

# TECHNICAL GUIDE

## QUIZ MANAGER

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## Introduction:

The aim of this project is to create an application which manages the preparation and execution of digital quiz, by performing the operations like Create, Read, Update and Delete on the questions from the BE.

- Read questions from the Database
- Update the questions in the Database from the BE
- Automatic mark evaluation system

## Objectives:

The Quiz Manager Application handles student identity. The users can take the exam and at the end can view the result.

- Provide the quiz to the user
- Evaluate and display the result
- Store the user name and the score in the database

## Scope and Limitation:

### Scope:

- The application provides the user the facility to attend an exam, evaluate it and stores the name and mark of the user
- Automatic answer correction and mark display
- This quiz has both multiple choice and open questions

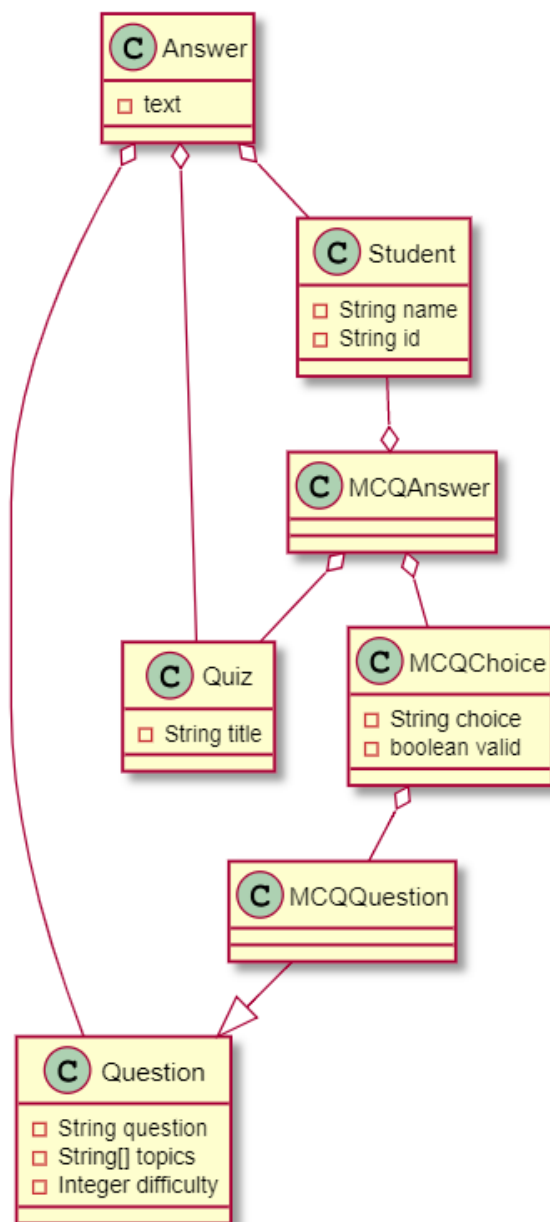
### Limitation:

