

QUIZ APPLICATION USER GUIDE

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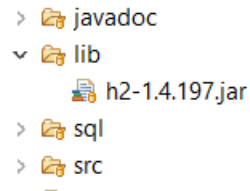
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Setting up the quiz program

1.1 Installing the pre-requisites

The quiz program requires

1. Java – JRE 1.8 and JDK 1.8
2. IDE (Eclipse) as it is a console application
3. H2 database (jar used – h2-1.4.197.jar)



1.2 Import the program from Github into Eclipse

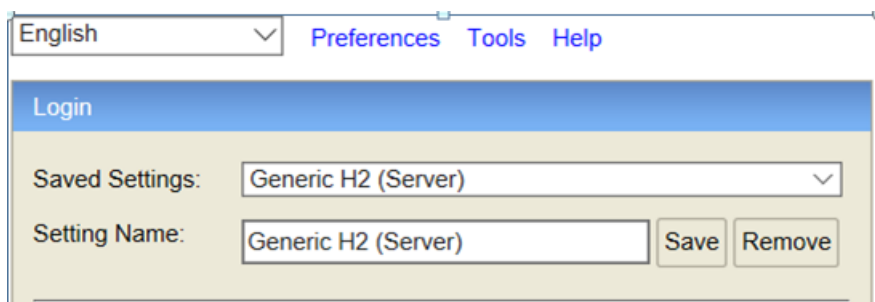
https://github.com/abhinayadurgi/JavaFundamental_Quiz.git

1.3 Setup the backend

Download H2 database and install it. Give the credentials. Test the connection

Use the same settings

Generic H2 (Server)



Server mode

These are the parameters used in the program.

English

▼

[Preferences](#) [Tools](#) [Help](#)

Login

Saved Settings: Generic H2 (Server) ▼

Setting Name: Generic H2 (Server)

Save

Remove

Driver Class: org.h2.Driver

JDBC URL: jdbc:h2:tcp://localhost/.test

User Name: test

Password:

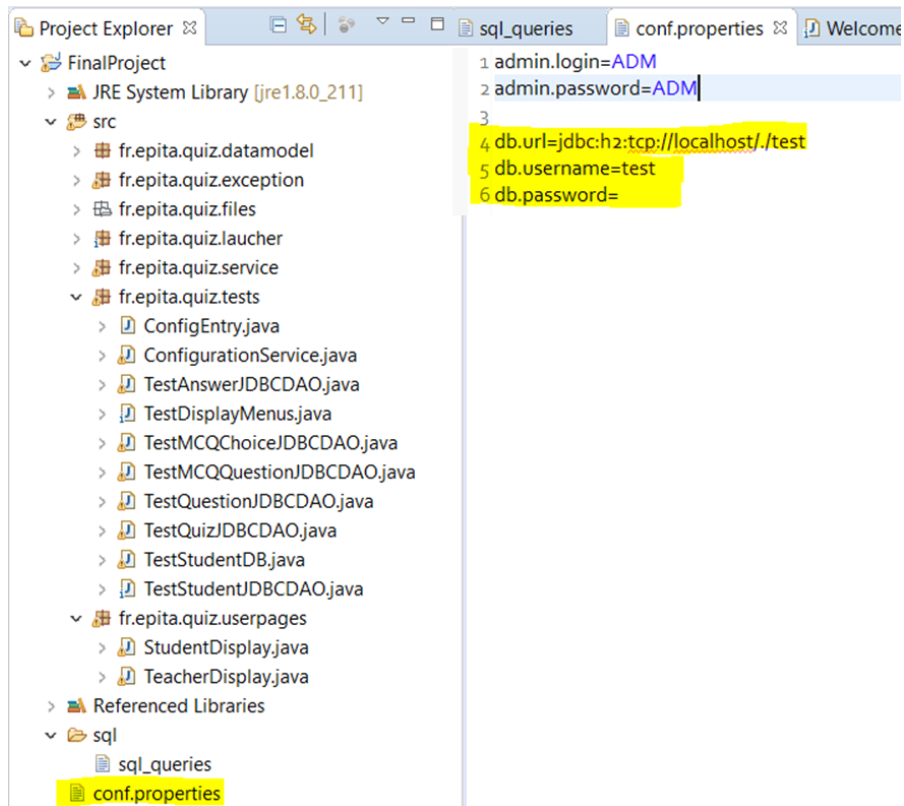
Connect

Test Connection

Test successful

If your credentials are different, these changes must be made in the program.

