the userlanguage.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

**6.20.2.11** UserProfile ilearnrw.datalogger.ProfileAccessUpdater.writePendingChanges ( )

Writes unwritten changes to the back end (persistent storage).

This will flush all pending operations in the same order as they are added. This is important if for example the same preference is set twice.

#### Returns

The new profile after the changes has been applied.

Implements [ilearnrw.datalogger.IProfileAccessUpdater](#).

References [ilearnrw.user.User.getProfile\(\)](#), and [ilearnrw.datalogger.ProfileAccessUpdater.mUser](#).

### 6.20.3 Member Data Documentation

#### 6.20.3.1 boolean [ilearnrw.datalogger.ProfileAccessUpdater.mIsDirty](#) [private]

Access to storage-backend.

Referenced by [ilearnrw.datalogger.ProfileAccessUpdater.setDirty\(\)](#).

#### 6.20.3.2 User [ilearnrw.datalogger.ProfileAccessUpdater.mMarker](#) [private]

The currently selected marker profile.

The marker profile is used to show who made a certain change/log in the system

#### 6.20.3.3 User [ilearnrw.datalogger.ProfileAccessUpdater.mUser](#) [private]

The profile to be updated.

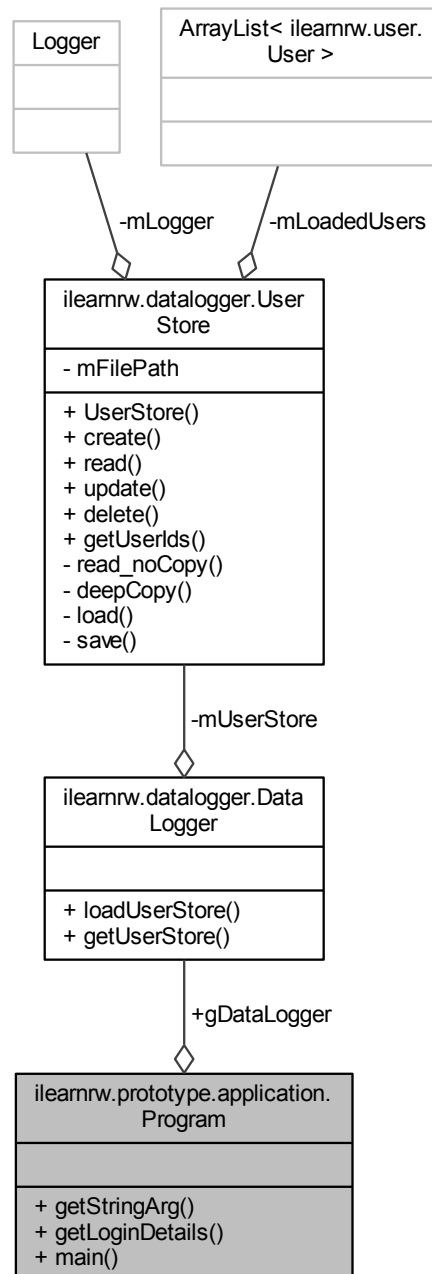
Referenced by [ilearnrw.datalogger.ProfileAccessUpdater.writePendingChanges\(\)](#).

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/[ProfileAccessUpdater.java](#)

## 6.21 ilearnrw.prototype.application.Program Class Reference

Collaboration diagram for ilearnrw.prototype.application.Program:



### Static Public Member Functions

- static String [getStringArg](#) (String name, String[] args) throws Exception
- static [LoginDetails](#) [getLoginDetails](#) ()
- static void [main](#) (String[] args)

## Static Public Attributes

- static [DataLogger gDataLogger](#) = new [DataLogger\(\)](#)

### 6.21.1 Member Function Documentation

6.21.1.1 static [LoginDetails ilearnrw.prototype.application.Program.getLoginDetails \( \)](#) [static]

References [ilearnrw.datalogger.LoginDetails.Password](#), and [ilearnrw.datalogger.LoginDetails.Username](#).

6.21.1.2 static [String ilearnrw.prototype.application.Program.getStringArg \( String name, String\[\] args \)](#) throws [Exception](#) [static]

Referenced by [ilearnrw.prototype.application.Program.main\(\)](#).

6.21.1.3 static void [ilearnrw.prototype.application.Program.main \( String\[\] args \)](#) [static]

#### Parameters

<i>args</i>	Commandline arguments.
-------------	------------------------

Commandline arguments:

-db <filePath> Database file to use (required)

References [ilearnrw.prototype.application.ConsoleMenu.doModalMenu\(\)](#), [ilearnrw.prototype.application.Program.gDataLogger](#), [ilearnrw.prototype.application.Program.getStringArg\(\)](#), [ilearnrw.datalogger.DataLogger.loadUserStore\(\)](#), [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.menuBreak](#), and [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult.showThisMenuAgain](#).

### 6.21.2 Member Data Documentation

6.21.2.1 [DataLogger ilearnrw.prototype.application.Program.gDataLogger](#) = new [DataLogger\(\)](#) [static]

Referenced by [ilearnrw.prototype.application.Program.main\(\)](#), and [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

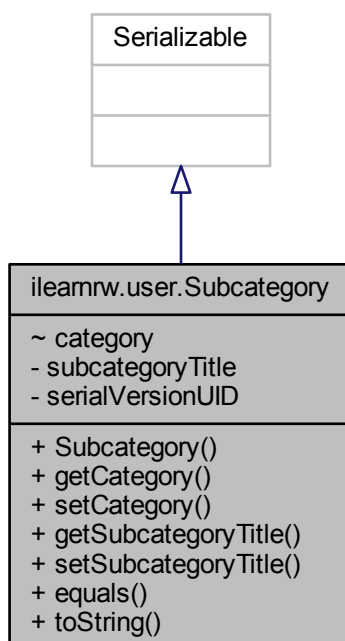
The documentation for this class was generated from the following file:

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/[Program.java](#)

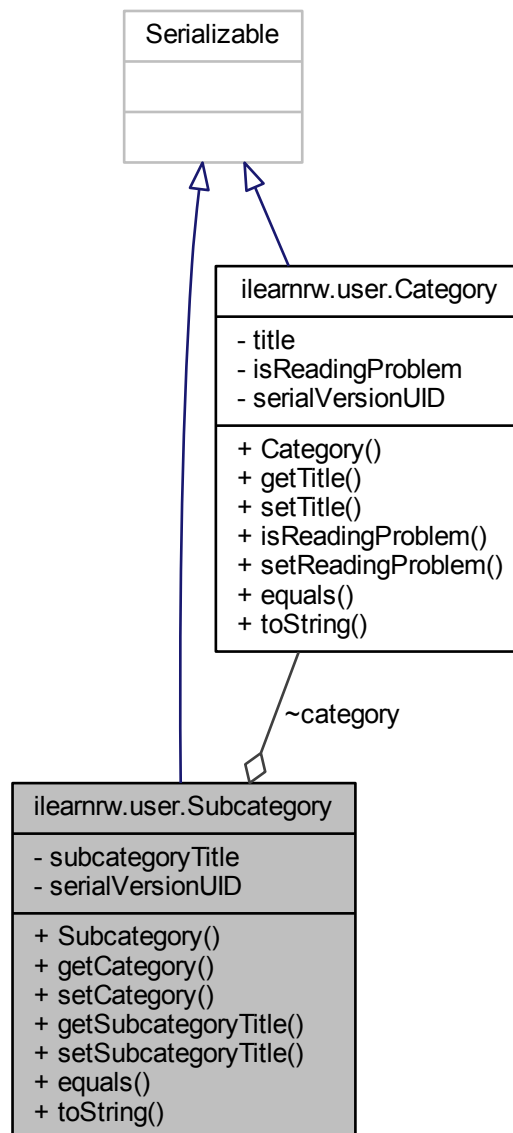


## 6.22 ilearnrw.user.Subcategory Class Reference

Inheritance diagram for ilearnrw.user.Subcategory:



Collaboration diagram for `ilearnrw.user.Subcategory`:



## Public Member Functions

- `Subcategory (String subcategoryTitle, Category category)`
- `Category getCategory ()`
- `void setCategory (Category category)`
- `String getSubcategoryTitle ()`
- `void setSubcategoryTitle (String subcategoryTitle)`
- `boolean equals (Object obj)`
- `String toString ()`

## Package Attributes

- [Category category](#)

## Private Attributes

- String [subcategoryTitle](#)

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

### 6.22.1 Constructor & Destructor Documentation

#### 6.22.1.1 `ilearnrw.user.Subcategory.Subcategory ( String subcategoryTitle, Category category )`

References [ilearnrw.user.Subcategory.category](#), and [ilearnrw.user.Subcategory.subcategoryTitle](#).