- Console application only
- No user validation

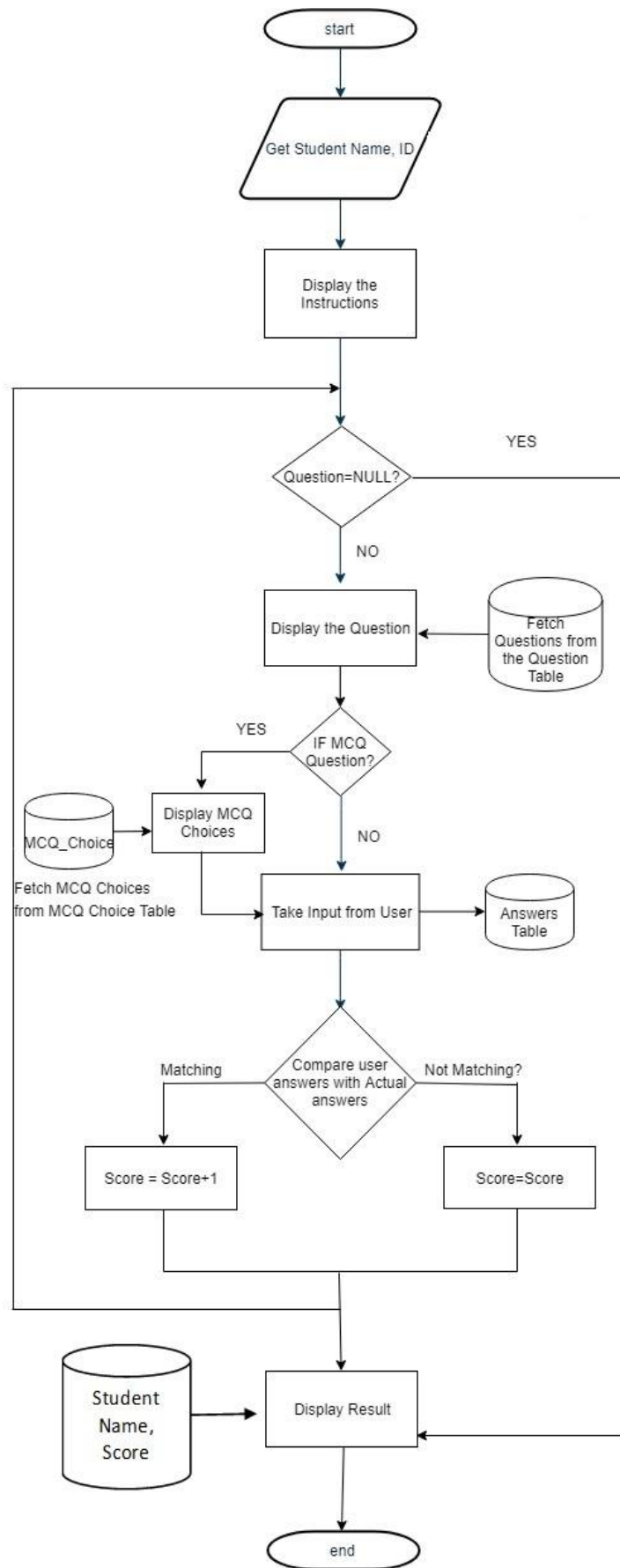
## Software Requirements

Platform	Platform Independent
IDE	Eclipse version 4.9.0
JDK	JDK 1.8.0
Database	H2DataBase 1.2.197