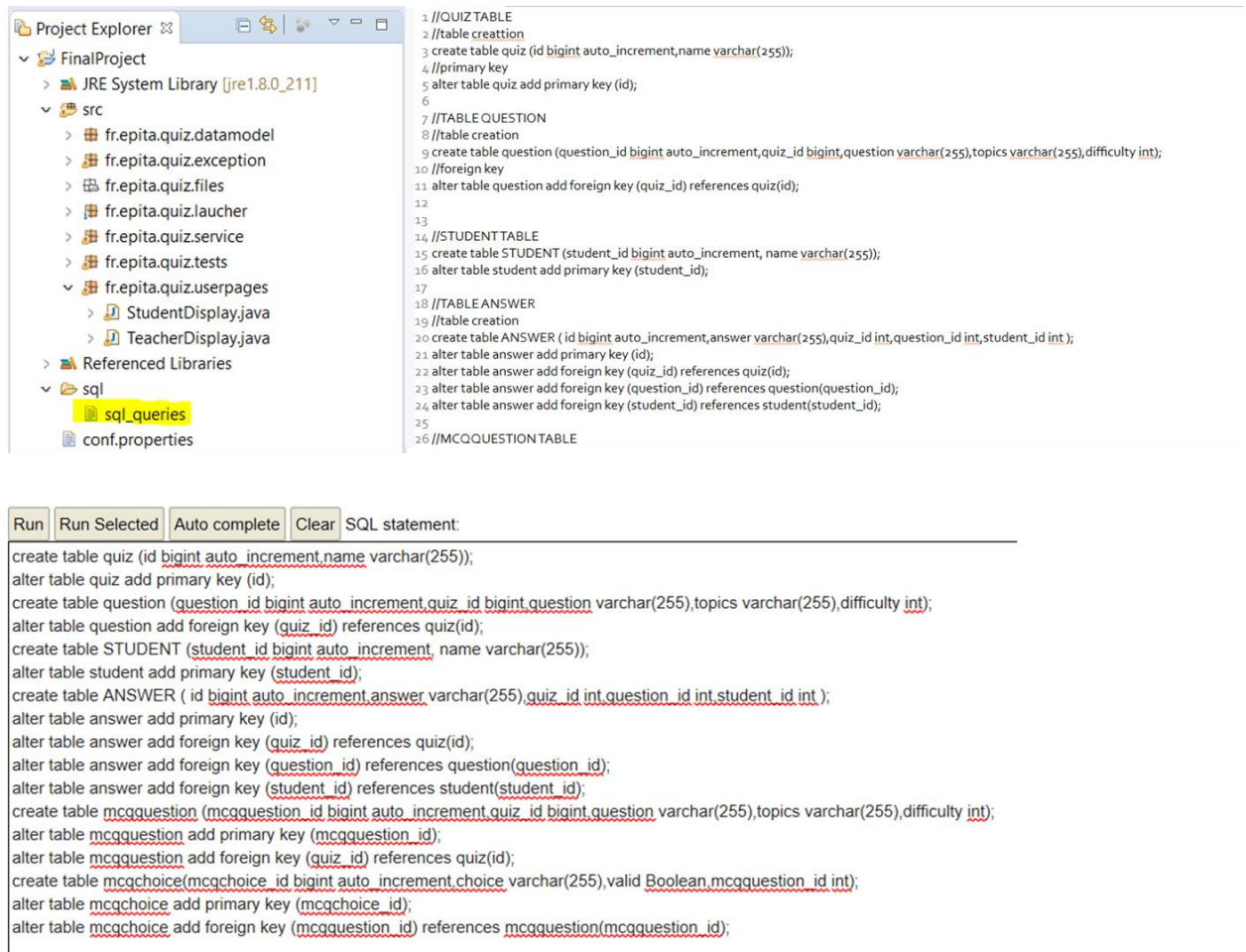
In the program, the database connection details are stored in the conf.properties file.
Edit the conf.properties file with your credentials



1.4 Creating the tables

There is a sql_queries file in the folder SQL

Run the queries in the same order in the H2 console to create the tables.