Referenced by [ilearnrw.user.Subcategory.equals\(\)](#).

### 6.22.2 Member Function Documentation

#### 6.22.2.1 `boolean ilearnrw.user.Subcategory.equals ( Object obj )`

References [ilearnrw.user.Subcategory.category](#), [ilearnrw.user.Subcategory.getCategory\(\)](#), [ilearnrw.user.Subcategory.getSubcategoryTitle\(\)](#), [ilearnrw.user.Category.getTitle\(\)](#), [ilearnrw.user.Subcategory.Subcategory\(\)](#), and [ilearnrw.user.Subcategory.subcategoryTitle](#).

#### 6.22.2.2 `Category ilearnrw.user.Subcategory.getCategory ( )`

References [ilearnrw.user.Subcategory.category](#).

Referenced by [ilearnrw.user.Subcategory.equals\(\)](#).

#### 6.22.2.3 `String ilearnrw.user.Subcategory.getSubcategoryTitle ( )`

References [ilearnrw.user.Subcategory.subcategoryTitle](#).

Referenced by [ilearnrw.user.Subcategory.equals\(\)](#).

#### 6.22.2.4 `void ilearnrw.user.Subcategory.setCategory ( Category category )`

References [ilearnrw.user.Subcategory.category](#).

#### 6.22.2.5 `void ilearnrw.user.Subcategory.setSubcategoryTitle ( String subcategoryTitle )`

References [ilearnrw.user.Subcategory.subcategoryTitle](#).

#### 6.22.2.6 `String ilearnrw.user.Subcategory.toString ( )`

References [ilearnrw.user.Subcategory.category](#), and [ilearnrw.user.Subcategory.subcategoryTitle](#).

### 6.22.3 Member Data Documentation

#### 6.22.3.1 Category `ilearnrw.user.Subcategory.category` [package]

Referenced by [ilearnrw.user.Subcategory.equals\(\)](#), [ilearnrw.user.Subcategory.getCategory\(\)](#), [ilearnrw.user.Subcategory.setCategory\(\)](#), [ilearnrw.user.Subcategory.Subcategory\(\)](#), and [ilearnrw.user.Subcategory.toString\(\)](#).

#### 6.22.3.2 final long `ilearnrw.user.Subcategory.serialVersionUID = 1L` [static],[private]

#### 6.22.3.3 String `ilearnrw.user.Subcategory.subcategoryTitle` [private]

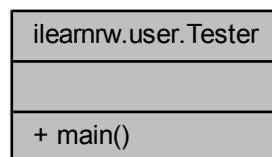
Referenced by [ilearnrw.user.Subcategory.equals\(\)](#), [ilearnrw.user.Subcategory.getSubcategoryTitle\(\)](#), [ilearnrw.user.Subcategory.setSubcategoryTitle\(\)](#), [ilearnrw.user.Subcategory.Subcategory\(\)](#), and [ilearnrw.user.Subcategory.toString\(\)](#).

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

- [C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/Subcategory.java](#)

## 6.23 ilearnrw.user.Tester Class Reference

Collaboration diagram for `ilearnrw.user.Tester`:



### Static Public Member Functions

- static void [main](#) (String[] args)

### 6.23.1 Member Function Documentation

#### 6.23.1.1 static void `ilearnrw.user.Tester.main ( String[] args )` [static]

Parameters

<i>args</i>	
-------------	--

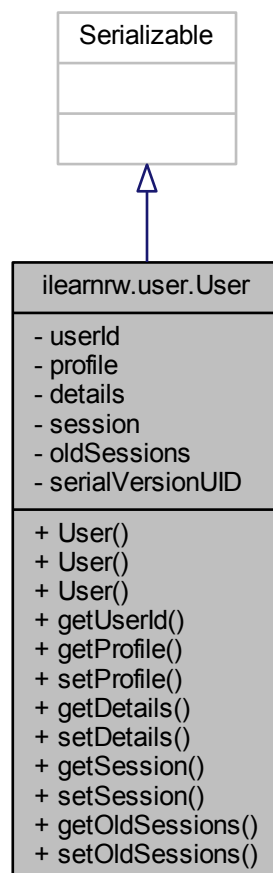
References [ilearnrw.user.UserProblemsList.getList\(\)](#), [ilearnrw.user.UserProfile.getProblemsList\(\)](#), and [ilearnrw.user.User.getProfile\(\)](#).

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

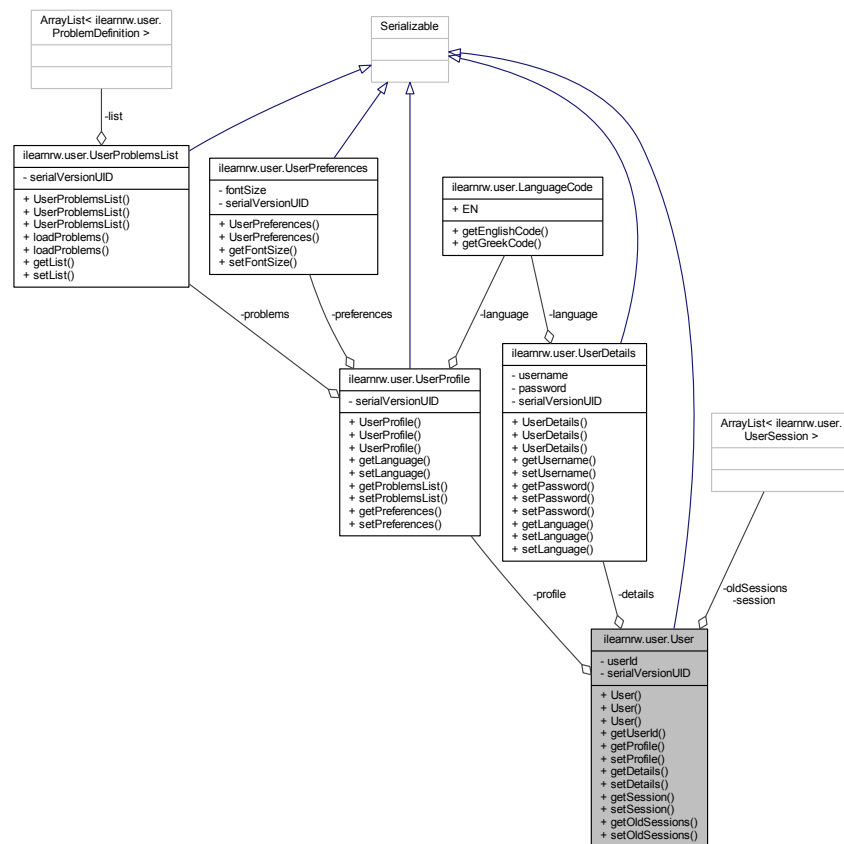
- [C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/Tester.java](#)

## 6.24 ilearnrw.user.User Class Reference

Inheritance diagram for ilearnrw.user.User:



Collaboration diagram for `ilearnrw.user.User`:



## Public Member Functions

- `User` (int `userId`, `UserProfile` `profile`, `UserDetails` `details`, `ArrayList`< `UserSession` > `oldSessions`)
- `User` (`LanguageCode` `lc`)
- `User` (int `userId`)
- int `getUserId` ()
- `UserProfile` `getProfile` ()
- void `setProfile` (`UserProfile` `profile`)
- `UserDetails` `getDetails` ()
- void `setDetails` (`UserDetails` `details`)
- `ArrayList`< `UserSession` > `getSession` ()
- void `setSession` (`ArrayList`< `UserSession` > `session`)
- `ArrayList`< `UserSession` > `getOldSessions` ()
- void `setOldSessions` (`ArrayList`< `UserSession` > `oldSessions`)

## Private Attributes

- int `userId`
- `UserProfile` `profile`
- `UserDetails` `details`
- `ArrayList`< `UserSession` > `session`
- `ArrayList`< `UserSession` > `oldSessions`

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

### 6.24.1 Constructor & Destructor Documentation

6.24.1.1 `ilearnrw.user.User.User ( int userId, UserProfile profile, UserDetails details, ArrayList< UserSession > oldSessions )`

References [ilearnrw.user.User.details](#), [ilearnrw.user.User.oldSessions](#), [ilearnrw.user.User.profile](#), [ilearnrw.user.-User.session](#), and [ilearnrw.user.User.userId](#).

