QUIZ MANAGER

Fundamental Java project

Team Name

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Introduction

Quiz Manager is a **Java** based application which is designed to manage quiz and questionnaires. It's a console based application which prompts a user with several options and based on the need, a user can select the required option. Upon selecting a wrong or invalid option, it prompts the user again with the available options.
It caters to two type of users:

1) Admin/Teacher – They are the users having the administrative access to the system. This account is secured with a password (current password - 123). Its stored in a file accessible to admin (admin.txt).

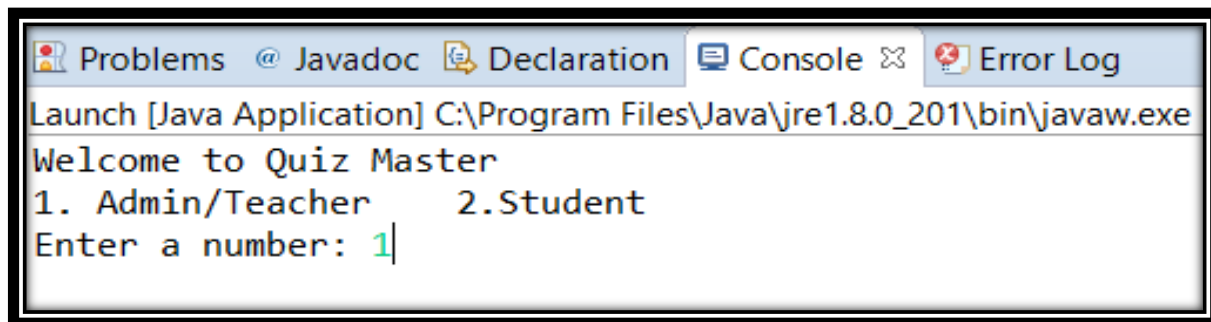   Actions that can be performed by Admin/Teacher: -
   - Login using a password
   - Create a new quiz by searching through database. He can mix-up the questions, select the questions based on difficulty level or select based on the different topics
   - There are 5 topics available in the app (C, C++, Java, HTML, Python)
   - If the desired topic or question is not available, admin can add / update / delete topic or questions in the database
   - See the results of any/all the student
   - Export the questions in text or .pdf format

2) Student – They have limited access in the system.
   Actions that can be performed by Student: –
   - Take a test
   - Choose the difficulty level and the topic they want to take the test for
   - Multiple topics available to choose from. In a single test, they can choose more than one topic
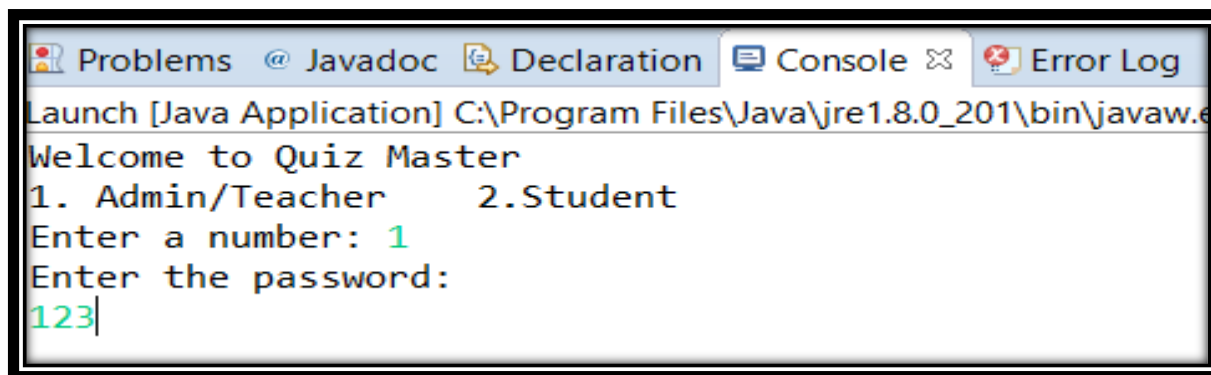   - Export their results in text or .pdf format

For Admin/Teacher and Student

```
Problems  @ Javadoc  Declaration  Console ⌧  Error Log
Launch [Java Application] C:\Program Files\Java\jre1.8.0_201\bin\javaw.exe
Welcome to Quiz Master
1. Admin/Teacher    2.Student
Enter a number: 1
```

It's the first screen a user will see upon running the application. Here there are two options presented. If you want to login as an Admin/Teacher, you must know the password.

For student, they need to enter their name and get going with rest of the options.

For Admin/Teacher

```
Problems  @ Javadoc  Declaration  Console ⌧  Error Log
Launch [Java Application] C:\Program Files\Java\jre1.8.0_201\bin\javaw.e
Welcome to Quiz Master
1. Admin/Teacher    2.Student
Enter a number: 1
Enter the password:
123
```

Password for Admin is **123**

For Admin/Teacher

```
Welcome to Quiz Master
1. Admin/Teacher      2.Student
Enter a number: 1
Enter the password:
123
1. CRUD 2.View Result 3.MainMenu
Enter a number: |
```

There are 3 options for Admin/Teacher: -

1) CRUD – Create / Read / Update / Delete

2) View Result – To view the results of all the students from the existing records

3) MainMenu – To go back to main menu

For Admin/Teacher

```
1. CRUD 2.View Result 3.MainMenu
Enter a number:
1
1.Add question 2.View 3.Edit 4.Delete
Enter the option:
```

In CRUD, there are 4 options

For Admin/Teacher

```
1. CRUD 2.View Result 3.MainMenu
Enter a number:
1
1.Add question 2.View 3.Edit 4.Delete
Enter the option:
1
Enter the topic :
New Topic
```

Under **Add question** option, user can add a new topic and questions OR add a new question for existing topic.