The screenshot shows an IDE interface. On the left, the 'Project Explorer' pane displays a project named 'FinalProject'. Under the 'src' folder, there are several subfolders including 'fr.epita.quiz.datamodel', 'fr.epita.quiz.exception', 'fr.epita.quiz.files', 'fr.epita.quiz.launcher', 'fr.epita.quiz.service', 'fr.epita.quiz.tests', and 'fr.epita.quiz.userpages'. The 'fr.epita.quiz.userpages' folder contains 'StudentDisplay.java' and 'TeacherDisplay.java'. Below the 'src' folder, there is a 'Referenced Libraries' section. At the bottom of the project explorer, there is a 'sql' folder containing a file named 'sql_queries', which is highlighted in yellow.

On the right, the 'SQL statement' window displays a series of SQL queries. The queries are numbered 1 through 26. The queries are as follows:

```
1 //QUIZ TABLE
2 //table creation
3 create table quiz (id bigint auto_increment,name varchar(255));
4 //primary key
5 alter table quiz add primary key (id);
6
7 //TABLE QUESTION
8 //table creation
9 create table question (question_id bigint auto_increment,quiz_id bigint,question varchar(255),topics varchar(255),difficulty int);
10 //foreign key
11 alter table question add foreign key (quiz_id) references quiz(id);
12
13
14 //STUDENT TABLE
15 create table STUDENT (student_id bigint auto_increment, name varchar(255));
16 alter table student add primary key (student_id);
17
18 //TABLE ANSWER
19 //table creation
20 create table ANSWER ( id bigint auto_increment,answer varchar(255),quiz_id int,question_id int,student_id int );
21 alter table answer add primary key (id);
22 alter table answer add foreign key (quiz_id) references quiz(id);
23 alter table answer add foreign key (question_id) references question(question_id);
24 alter table answer add foreign key (student_id) references student(student_id);
25
26 //MCQUESTION TABLE
```

Below the SQL statement window, there is a 'Run' button, a 'Run Selected' button, an 'Auto complete' button, and a 'Clear' button. The 'SQL statement' window also displays the following SQL queries:

```
create table quiz (id bigint auto_increment,name varchar(255));
alter table quiz add primary key (id);
create table question (question_id bigint auto_increment,quiz_id bigint,question varchar(255),topics varchar(255),difficulty int);
alter table question add foreign key (quiz_id) references quiz(id);
create table STUDENT (student_id bigint auto_increment, name varchar(255));
alter table student add primary key (student_id);
create table ANSWER ( id bigint auto_increment,answer varchar(255),quiz_id int,question_id int,student_id int );
alter table answer add primary key (id);
alter table answer add foreign key (quiz_id) references quiz(id);
alter table answer add foreign key (question_id) references question(question_id);
alter table answer add foreign key (student_id) references student(student_id);
create table mcgquestion (mcgquestion_id bigint auto_increment,quiz_id bigint,question varchar(255),topics varchar(255),difficulty int);
alter table mcgquestion add primary key (mcgquestion_id);
alter table mcgquestion add foreign key (quiz_id) references quiz(id);
create table mcgchoice (mcgchoice_id bigint auto_increment,choice varchar(255),valid Boolean,mcgquestion_id int);
alter table mcgchoice add primary key (mcgchoice_id);
alter table mcgchoice add foreign key (mcgquestion_id) references mcgquestion(mcgquestion_id);
```