6.24.1.2 `ilearnrw.user.User.User ( LanguageCode lc )`

References [ilearnrw.user.User.details](#), [ilearnrw.user.User.oldSessions](#), [ilearnrw.user.User.profile](#), [ilearnrw.user.-User.session](#), and [ilearnrw.user.User.userId](#).

6.24.1.3 `ilearnrw.user.User.User ( int userId )`

References [ilearnrw.user.User.details](#), [ilearnrw.user.User.oldSessions](#), [ilearnrw.user.User.profile](#), [ilearnrw.user.-User.session](#), and [ilearnrw.user.User.userId](#).

### 6.24.2 Member Function Documentation

6.24.2.1 `UserDetails ilearnrw.user.User.getDetails ( )`

References [ilearnrw.user.User.details](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

6.24.2.2 `ArrayList<UserSession> ilearnrw.user.User.getOldSessions ( )`

References [ilearnrw.user.User.oldSessions](#).

6.24.2.3 `UserProfile ilearnrw.user.User.getProfile ( )`

References [ilearnrw.user.User.profile](#).

Referenced by [ilearnrw.user.Tester.main\(\)](#), and [ilearnrw.datalogger.ProfileAccessUpdater.writePendingChanges\(\)](#).

6.24.2.4 `ArrayList<UserSession> ilearnrw.user.User.getSession ( )`

References [ilearnrw.user.User.session](#).

6.24.2.5 `int ilearnrw.user.User.getUserId ( )`

References [ilearnrw.user.User.userId](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#), and [ilearnrw.datalogger.UserStore.-update\(\)](#).

6.24.2.6 void `ilearnrw.user.User.setDetails ( UserDetails details )`

References [ilearnrw.user.User.details](#).

6.24.2.7 void `ilearnrw.user.User.setOldSessions ( ArrayList< UserSession > oldSessions )`

References [ilearnrw.user.User.oldSessions](#).

6.24.2.8 void `ilearnrw.user.User.setProfile ( UserProfile profile )`

References [ilearnrw.user.User.profile](#).

6.24.2.9 void `ilearnrw.user.User.setSession ( ArrayList< UserSession > session )`

References [ilearnrw.user.User.session](#).

### 6.24.3 Member Data Documentation

6.24.3.1 **UserDetails** `ilearnrw.user.User.details` [private]

Referenced by [ilearnrw.user.User.getDetails\(\)](#), [ilearnrw.user.User.setDetails\(\)](#), and [ilearnrw.user.User.User\(\)](#).

6.24.3.2 **ArrayList<UserSession>** `ilearnrw.user.User.oldSessions` [private]

Referenced by [ilearnrw.user.User.getOldSessions\(\)](#), [ilearnrw.user.User.setOldSessions\(\)](#), and [ilearnrw.user.User.User\(\)](#).

6.24.3.3 **UserProfile** `ilearnrw.user.User.profile` [private]

Referenced by [ilearnrw.user.User.getProfile\(\)](#), [ilearnrw.user.User.setProfile\(\)](#), and [ilearnrw.user.User.User\(\)](#).

6.24.3.4 **final long** `ilearnrw.user.User.serialVersionUID = 1L` [static], [private]

6.24.3.5 **ArrayList<UserSession>** `ilearnrw.user.User.session` [private]

Referenced by [ilearnrw.user.User.getSession\(\)](#), [ilearnrw.user.User.setSession\(\)](#), and [ilearnrw.user.User.User\(\)](#).

6.24.3.6 **int** `ilearnrw.user.User.userId` [private]

Referenced by [ilearnrw.user.User.getUserId\(\)](#), and [ilearnrw.user.User.User\(\)](#).

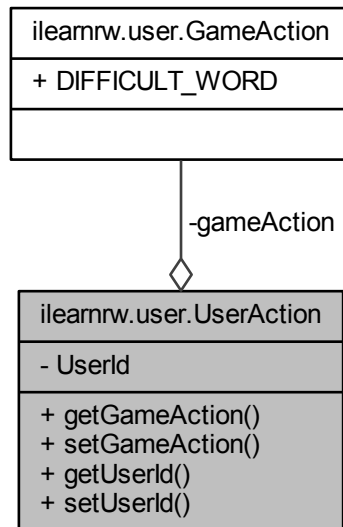
The documentation for this class was generated from the following file:

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[User.java](#)



## 6.25 ilearnrw.user.UserAction Class Reference

Collaboration diagram for ilearnrw.user.UserAction:



### Public Member Functions

- [GameAction](#) [getGameAction](#) ( )
- void [setGameAction](#) ([GameAction](#) [gameAction](#))
- int [getUserId](#) ( )
- void [setUserId](#) (int [userId](#))

### Private Attributes

- [GameAction](#) [gameAction](#)
- int [UserId](#)

### 6.25.1 Member Function Documentation

#### 6.25.1.1 [GameAction](#) [ilearnrw.user.UserAction.getGameAction](#) ( )

References [ilearnrw.user.UserAction.gameAction](#).

#### 6.25.1.2 int [ilearnrw.user.UserAction.getUserId](#) ( )

References [ilearnrw.user.UserAction.UserId](#).

#### 6.25.1.3 void [ilearnrw.user.UserAction.setGameAction](#) ( [GameAction](#) [gameAction](#) )

References [ilearnrw.user.UserAction.gameAction](#).

6.25.1.4 void `ilearnrw.user.UserAction.setUserId ( int userId )`

References [ilearnrw.user.UserAction.UserId](#).

## 6.25.2 Member Data Documentation

6.25.2.1 **GameAction** `ilearnrw.user.UserAction.gameAction` [private]

Referenced by [ilearnrw.user.UserAction.getGameAction\(\)](#), and [ilearnrw.user.UserAction.setGameAction\(\)](#).

6.25.2.2 int `ilearnrw.user.UserAction.UserId` [private]

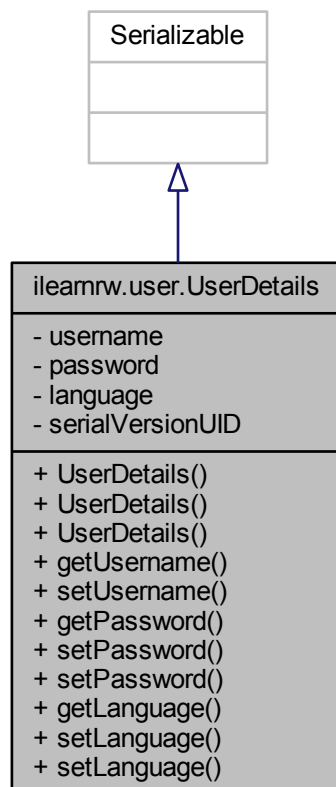
Referenced by [ilearnrw.user.UserAction.getUserId\(\)](#), and [ilearnrw.user.UserAction.setUserId\(\)](#).

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

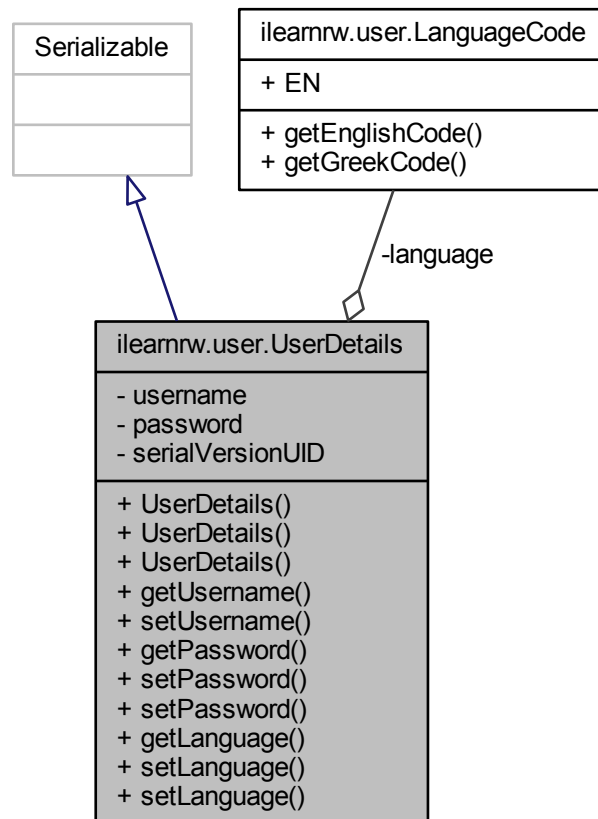
- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[UserAction.java](#)

## 6.26 ilearnrw.user.UserDetails Class Reference

Inheritance diagram for `ilearnrw.user.UserDetails`:



Collaboration diagram for ilearnrw.user.UserDetails:



### Public Member Functions

- [UserDetails](#) (String [username](#), int [password](#), [LanguageCode](#) [language](#))
- [UserDetails](#) ([LanguageCode](#) [language](#))
- [UserDetails](#) (int [userId](#))
- String [getUsername](#) ()
- void [setUsername](#) (String [username](#))
- int [getPassword](#) ()
- void [setPassword](#) (int [password](#))
- void [setPassword](#) (String [password](#))
- [LanguageCode](#) [getLanguage](#) ()
- void [setLanguage](#) ([LanguageCode](#) [language](#))
- void [setLanguage](#) (byte [languageCode](#))

### Private Attributes

- String [username](#)
- int [password](#)
- [LanguageCode](#) [language](#)

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

## 6.26.1 Constructor & Destructor Documentation

### 6.26.1.1 `ilearnrw.user.UserDetails.UserDetails ( String username, int password, LanguageCode language )`

References [ilearnrw.user.UserDetails.language](#), [ilearnrw.user.UserDetails.password](#), and [ilearnrw.user.UserDetails.username](#).

