CS5500: Project
Team 104
Phase B
Interface details

List of interfaces:

The system is composed of the following interfaces
(At this point of time)

Interface Hierarchy

- plagiarism.detector.**IAuth**
- plagiarism.detector.**IMatch**
- plagiarism.detector.**IPlagiarismCore**
- plagiarism.detector.**IPlagiarismSystem**

Interface IAuth

`public interface` **`IAuth`**
IAuth - Interface Authentication This interface contains methods for all authentication related functions

Purpose: Any change in the configuration of the system (operations) should be possible, only if the user is authorized to do so.

This interface is designed in a way that the actual passwords can never be extract. Only the hashes of the password should be obtainable when the need arises.

Method Summary:

Modifier and Type	Method and Description
`boolean`	**`authenticate`**`(char[] givenPassword)` authenticates the user with the given password
`int`	**`changePassword`**`(char[] newPassword)` changePassword - replaces the current password with the new password.

Method Detail

authenticate

```
boolean authenticate(char[] givenPassword)
```

authenticates the user with the given password

Returns:

`true if the given password, matches the current password else false`

See Also:

`Why return type of char[] over String?`

changePassword

```
int changePassword(char[] newPassword)
```

changePassword - replaces the current password with the new password. Once replaced, the new password becomes the current password and all authentication methods will refer to it.

Returns:

```
0 if the password has been changed successfully
-1 if there are any issues with current password authentication
-2 if there are any issues with new password validation public interface
```

Interface IMatch

All Known Implementing Classes:

Match

```
public interface IMatch
```

Method Summary

Modifier and Type	Method and Description
java.util.List<MatchMetaData>	returnComparedWithMetadata() returnComparedWithMetadata
MatchType	returnMatchType()
MatchMetaData	returnSourceMetadata(

Method Detail

returnMatchType

```
MatchType returnMatchType()
```

Returns:

the type of match
where, the value should be one of the enum values (MatchType)

returnSourceMetadata

```
MatchMetaData returnSourceMetadata()
```

Returns:

a MatchMetaData object, that represents the line number and column number of the match found in the other file,
source refers to the file given for detection compared with refers to the file against which the source is compared with

returnComparedWithMetadata

```
java.util.List<MatchMetaData> returnComparedWithMetadata()
```

returnComparedWithMetadata

Returns:

a List obj, that contains a list of metadata of the files compared with

Interface IPlagiarismCore

All Known Implementing Classes:

PlagiarismCore

```
public interface IPlagiarismCore
```

Method Summary

Modifier and Type	Method and Description
java.util.List<Match>	returnExactMatches() returnExactMatches
java.util.List<Match>	returnFunctionizedMatches() returnFunctionizedMatches
java.util.List<Match>	returnRenamedCodeMatches() returnRenamedCodeMatches
java.util.List<Match>	returnRenamedDatatypesMatches() returnRenamedDatatypesMatches

Method Detail

returnRenamedDatatypesMatches

```
java.util.List<Match> returnRenamedDatatypesMatches()
```

returnRenamedDatatypesMatches

Returns:

```
a List of Match type,
where, each Match represents
```

See Also:

Match

returnFunctionizedMatches

```
java.util.List<Match> returnFunctionizedMatches()
```

returnFunctionizedMatches

Returns:

```
a List of matches after scanning for codes moved into functions and
vice versa
```

returnRenamedCodeMatches

```
java.util.List<Match> returnRenamedCodeMatches()
```

returnRenamedCodeMatches

Returns:

a List obj that contains a list of matches where,datatypes and functions renamed

returnExactMatches

```
java.util.List<Match> returnExactMatches()
```

returnExactMatches

Returns:

a List obj that contains a list of matches where ,the code is exactly similar in the source and files compared with.

Interface IPlagiarismSystem

- **All Known Implementing Classes:**
  PlagiarismSystem

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public interface **IPlagiarismSystem**

Contains the functions for main system interactions with the UI and system IT Note : Plagiarism Settings - Type of Plagiarism to detect Plagiarism

Method Summary

Modifier and Type	Method and Description
int	**resetPlagiarismConfig**()
int	**returnPlagiarismSettings**() returnPlagiarismSettings
int	**setInputFilesToDetect**(java.io.File[] fileArray) setInputFilesToDetect
int	**setInputFilesToCompareWith**(java.io.File[] fileArray) setInputFilesToDetect
int	**setPlagiarismConfig** (int confidence_level)

Method Detail

setPlagiarismConfig

int setPlagiarismConfig(int confidence_level)

Returns:

```
0     on successful return after configuration
-1    on unsuccessful return after configuration
```

setInputFilesToDetect

int setInputFilesToDetect(java.io.File[] fileArray)

setInputFilesToDetect

Returns:

```
0     on successful return after configuration
-1    on unsuccessful return after configuration
```

setFilesToCompareWith

```
int setFilesToCompareWith(java.io.File[] fileArray)
```

setInputFilesToDetect

Returns:

```
0     on successful return after configuration
-1    on unsuccessful return after configuration
```

returnPlagiarismSettings

```
int returnPlagiarismSettings
returnPlagiarismSettings()
```

returnPlagiarismSettings

Returns:

```
a Map of String, String where each key represents a setting and its
value is given as String
```

resetPlagiarismConfig

```
int resetPlagiarismConfig()
```

Returns:

```
an integer,
0 on successful reset to default
-1 on any exception during reset.
```