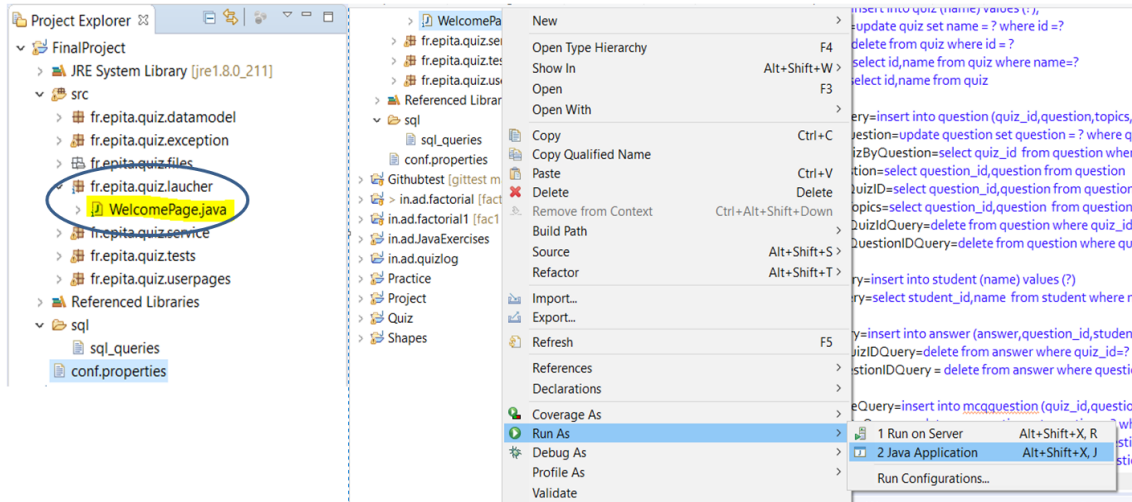
LAUNCHING THE PROGRAM

The main method of the program is in the launcher package of the project

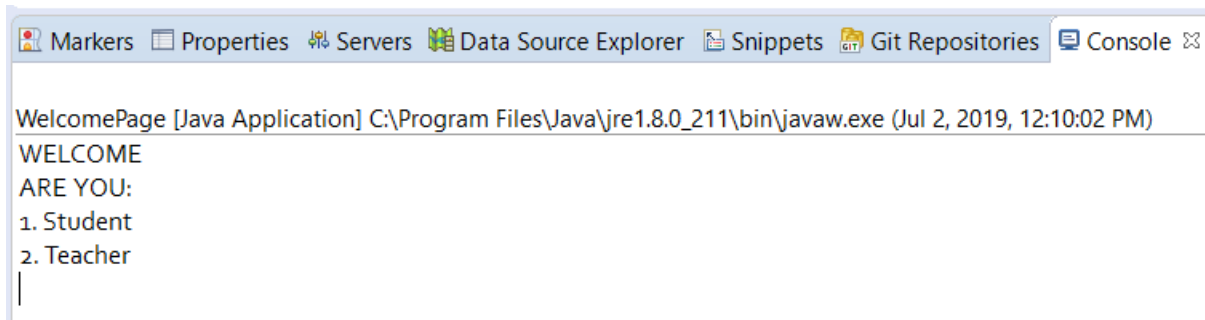
The class with the main method is called WelcomePage.java

Run this class to launch the program

Right Click on the WelcomePage.class -> Run As -> Java Application



It displays the welcome page on running the application



Note: When the program is first executed, the tables are empty and do not have data. The data must be created by the user. So Create quiz, open questions and MCQ questions before taking a quiz.

In case of a connection problem, it displays an error and terminates. Please check the connection and try again.

```
1
Enter name:
Hagrid
Problem connecting to the database
Please check connections and try again
```

USING THE APPLICATION AS A TEACHER

A teacher has to provide login and password.