### 6.26.1.2 `ilearnrw.user.UserDetails.UserDetails ( LanguageCode language )`

References [ilearnrw.user.UserDetails.language](#), [ilearnrw.user.UserDetails.password](#), and [ilearnrw.user.UserDetails.username](#).

### 6.26.1.3 `ilearnrw.user.UserDetails.UserDetails ( int userId )`

References [ilearnrw.user.LanguageCode.GR](#), [ilearnrw.user.UserDetails.language](#), [ilearnrw.user.UserDetails.password](#), and [ilearnrw.user.UserDetails.username](#).

## 6.26.2 Member Function Documentation

### 6.26.2.1 `LanguageCode ilearnrw.user.UserDetails.getLanguage ( )`

References [ilearnrw.user.UserDetails.language](#).

### 6.26.2.2 `int ilearnrw.user.UserDetails.getPassword ( )`

#### Returns

the hash value of the user's password

References [ilearnrw.user.UserDetails.password](#).

### 6.26.2.3 `String ilearnrw.user.UserDetails.getUsername ( )`

References [ilearnrw.user.UserDetails.username](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

### 6.26.2.4 `void ilearnrw.user.UserDetails.setLanguage ( LanguageCode language )`

#### Parameters

<i>the</i>	language code as a enum item
------------	------------------------------

References [ilearnrw.user.UserDetails.language](#).

### 6.26.2.5 `void ilearnrw.user.UserDetails.setLanguage ( byte languageCode )`

## Parameters

<i>the</i>	language code as a enum item
------------	------------------------------

References [ilearnrw.user.LanguageCode.EN](#), [ilearnrw.user.LanguageCode.getEnglishCode\(\)](#), [ilearnrw.user.LanguageCode.GR](#), and [ilearnrw.user.UserDetails.language](#).

6.26.2.6 void ilearnrw.user.UserDetails.setPassword ( int *password* )

## Parameters

<i>the</i>	hash value of the users password
------------	----------------------------------

References [ilearnrw.user.UserDetails.password](#).

6.26.2.7 void ilearnrw.user.UserDetails.setPassword ( String *password* )

## Parameters

<i>the</i>	user's password as a string
------------	-----------------------------

6.26.2.8 void ilearnrw.user.UserDetails.setUsername ( String *username* )

References [ilearnrw.user.UserDetails.username](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

## 6.26.3 Member Data Documentation

## 6.26.3.1 LanguageCode ilearnrw.user.UserDetails.language [private]

Referenced by [ilearnrw.user.UserDetails.getLanguage\(\)](#), [ilearnrw.user.UserDetails.setLanguage\(\)](#), and [ilearnrw.user.UserDetails.UserDetails\(\)](#).

## 6.26.3.2 int ilearnrw.user.UserDetails.password [private]

Referenced by [ilearnrw.user.UserDetails.getPassword\(\)](#), [ilearnrw.user.UserDetails.setPassword\(\)](#), and [ilearnrw.user.UserDetails.UserDetails\(\)](#).

## 6.26.3.3 final long ilearnrw.user.UserDetails.serialVersionUID = 1L [static], [private]

## 6.26.3.4 String ilearnrw.user.UserDetails.username [private]

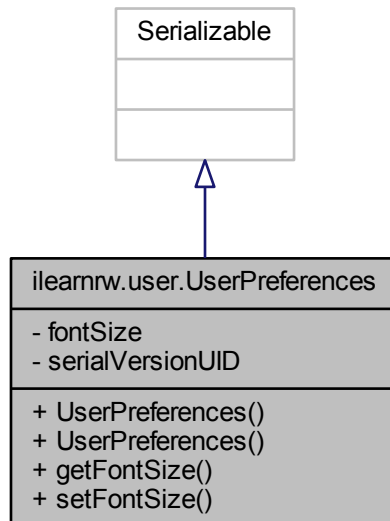
Referenced by [ilearnrw.user.UserDetails.getUsername\(\)](#), [ilearnrw.user.UserDetails.setUsername\(\)](#), and [ilearnrw.user.UserDetails.UserDetails\(\)](#).

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

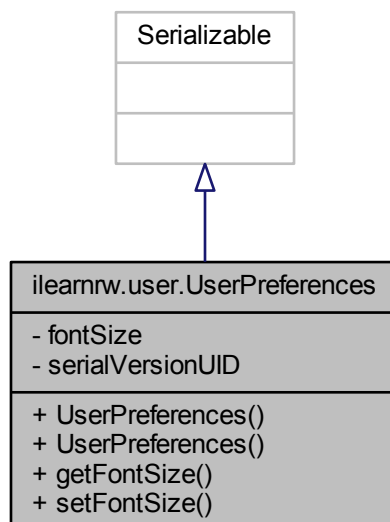
- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[UserDetails.java](#)

## 6.27 ilearnrw.user.UserPreferences Class Reference

Inheritance diagram for ilearnrw.user.UserPreferences:



Collaboration diagram for ilearnrw.user.UserPreferences:



## Public Member Functions

- [UserPreferences](#) ()
- [UserPreferences](#) (int [fontSize](#))
- int [getFontSize](#) ()
- void [setFontSize](#) (int [fontSize](#))

## Private Attributes

- int [fontSize](#)

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

### 6.27.1 Constructor & Destructor Documentation

#### 6.27.1.1 [ilearnrw.user.UserPreferences.UserPreferences](#) ( )

References [ilearnrw.user.UserPreferences.setFontSize\(\)](#).

#### 6.27.1.2 [ilearnrw.user.UserPreferences.UserPreferences](#) ( int *fontSize* )

References [ilearnrw.user.UserPreferences.setFontSize\(\)](#).

### 6.27.2 Member Function Documentation

#### 6.27.2.1 int [ilearnrw.user.UserPreferences.getFontSize](#) ( )

References [ilearnrw.user.UserPreferences.fontSize](#).

#### 6.27.2.2 void [ilearnrw.user.UserPreferences.setFontSize](#) ( int *fontSize* )

References [ilearnrw.user.UserPreferences.fontSize](#).

Referenced by [ilearnrw.user.UserPreferences.UserPreferences\(\)](#).

### 6.27.3 Member Data Documentation

#### 6.27.3.1 int [ilearnrw.user.UserPreferences.fontSize](#) [private]

Referenced by [ilearnrw.user.UserPreferences.getFontSize\(\)](#), and [ilearnrw.user.UserPreferences.setFontSize\(\)](#).