In the below screenshot, user added a **new topic**. Then, application asked him to add the question, options and correct answer.

```
1. CRUD 2.View Result 3.MainMenu
Enter a number:
1
1.Add question 2.View 3.Edit 4.Delete
Enter the option:
1
Enter the topic :
Topic New
Enter the difficulty level
1
Enter the Question:
New question
Enter the Option a:
Yes
Enter the Option b:
No
Enter the Option c:
Maybe
Enter the Option d:
None
Enter the Answer Option:
a
```

For Admin/Teacher

Under **View** option, user can select the topic and difficulty level then see the list of questions with their **ID's**

```
1. CRUD 2.View Result 3.MainMenu
Enter a number:
1
1.Add question 2.View 3.Edit 4.Delete
Enter the option:
2
1.c
2.c++
3.java
4.html
5.python
Choose your topics. Multiple topics can be chosen seperated by commas eg: 1,2
3
chosen topics:3
Enter the difficulty level
1
Topics:[java]DifficultyLevel:1
Id:46
Question:What is the range of short data type in Java?
Option a) -128 to 127
Option b) -32768 to 32767
Option c) -2147483648 to 2147483647
Option d) None of above
Correct Answer:b

Id:47
Question:What is the range of byte data type in Java?
Option a) -128 to 127
Option b) -32768 to 32767
Option c) -2147483648 to 2147483647
Option d) None of above
```

For Admin/Teacher

Under **Edit** option, user has to give the question ID(which was shown in the previous View option.) and after, it shows the option – what he wants to edit.
He can edit the question, options, correct answer, Topic or difficulty level

```
1. CRUD 2.View Result 3.MainMenu
Enter a number:
1
1.Add question 2.View 3.Edit 4.Delete
Enter the option:
3
Enter the qn id :
35
Enter the option you want to edit :
1.Question 2.Option A 3.Option B 4.Option C 5.Option D 6.Answer 7.Topic 8.DifficultyLevel
2
Enter the new value:
No
```

NOTE: Question ID is different for every question and is automatically managed

To **delete** a question, user need to enter the question ID

```
1. CRUD 2.View Result 3.MainMenu
Enter a number:
1
1.Add question 2.View 3.Edit 4.Delete
Enter the option:
4
Enter the question number:
```

Option for Admin/Teacher to export

```
Do you want to export the quiz generated ?
1.Yes 2.No
```

For Student

Selecting 2nd option from the main menu, shows the below screen. User has to enter his name and then he can select the topic(single or multiple)

```
Welcome to Quiz Master
1. Admin    2.Student
Enter a number: 2
Enter your name:
John Doe
1.c
2.c++
3.java
4.html
5.python
Choose your topics. Multiple topics can be chosen seperated by commas eg: 1,2
```

Upon choosing the topics, user has to select the complexity level

```
John Doe
1.c
2.c++
3.java
4.html
5.python
Choose your topics. Multiple topics can be chosen seperated by commas eg: 1,2
1,3,4
chosen topics:1,3,4
Choose the defficulty level
1.Easy   2.Medium   3.Difficult
Enter a number: 2
```

Then it shows the questions and asks for the response as below

```
Question:Which data type is most suitable for storing a number 65000 in a 32-bit system?
Option a) signed short
Option b) unsigned short
Option c) long
Option d) int
Enter option (a or b or c or d)
Answer:
Enter your answer:
```

For Student

After the quiz is finished, user will get the below result. He also gets an option to import the results in text or .pdf format

```
Name:John Doe    Mark:4/10  Topics:[java, html]    Difficulty:3
Do you want to export the quiz generated ?
1.Yes 2.No
```

```
Do you want to export the quiz generated ?
1.Yes 2.No
1
1.Text file 2.PDF file 3.BOTH format
1
```

Output of the exported text file for student

```
Quiz-1550702237490 - Notepad
File Edit Format View Help
1.What is true about constructor?
option a:It can contain return type  option b:It can take any number of parameters
option c:It can have any non access modifiers  option d:Constructor cannot throw an exception


2.What is true about Class.getInstance()?
option a:Class.getInstance calls the constructor  option b:Class.getInstance is same as new operator
option c:Class.getInstance needs to have matching constructor  option d:Class.getInstance creates object if class does not have


3.What would be the behaviour if this() and super() used in a method?
option a:Runtime error  option b:Throws exception
option c:compile time error  option d:Runs successfully


4.What is true about private constructor?
option a:Private constructor ensures only one instance of a class exist at any point of time  option b:Private constructor ens
option c:Private constructor eases the instantiation of a class  option d:Private constructor allows creating objects in other
```