Login : ADM

Password: ADM

After successful login, the menu is displayed

Please enter your login :

ADM

Please enter your password :

ADM

Menu

1. Create a quiz
 2. Update a quiz
 3. Delete a quiz
 4. Create an open question in a quiz
 5. Update an open question
 6. Delete an open question
 7. Create an MCQ Question in a quiz
 8. Update an MCQ Question
 9. Delete an MCQ Question
 10. Sign out
- Enter choice

|

If login fails,

It displays the text "Invalid login/Password" and the previous menu

Please enter your login :

ADMIN

Please enter your password :

ADMIN

Invalid Login / Password

WELCOME

ARE YOU:

1. Student
2. Teacher

|

CREATE A QUIZ

Choose 1. Create a quiz from the menu by typing '1'

Enter the quiz title when prompted

```
Menu
1. Create a quiz
2. Update a quiz
3. Delete a quiz
4. Create an open question in a quiz
5. Update an open question
6. Delete an open question
7. Create an MCQQuestion in a quiz
8. Update an MCQ Question
9. Delete an MCQ Question
10. Sign out
Enter choice
1
Enter the quiz title
Java programming
```

There cannot be two quizzes with the same name. The program checks, and if a quiz with the same name exists, it displays 'Already Exists'

```
Menu
1. Create a quiz
2. Update a quiz
3. Delete a quiz
4. Create an open question in a quiz
5. Update an open question
6. Delete an open question
7. Create an MCQQuestion in a quiz
8. Update an MCQ Question
9. Delete an MCQ Question
10. Sign out
Enter choice
1
Enter the quiz title
Java programming
Already exists
Menu
```


UPDATE A QUIZ

A quiz title can be updated. To update a quiz, choose 'Update a quiz' by typing '2'.

It displays the available quizzes. Type the quiz number to be updated.

Enter the new title

Menu

1. Create a quiz
 2. Update a quiz
 3. Delete a quiz
 4. Create an open question in a quiz
 5. Update an open question
 6. Delete an open question
 7. Create an MCQQuestion in a quiz
 8. Update an MCQ Question
 9. Delete an MCQ Question
 10. Sign out
- Enter choice

2

33 . Java programming

Enter the quiz ID to be updated

33

Enter the new title

Java

DELETE A QUIZ

To delete a quiz, choose 'Delete a quiz' by typing '3'.

It displays the available quizzes. Type the quiz number to be deleted

Menu

1. Create a quiz
 2. Update a quiz
 3. Delete a quiz
 4. Create an open question in a quiz
 5. Update an open question
 6. Delete an open question
 7. Create an MCQQuestion in a quiz
 8. Update an MCQ Question
 9. Delete an MCQ Question
 10. Sign out
- Enter choice

3

33 . Java

Enter the Quiz ID to be deleted

33

Deleting a quiz deletes all the corresponding questions and answers that belong to the deleted quiz

CREATE AN OPEN QUESTION IN A QUIZ

An open question can be created for a quiz. A question also has topics and difficulty.

To create an open question in a quiz, choose 'Create an open question in a quiz' by typing '4'

It displays the available quizzes

Choose the quiz you want to add the question in by typing the quiz number

Enter the question, if the question already exists, it displays "already exists".

Enter the quiz ID for the question

34

Enter the open question

Is java object oriented?

This open question already exists

..

If the question does not already exist, enter the topics and difficulty when prompted. A question can have any number of topics. The accepted levels of difficulty are : very_easy, easy, medium, hard, very_hard and extremely_hard

Enter choice

4

34 . Java

Enter the quiz ID for the question

34

Enter the open question

What is java?

Enter topics

java

More topics? yes/no

yes

Enter topics

programming

More topics? yes/no

no

The Difficulty levels are:

VERY_EASY

EASY

MEDIUM

HARD

VERY_HARD

EXTREMELY_HARD

Enter the difficulty

very_easy

,

If an invalid value is entered, it displays an error message

```
The Difficulty levels are:  
VERY_EASY  
EASY  
MEDIUM  
HARD  
VERY_HARD  
EXTREMELY_HARD  
Enter the difficulty  
difficult  
Enter correct value  
Enter the difficulty
```

UPDATE AN OPEN QUESTION:

To update an open question, choose 'Update an open question' by typing '5'.

It displays the available questions. Enter the ID of the question to be updated. Enter the updated question.

```
Enter choice  
5  
1.What is java?  
2.Is java object oriented?  
Enter the question ID to be updated  
1  
Enter the new question  
What is java programming?
```

DELETE AN OPEN QUESTION

To delete an open question, choose 'Delete an open question' by typing '6'.