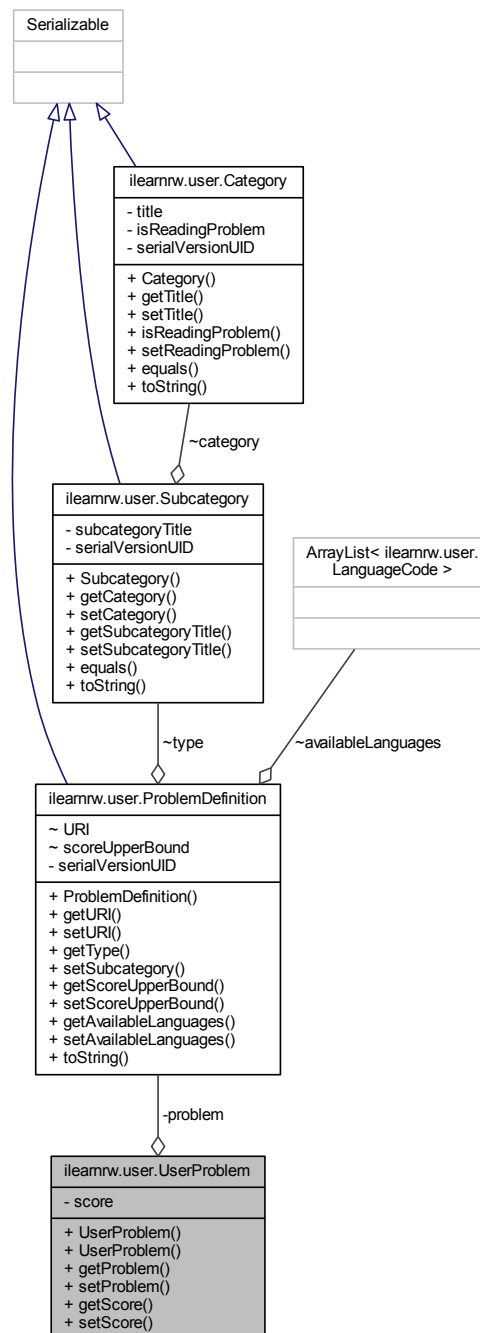
#### 6.27.3.2 final long [ilearnrw.user.UserPreferences.serialVersionUID](#) = 1L [static],[private]

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[UserPreferences.java](#)

## 6.28 ilearnrw.user.UserProblem Class Reference

Collaboration diagram for ilearnrw.user.UserProblem:



### Public Member Functions

- [UserProblem \(ProblemDefinition problem, int score\)](#)
- [UserProblem \(ProblemDefinition problem\)](#)
- [ProblemDefinition getProblem \(\)](#)



- void [setProblem](#) ([ProblemDefinition problem](#))
- int [getScore](#) ()
- void [setScore](#) (int [score](#))

### Private Attributes

- [ProblemDefinition problem](#)
- int [score](#)

## 6.28.1 Constructor & Destructor Documentation

6.28.1.1 `ilearnrw.user.UserProblem.UserProblem ( ProblemDefinition problem, int score )`

References [ilearnrw.user.UserProblem.problem](#), and [ilearnrw.user.UserProblem.score](#).

6.28.1.2 `ilearnrw.user.UserProblem.UserProblem ( ProblemDefinition problem )`

References [ilearnrw.user.ProblemDefinition.getScoreUpperBound\(\)](#), and [ilearnrw.user.UserProblem.problem](#).

## 6.28.2 Member Function Documentation

6.28.2.1 `ProblemDefinition ilearnrw.user.UserProblem.getProblem ( )`

Returns

the [ProblemDefintion](#) of the user's problem

References [ilearnrw.user.UserProblem.problem](#).

6.28.2.2 `int ilearnrw.user.UserProblem.getScore ( )`

Returns

the frequency that the user does errors related to this problem

References [ilearnrw.user.UserProblem.score](#).

6.28.2.3 `void ilearnrw.user.UserProblem.setProblem ( ProblemDefinition problem )`

References [ilearnrw.user.UserProblem.problem](#).

6.28.2.4 `void ilearnrw.user.UserProblem.setScore ( int score )`

References [ilearnrw.user.UserProblem.score](#).

## 6.28.3 Member Data Documentation

6.28.3.1 `ProblemDefinition ilearnrw.user.UserProblem.problem [private]`

Referenced by [ilearnrw.user.UserProblem.getProblem\(\)](#), [ilearnrw.user.UserProblem.setProblem\(\)](#), and [ilearnrw.user.UserProblem.UserProblem\(\)](#).

6.28.3.2 `int ilearnrw.user.UserProblem.score` `[private]`

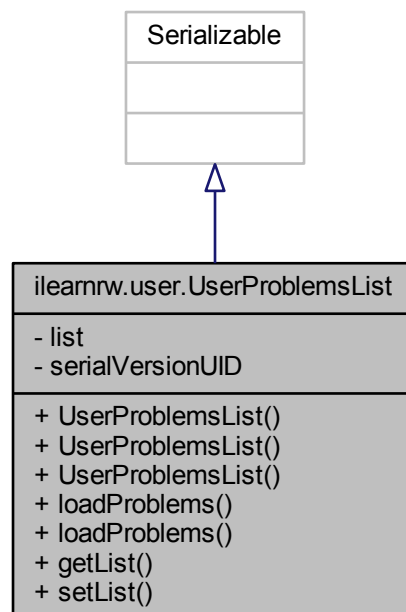
Referenced by [ilearnrw.user.UserProblem.getScore\(\)](#), [ilearnrw.user.UserProblem.setScore\(\)](#), and [ilearnrw.user.UserProblem.UserProblem\(\)](#).

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

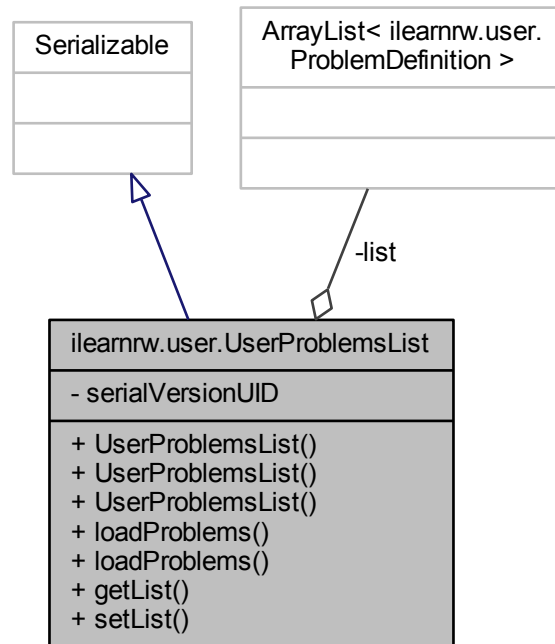
- [C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserProblem.java](#)

## 6.29 ilearnrw.user.UserProblemsList Class Reference

Inheritance diagram for ilearnrw.user.UserProblemsList:



Collaboration diagram for ilearnrw.user.UserProblemsList:



## Public Member Functions

- [UserProblemsList](#) (int `userId`)
- [UserProblemsList](#) ([LanguageCode](#) `lc`)
- [UserProblemsList](#) ([ArrayList< ProblemDefinition >](#) `list`)
- void [loadProblems](#) ([LanguageCode](#) `lc`)
- void [loadProblems](#) (int `userId`)
- [ArrayList< ProblemDefinition >](#) [getList](#) ()
- void [setList](#) ([ArrayList< ProblemDefinition >](#) `list`)

## Private Attributes

- [ArrayList< ProblemDefinition >](#) `list`

## Static Private Attributes

- static final long [serialVersionUID](#) = 1L

### 6.29.1 Constructor & Destructor Documentation

#### 6.29.1.1 ilearnrw.user.UserProblemsList.UserProblemsList ( int `userId` )

References [ilearnrw.user.UserProblemsList.list](#), and [ilearnrw.user.UserProblemsList.loadProblems\(\)](#).

#### 6.29.1.2 `ilearnrw.user.UserProblemsList.UserProblemsList ( LanguageCode lc )`

References [ilearnrw.user.UserProblemsList.list](#), and [ilearnrw.user.UserProblemsList.loadProblems\(\)](#).

#### 6.29.1.3 `ilearnrw.user.UserProblemsList.UserProblemsList ( ArrayList< ProblemDefinition > list )`

References [ilearnrw.user.UserProblemsList.list](#).

### 6.29.2 Member Function Documentation

#### 6.29.2.1 `ArrayList<ProblemDefinition> ilearnrw.user.UserProblemsList.getList ( )`

References [ilearnrw.user.UserProblemsList.list](#).

Referenced by [ilearnrw.user.Tester.main\(\)](#).

#### 6.29.2.2 `void ilearnrw.user.UserProblemsList.loadProblems ( LanguageCode lc )`

References [ilearnrw.user.LanguageCode.EN](#), [ilearnrw.user.ProblemDefinition.getAvailableLanguages\(\)](#), [ilearnrw.user.LanguageCode.GR](#), and [ilearnrw.user.UserProblemsList.list](#).

Referenced by [ilearnrw.user.UserProblemsList.UserProblemsList\(\)](#).

#### 6.29.2.3 `void ilearnrw.user.UserProblemsList.loadProblems ( int userId )`

References [ilearnrw.user.LanguageCode.EN](#), [ilearnrw.user.LanguageCode.GR](#), and [ilearnrw.user.UserProblemsList.list](#).

#### 6.29.2.4 `void ilearnrw.user.UserProblemsList.setList ( ArrayList< ProblemDefinition > list )`

References [ilearnrw.user.UserProblemsList.list](#).

### 6.29.3 Member Data Documentation

#### 6.29.3.1 `ArrayList<ProblemDefinition> ilearnrw.user.UserProblemsList.list [private]`

Referenced by [ilearnrw.user.UserProblemsList.getList\(\)](#), [ilearnrw.user.UserProblemsList.loadProblems\(\)](#), [ilearnrw.user.UserProblemsList.setList\(\)](#), and [ilearnrw.user.UserProblemsList.UserProblemsList\(\)](#).

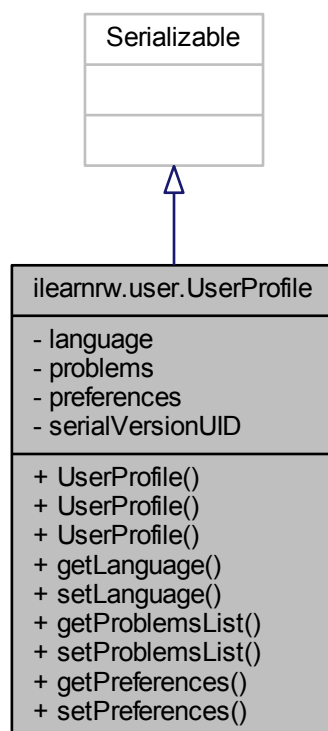
#### 6.29.3.2 `final long ilearnrw.user.UserProblemsList.serialVersionUID = 1L [static],[private]`

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

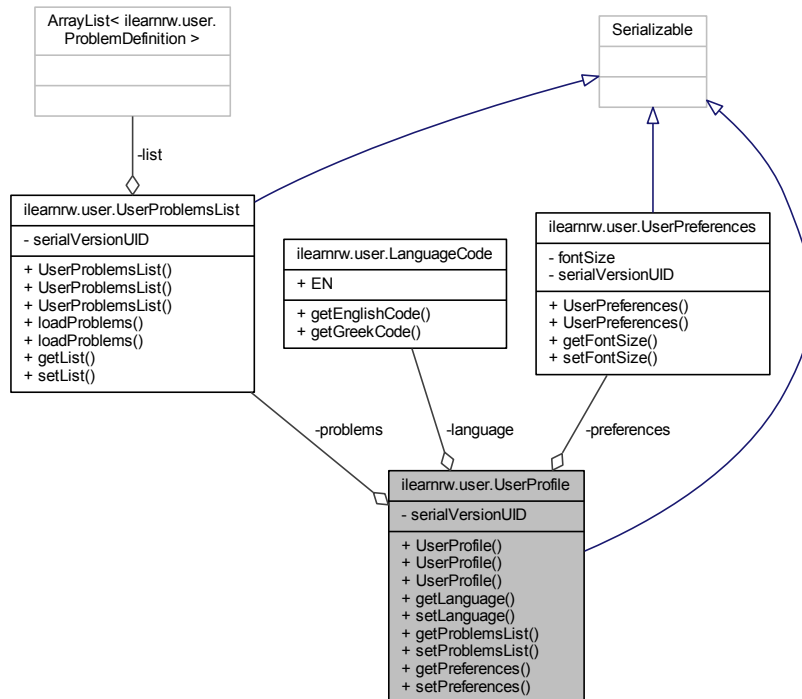
- [C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserProblemsList.java](#)

## 6.30 ilearnrw.user.UserProfile Class Reference

Inheritance diagram for ilearnrw.user.UserProfile:



Collaboration diagram for `ilearnrw.user.UserProfile`:



## Public Member Functions

- `UserProfile (LanguageCode language, UserProblemsList problems, UserPreferences preferences)`
- `UserProfile (LanguageCode language)`
- `UserProfile (int userId)`
- `LanguageCode getLanguage ()`
- `void setLanguage (LanguageCode language)`
- `UserProblemsList getProblemsList ()`
- `void setProblemsList (UserProblemsList problems)`
- `UserPreferences getPreferences ()`
- `void setPreferences (UserPreferences preferences)`

## Private Attributes

- `LanguageCode language`
- `UserProblemsList problems`
- `UserPreferences preferences`

## Static Private Attributes

- `static final long serialVersionUID = 1L`

### 6.30.1 Constructor & Destructor Documentation

6.30.1.1 `ilearnrw.user.UserProfile.UserProfile ( LanguageCode language, UserProblemsList problems, UserPreferences preferences )`

References [ilearnrw.user.UserProfile.language](#), [ilearnrw.user.UserProfile.preferences](#), and [ilearnrw.user.UserProfile.problems](#).

6.30.1.2 `ilearnrw.user.UserProfile.UserProfile ( LanguageCode language )`

References [ilearnrw.user.UserProfile.language](#).

6.30.1.3 `ilearnrw.user.UserProfile.UserProfile ( int userId )`

References [ilearnrw.user.LanguageCode.EN](#), [ilearnrw.user.UserProfile.language](#), [ilearnrw.user.UserProfile.preferences](#), and [ilearnrw.user.UserProfile.problems](#).

### 6.30.2 Member Function Documentation

6.30.2.1 `LanguageCode ilearnrw.user.UserProfile.getLanguage ( )`

References [ilearnrw.user.UserProfile.language](#).

6.30.2.2 `UserPreferences ilearnrw.user.UserProfile.getPreferences ( )`

References [ilearnrw.user.UserProfile.preferences](#).

6.30.2.3 `UserProblemsList ilearnrw.user.UserProfile.getProblemsList ( )`

References [ilearnrw.user.UserProfile.problems](#).

Referenced by [ilearnrw.user.Tester.main\(\)](#).

6.30.2.4 `void ilearnrw.user.UserProfile.setLanguage ( LanguageCode language )`

References [ilearnrw.user.UserProfile.language](#).

6.30.2.5 `void ilearnrw.user.UserProfile.setPreferences ( UserPreferences preferences )`

References [ilearnrw.user.UserProfile.preferences](#).

6.30.2.6 `void ilearnrw.user.UserProfile.setProblemsList ( UserProblemsList problems )`

References [ilearnrw.user.UserProfile.problems](#).

### 6.30.3 Member Data Documentation

6.30.3.1 `LanguageCode ilearnrw.user.UserProfile.language` [private]

Referenced by [ilearnrw.user.UserProfile.getLanguage\(\)](#), [ilearnrw.user.UserProfile.setLanguage\(\)](#), and [ilearnrw.user.UserProfile.UserProfile\(\)](#).

### 6.30.3.2 UserPreferences ilearnrw.user.UserProfile.preferences [private]

Referenced by [ilearnrw.user.UserProfile.getPreferences\(\)](#), [ilearnrw.user.UserProfile.setPreferences\(\)](#), and [ilearnrw.user.UserProfile.UserProfile\(\)](#).

### 6.30.3.3 UserProblemsList ilearnrw.user.UserProfile.problems [private]

Referenced by [ilearnrw.user.UserProfile.getProblemsList\(\)](#), [ilearnrw.user.UserProfile.setProblemsList\(\)](#), and [ilearnrw.user.UserProfile.UserProfile\(\)](#).

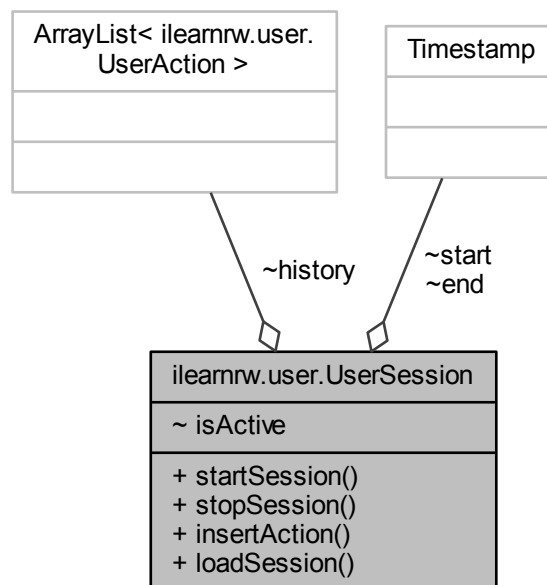
### 6.30.3.4 final long ilearnrw.user.UserProfile.serialVersionUID = 1L [static],[private]

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[UserProfile.java](#)

## 6.31 ilearnrw.user.UserSession Class Reference

Collaboration diagram for ilearnrw.user.UserSession:



### Public Member Functions

- void [startSession](#) ()
- void [stopSession](#) ()
- void [insertAction](#) ([UserAction](#) x) throws [IlearnException](#)
- void [loadSession](#) (int userId)



## Package Attributes

- boolean [isActive](#)
- Timestamp [start](#)
- Timestamp [end](#)
- ArrayList< [UserAction](#) > [history](#)

### 6.31.1 Member Function Documentation

#### 6.31.1.1 void ilearnrw.user.UserSession.insertAction ( [UserAction](#) x ) throws [ILearnException](#)

References [ilearnrw.user.UserSession.history](#), and [ilearnrw.user.UserSession.isActive](#).