It displays the available questions, Enter the ID of the question to be deleted.

Menu

1. Create a quiz
2. Update a quiz
3. Delete a quiz
4. Create an open question in a quiz
5. Update an open question
6. Delete an open question
7. Create an MCQQuestion in a quiz
8. Update an MCQ Question
9. Delete an MCQ Question
10. Sign out

Enter choice

6

2.Is java object oriented?

1.What is java programming?

Enter the question ID to be deleted

1

CREATE AN MCQ QUESTION IN A QUIZ

To create an MCQ Question, choose 'Create an MCQ Question' in a quiz by typing '7'

An MCQ Question has topics and difficulty. An MCQ Question can have any number of choices.

It displays a list of the available quizzes. Type the ID of the quiz for the MCQ Question to be added in.

Type the MCQ Question.

If the MCQ Question already exists, it displays the message "Already exists"

Enter the Quiz ID to add the MCQ Question in

34

Enter the question

Is multiple inheritance supported in java?

This mcq question already exists

^ ^ ^ ^ ^

If it does not already exist,

Enter the topics, difficulty level when prompted.

Enter the choice and its validity (true for correct; false for wrong)

Enter the Quiz ID to add the MCQ Question in

34

Enter the question

Does java support multiple inheritance?

Enter topics

java

More topics? yes/no

yes

Enter topics

programming

More topics? yes/no

no

The Difficulty levels are:

VERY_EASY

EASY

MEDIUM

HARD

VERY_HARD

EXTREMELY_HARD

Enter the difficulty

easy

Enter the choice

yes

Enter the validity

false

More Choices? yes/no

yes

Enter the choice

no

Enter the validity

true

More Choices? yes/no

no

,

An MCQ Question should have atleast 2 choices and a valid option. It prompts for a valid option if there is no valid option.

```
-----
Enter the Quiz ID to add the MCQ Question in
34
Enter the question
Which of the following is not an oops concept?
Enter topics
java
More topics? yes/no
yes
Enter topics
programming
More topics? yes/no
no
The Difficulty levels are:
VERY_EASY
EASY
MEDIUM
HARD
VERY_HARD
EXTREMELY_HARD
Enter the difficulty
medium
Enter the choice
inheritance
Enter the validity
false
More Choices? yes/no
no
Enter one valid option
Enter the choice
compilation
Enter the validity
true
More Choices? yes/no
no
.
```

UPDATE AN MCQ QUESTION

To update an MCQ Question, choose 'Update an MCQ Question' by typing '8'. It displays the available MCQ Questions. Choose the MCQ Question to updated by typing the ID of the MCQ Question. Enter the new MCQ Question.

```
-----
Enter choice
8
1.Does java support multiple inheritance?
3.Which of the following is not an inheritance concept?
4.Which of the following is not an oops concept?
Enter the MCQ question ID to be updated
1
Enter the updated question
Is multiple inheritance supported in Java?
.
```

DELETE AN MCQ QUESTION

To delete an MCQ question choose 'Delete an MCQ Question' by typing '9'. It displays the available MCQ Questions. Enter the ID of the MCQ Question to be deleted. Deleting an MCQ Question deletes its choice also.

Enter choice

9

1.Is multiple inheritance supported in Java?

3.Which of the following is not an inheritance concept?

4.Which of the following is not an oops concept?