#### 6.31.1.2 void ilearnrw.user.UserSession.loadSession ( int *userId* )

References [ilearnrw.user.UserSession.history](#).

#### 6.31.1.3 void ilearnrw.user.UserSession.startSession ( )

sets the timestamp and turns the boolean variable 'isActive' to true!

References [ilearnrw.user.UserSession.history](#), [ilearnrw.user.UserSession.isActive](#), and [ilearnrw.user.UserSession.start](#).

#### 6.31.1.4 void ilearnrw.user.UserSession.stopSession ( )

sets the timestamp and turns the boolean variable 'isActive' to true!

References [ilearnrw.user.UserSession.end](#), and [ilearnrw.user.UserSession.isActive](#).

### 6.31.2 Member Data Documentation

#### 6.31.2.1 Timestamp ilearnrw.user.UserSession.end [package]

Referenced by [ilearnrw.user.UserSession.stopSession\(\)](#).

#### 6.31.2.2 ArrayList<[UserAction](#)> ilearnrw.user.UserSession.history [package]

Referenced by [ilearnrw.user.UserSession.insertAction\(\)](#), [ilearnrw.user.UserSession.loadSession\(\)](#), and [ilearnrw.user.UserSession.startSession\(\)](#).

#### 6.31.2.3 boolean ilearnrw.user.UserSession.isActive [package]

Referenced by [ilearnrw.user.UserSession.insertAction\(\)](#), [ilearnrw.user.UserSession.startSession\(\)](#), and [ilearnrw.user.UserSession.stopSession\(\)](#).

#### 6.31.2.4 Timestamp ilearnrw.user.UserSession.start [package]

Referenced by [ilearnrw.user.UserSession.startSession\(\)](#).

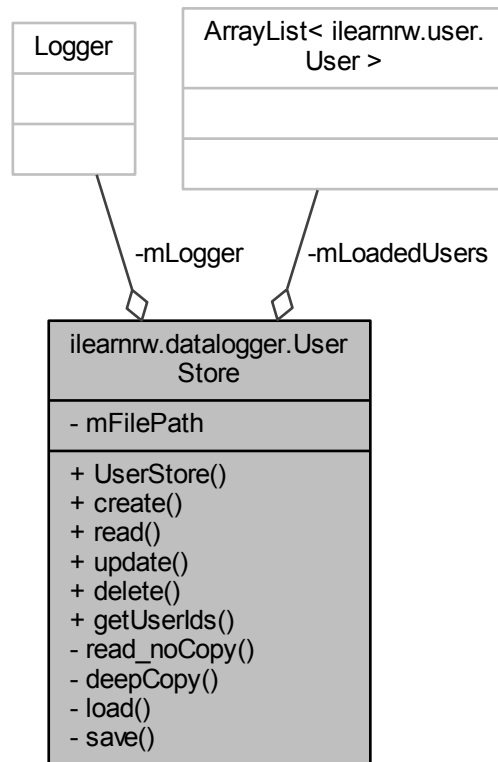
The documentation for this class was generated from the following file:

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/[UserSession.java](#)

## 6.32 ilearnrw.datalogger.UserStore Class Reference

The [UserStore](#) is used to create and store user objects persistantly.

Collaboration diagram for ilearnrw.datalogger.UserStore:



### Public Member Functions

- [UserStore](#) (String filePath)
- [User create](#) ()
- [User read](#) (int userId)
- [User update](#) ([User](#) user)
- boolean [delete](#) (int userId)
- LinkedList< Integer > [getUserIds](#) ()

### Private Member Functions

- [User read\\_noCopy](#) (int userId)
- [User deepCopy](#) ([User](#) user)
- void [load](#) ()  
*Loads the serialized objects in mFilePath into mLoadedUsers.*
- void [save](#) ()  
*Serializes mLoadedUsers into mFilePath*

## Private Attributes

- `ArrayList< User > mLoadedUsers`
- `Logger mLogger`

## Static Private Attributes

- `static String mFilePath`

*The complete path to the file to read/write the user information from/to.*

### 6.32.1 Detailed Description

The `UserStore` is used to create and store user objects persistantly.

**Todo** Replace storage backed with SQL database.

#### Note

At the moment Java's built in serialization is used to store users to disk. This requires all objects to be stored to implement the `Serializable` interface.

Implements a CRUD interface for users and save/load functions to store the data persistantly.

### 6.32.2 Constructor & Destructor Documentation

#### 6.32.2.1 `ilearnrw.datalogger.UserStore.UserStore ( String filePath )`

##### Parameters

<i>filePath</i>	The full path to the file to use to store the user profiles etc.
-----------------	--

References `ilearnrw.datalogger.UserStore.load()`, `ilearnrw.datalogger.UserStore.mFilePath`, and `ilearnrw.datalogger.UserStore.mLogger`.

### 6.32.3 Member Function Documentation

#### 6.32.3.1 `User ilearnrw.datalogger.UserStore.create ( )`

Create a new user.

Will generate a new `UserId` for the user.

##### Returns

A new `User` object.

References `ilearnrw.datalogger.UserStore.deepCopy()`, `ilearnrw.datalogger.UserStore.mLoadedUsers`, `ilearnrw.datalogger.UserStore.read_noCopy()`, and `ilearnrw.datalogger.UserStore.save()`.

Referenced by `ilearnrw.prototype.application.DatabaseManager.onSelected()`.

### 6.32.3.2 User `ilearnrw.datalogger.UserStore.deepCopy ( User user )` [private]

Returns a copy of a User object

This is called from functions returning a user in this class since we do not want to give out the actual reference stored in the `_loadedUsers` list.

References [ilearnrw.datalogger.UserStore.mLogger](#).

Referenced by [ilearnrw.datalogger.UserStore.create\(\)](#), [ilearnrw.datalogger.UserStore.read\(\)](#), and [ilearnrw.datalogger.UserStore.update\(\)](#).

### 6.32.3.3 boolean `ilearnrw.datalogger.UserStore.delete ( int userId )`

Deletes a user from the store.

Parameters

<i>userId</i>	userId of the user to delete
---------------	------------------------------

Returns

true if successful.

References [ilearnrw.datalogger.UserStore.mLoadedUsers](#), [ilearnrw.datalogger.UserStore.read\\_noCopy\(\)](#), and [ilearnrw.datalogger.UserStore.save\(\)](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

### 6.32.3.4 `LinkedList<Integer> ilearnrw.datalogger.UserStore.getUserIds ( )`

Returns

A list of all stored userId's.

References [ilearnrw.datalogger.UserStore.mLoadedUsers](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

### 6.32.3.5 void `ilearnrw.datalogger.UserStore.load ( )` [private]

Loads the serialized objects in `mFilePath` into `mLoadedUsers`.

References [ilearnrw.datalogger.UserStore.mFilePath](#), [ilearnrw.datalogger.UserStore.mLoadedUsers](#), and [ilearnrw.datalogger.UserStore.mLogger](#).

Referenced by [ilearnrw.datalogger.UserStore.UserStore\(\)](#).

### 6.32.3.6 User `ilearnrw.datalogger.UserStore.read ( int userId )`

Reads a User from the [UserStore](#)

Parameters

<i>userId</i>	The userId of the user to load
---------------	--------------------------------

Returns

The user with `userId == userId`

References [ilearnrw.datalogger.UserStore.deepCopy\(\)](#), and [ilearnrw.datalogger.UserStore.read\\_noCopy\(\)](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

**6.32.3.7 User** `ilearnrw.datalogger.UserStore.read_noCopy ( int userId )` [private]

References [ilearnrw.datalogger.UserStore.mLoadedUsers](#).

Referenced by [ilearnrw.datalogger.UserStore.create\(\)](#), [ilearnrw.datalogger.UserStore.delete\(\)](#), [ilearnrw.datalogger.UserStore.read\(\)](#), and [ilearnrw.datalogger.UserStore.update\(\)](#).

**6.32.3.8 void** `ilearnrw.datalogger.UserStore.save ( )` [private]

Serializes `mLoadedUsers` into `mFilePath`

References [ilearnrw.datalogger.UserStore.mFilePath](#), [ilearnrw.datalogger.UserStore.mLoadedUsers](#), and [ilearnrw.datalogger.UserStore.mLogger](#).

Referenced by [ilearnrw.datalogger.UserStore.create\(\)](#), [ilearnrw.datalogger.UserStore.delete\(\)](#), and [ilearnrw.datalogger.UserStore.update\(\)](#).

**6.32.3.9 User** `ilearnrw.datalogger.UserStore.update ( User user )`

Updates the user currently stored with the one supplied.

Parameters

<i>user</i>	The new user copy to store.
-------------	-----------------------------

Returns

A new copy of the user object.

References [ilearnrw.datalogger.UserStore.deepCopy\(\)](#), [ilearnrw.user.User.getUserId\(\)](#), [ilearnrw.datalogger.UserStore.mLoadedUsers](#), [ilearnrw.datalogger.UserStore.read\\_noCopy\(\)](#), and [ilearnrw.datalogger.UserStore.save\(\)](#).

Referenced by [ilearnrw.prototype.application.DatabaseManager.onSelected\(\)](#).

**6.32.4 Member Data Documentation****6.32.4.1 String** `ilearnrw.datalogger.UserStore.mFilePath` [static], [private]

The complete path to the file to read/write the user information from/to.

Referenced by [ilearnrw.datalogger.UserStore.load\(\)](#), [ilearnrw.datalogger.UserStore.save\(\)](#), and [ilearnrw.datalogger.UserStore.UserStore\(\)](#).

**6.32.4.2 ArrayList<User>** `ilearnrw.datalogger.UserStore.mLoadedUsers` [private]

Referenced by [ilearnrw.datalogger.UserStore.create\(\)](#), [ilearnrw.datalogger.UserStore.delete\(\)](#), [ilearnrw.datalogger.UserStore.getUserIds\(\)](#), [ilearnrw.datalogger.UserStore.load\(\)](#), [ilearnrw.datalogger.UserStore.read\\_noCopy\(\)](#), [ilearnrw.datalogger.UserStore.save\(\)](#), and [ilearnrw.datalogger.UserStore.update\(\)](#).

**6.32.4.3 Logger** `ilearnrw.datalogger.UserStore.mLogger` [private]

Referenced by [ilearnrw.datalogger.UserStore.deepCopy\(\)](#), [ilearnrw.datalogger.UserStore.load\(\)](#), [ilearnrw.datalogger.UserStore.save\(\)](#), and [ilearnrw.datalogger.UserStore.UserStore\(\)](#).

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

- C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/[UserStore.java](#)



## Chapter 7

# File Documentation

### 7.1 C:/develop/projects/ILearnRW/github/ilearnrw/README.md File Reference

### 7.2 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/DataLogger.java File Reference

#### Classes

- class [ilearnrw.datalogger.DataLogger](#)

#### Packages

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

#### Constant Groups

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

### 7.3 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/IDataLogger.java File Reference

#### Classes

- interface [ilearnrw.datalogger.IDataLogger](#)

#### Packages

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

## Constant Groups

- package [ilearnrw.datalogger](#)  
*DataLogger package.*

## 7.4 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/ILoginProider.java File Reference

### Classes

- interface [ilearnrw.datalogger.ILoginProvider](#)

### Packages

- package [ilearnrw.datalogger](#)  
*DataLogger package.*

## Constant Groups

- package [ilearnrw.datalogger](#)  
*DataLogger package.*

## 7.5 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/IProfileAccess-Updater.java File Reference

### Classes

- interface [ilearnrw.datalogger.IProfileAccessUpdater](#)  
*Interface to update profiles in the iLearnRW system.*
- class [ilearnrw.datalogger.IProfileAccessUpdater.PermissionException](#)  
*The marker does not have permission to perform the requested change.*
- class [ilearnrw.datalogger.IProfileAccessUpdater.PendingChangesAvailable](#)  
*Indicates that an action cannot be performed due to pending changes.*

### Packages

- package [ilearnrw.datalogger](#)  
*DataLogger package.*

## Constant Groups

- package [ilearnrw.datalogger](#)  
*DataLogger package.*



## 7.6 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/LoginDetails.java File Reference

### Classes

- class [ilearnrw.datalogger.LoginDetails](#)

### Packages

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

### Constant Groups

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

## 7.7 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/ProfileAccess-Updater.java File Reference

### Classes

- class [ilearnrw.datalogger.ProfileAccessUpdater](#)

### Packages

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

### Constant Groups

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

## 7.8 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/datalogger/UserStore.java File Reference

### Classes

- class [ilearnrw.datalogger.UserStore](#)  
*The UserStore is used to create and store user objects persistantly.*

### Packages

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

## Constant Groups

- package [ilearnrw.datalogger](#)  
*DataLogger* package.

## 7.9 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/- ConsoleMenu.java File Reference

### Classes

- class [ilearnrw.prototype.application.ConsoleMenu](#)
- enum [ilearnrw.prototype.application.ConsoleMenu.EConsoleMenuActionResult](#)
- interface [ilearnrw.prototype.application.ConsoleMenu.IConsoleMenuAction](#)

### Packages

- package [ilearnrw.prototype.application](#)

### Constant Groups

- package [ilearnrw.prototype.application](#)

## 7.10 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/- ConsoleMenuAction.java File Reference

### Classes

- class [ilearnrw.prototype.application.ConsoleMenuAction](#)

### Packages

- package [ilearnrw.prototype.application](#)

### Constant Groups

- package [ilearnrw.prototype.application](#)

## 7.11 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/- DatabaseManager.java File Reference

### Classes

- class [ilearnrw.prototype.application.DatabaseManager](#)
- interface [ilearnrw.prototype.application.DatabaseManager.ISelectUser](#)

### Packages

- package [ilearnrw.prototype.application](#)

### Constant Groups

- package [ilearnrw.prototype.application](#)

## 7.12 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/prototype/application/-Program.java File Reference

### Classes

- class [ilearnrw.prototype.application.Program](#)

### Packages

- package [ilearnrw.prototype.application](#)

### Constant Groups

- package [ilearnrw.prototype.application](#)

## 7.13 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/Category.java File Reference

### Classes

- class [ilearnrw.user.Category](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.14 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/GameAction.java File Reference

### Classes

- enum [ilearnrw.user.GameAction](#)

### Packages

- package [ilearnrw.user](#)

## Constant Groups

- package [ilearnrw.user](#)

## 7.15 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/IlearnException.java File Reference

### Classes

- class [ilearnrw.user.IlearnException](#)

### Packages

- package [ilearnrw.user](#)

## Constant Groups

- package [ilearnrw.user](#)

## 7.16 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/LanguageCode.java File Reference

### Classes

- enum [ilearnrw.user.LanguageCode](#)

### Packages

- package [ilearnrw.user](#)

## Constant Groups

- package [ilearnrw.user](#)

## 7.17 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/ProblemDefinition.java File Reference

### Classes

- class [ilearnrw.user.ProblemDefinition](#)

### Packages

- package [ilearnrw.user](#)

## Constant Groups

- package [ilearnrw.user](#)

## 7.18 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/ProblemDefinitionIndex.java File Reference

### Classes

- class [ilearnrw.user.ProblemDefinitionIndex](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.19 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/Subcategory.java File Reference

### Classes

- class [ilearnrw.user.Subcategory](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.20 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/Tester.java File Reference

### Classes

- class [ilearnrw.user.Tester](#)

### Packages

- package [ilearnrw.user](#)

## Constant Groups

- package [ilearnrw.user](#)

## 7.21 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/User.java File Reference

### Classes

- class [ilearnrw.user.User](#)

### Packages

- package [ilearnrw.user](#)

## Constant Groups

- package [ilearnrw.user](#)

## 7.22 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserAction.java File Reference

### Classes

- class [ilearnrw.user.UserAction](#)

### Packages

- package [ilearnrw.user](#)

## Constant Groups

- package [ilearnrw.user](#)

## 7.23 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserDetails.java File Reference

### Classes

- class [ilearnrw.user.UserDetails](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.24 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserPreferences.java File Reference

### Classes

- class [ilearnrw.user.UserPreferences](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.25 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserProblem.java File Reference

### Classes

- class [ilearnrw.user.UserProblem](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.26 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserProblems-List.java File Reference

### Classes

- class [ilearnrw.user.UserProblemsList](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.27 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserProfile.java File Reference

### Classes

- class [ilearnrw.user.UserProfile](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)

## 7.28 C:/develop/projects/ILearnRW/github/ilearnrw/src/ilearnrw/user/UserSession.java File Reference

### Classes

- class [ilearnrw.user.UserSession](#)

### Packages

- package [ilearnrw.user](#)

### Constant Groups

- package [ilearnrw.user](#)



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