Enter the MCQ question ID to be deleted

1

USING THE APPLICATION AS A STUDENT

After choosing 'Student' on the welcome page, the application displays the studentlogin/signup option. An existing student can login. A new student must sign up. If an existing student tries to signup, it displays "Already Exists". After successful login/Signup, it displays the student menu

The login names are CASE SENSITIVE

WELCOME ARE YOU: 1. Student 2. Teacher 1 WELCOME ARE YOU: 1.EXISTING USER 2.NEW USER ENTER THE CHOICE 1/2 1 Enter name: Hagrid Welcome Hagrid What would you like to do? 1.Take quiz by topics 2.See the quiz list 3. Sign out	WELCOME ARE YOU: 1.EXISTING USER 2.NEW USER ENTER THE CHOICE 1/2 2 Enter name: Hagrid Already Exists
---	--

A STUDENT TAKES A QUIZ

1. BASED ON TOPICS
2. CHOOSING A QUIZ FROM A LIST OF QUIZZES

TAKE A QUIZ BASED ON TOPICS:

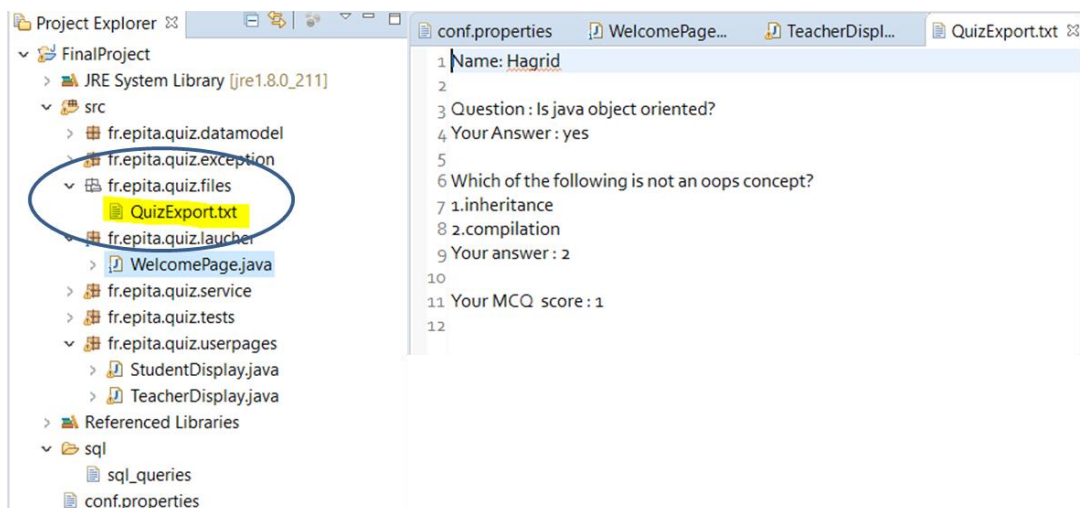
To take a quiz based on topics, choose 'Take quiz by topics' by typing '1'. Enter the topics separated by commas.

The program assembles a quiz based on the topics and displays the questions one at a time. The questions can be open and/or MCQ.

To answer an open question, type the answer, it will be recorded. For an MCQ Question, enter the ID of the correct choice. The MCQ score is calculated and displayed at the end of the quiz.

```
What would you like to do?
1.Take quiz by topics
2.See the quiz list
3. Sign out
1
Enter the topics separated by commas
java,programming
Question
Is java object oriented?
Enter answer
yes
Answer Recorded
Which of the following is not an oops concept?
1 . inheritance
2 . compilation
Enter the answer number from the choice list
2
Your MCQ score is 1
END OF QUIZ
```

The quiz is exported to a file 'QuizExport.txt'. It is present in the files package.



If a quiz for the given topic is not available, it displays a 'not available' message.

Enter the topics separated by commas

python

There are no questions for this topic!

END OF QUIZ

What would you like to do?

1. Take quiz by topics
2. See the quiz list
3. Sign out

TAKE A QUIZ BY CHOOSING A QUIZ FROM A LIST OF QUIZZES

To take a quiz from a list choose 'See the quiz list' by typing '2'. It displays the quiz list.

Choose the quiz by entering the ID of the quiz

Welcome Hagrid

What would you like to do?

1. Take quiz by topics
2. See the quiz list
3. Sign out

2

QUIZ LIST

34 . Java

35 . C programming

Which quiz would you like to take today?

The questions from the quiz are displayed one at a time. Type the answers for the open questions. Enter the ID of the correct MCQ Choice. (Same as above).

The MCQ Score is calculated and displayed in the end.

The quiz is exported to a file.