## Global Schema

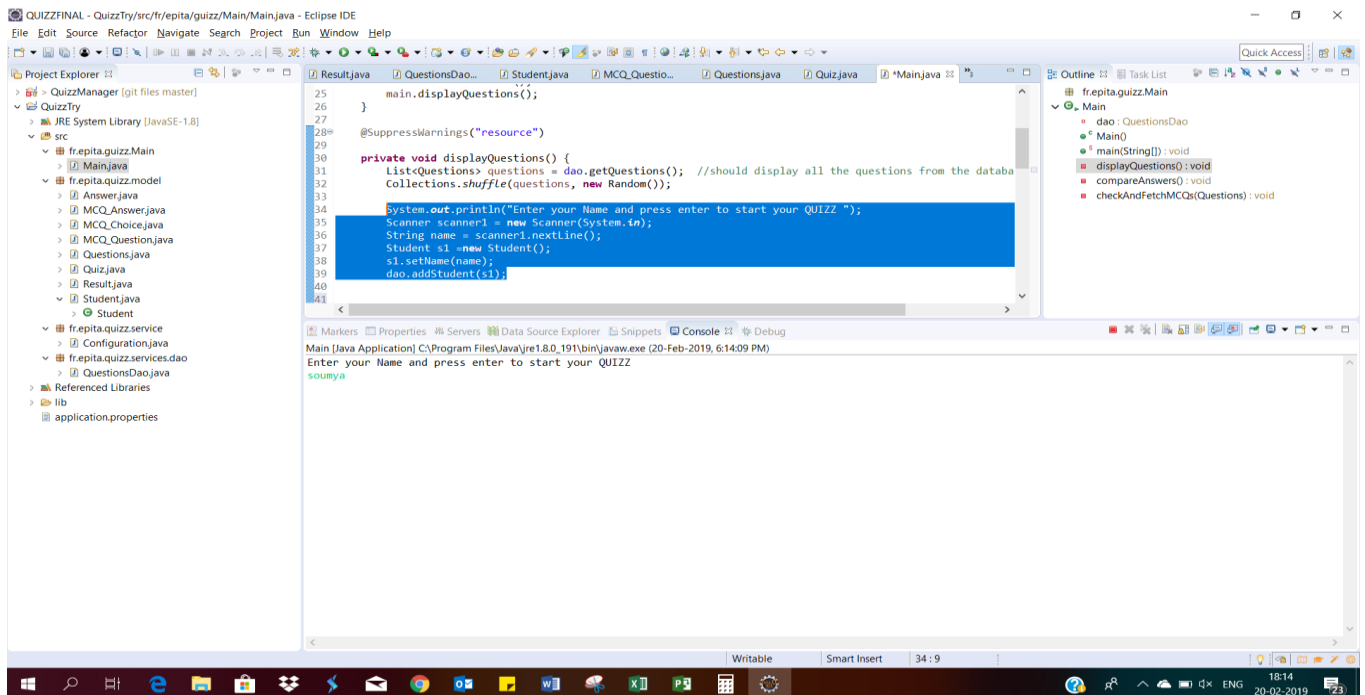


## Flow Chart

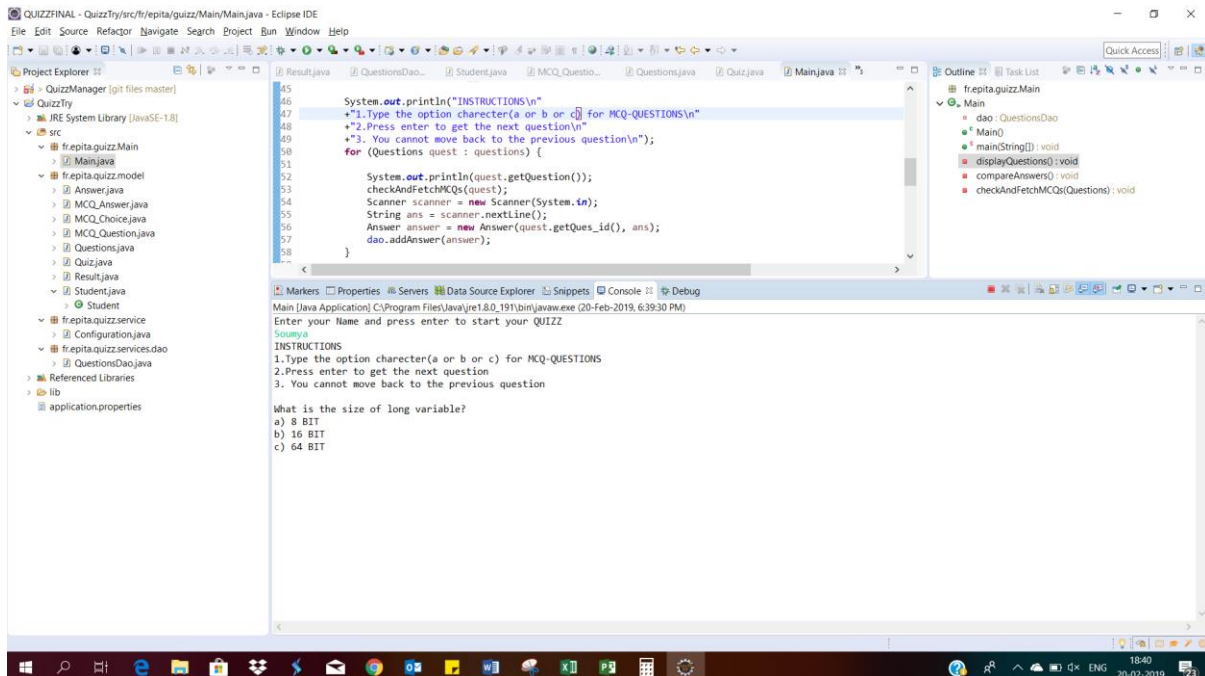


# Console Application Operations

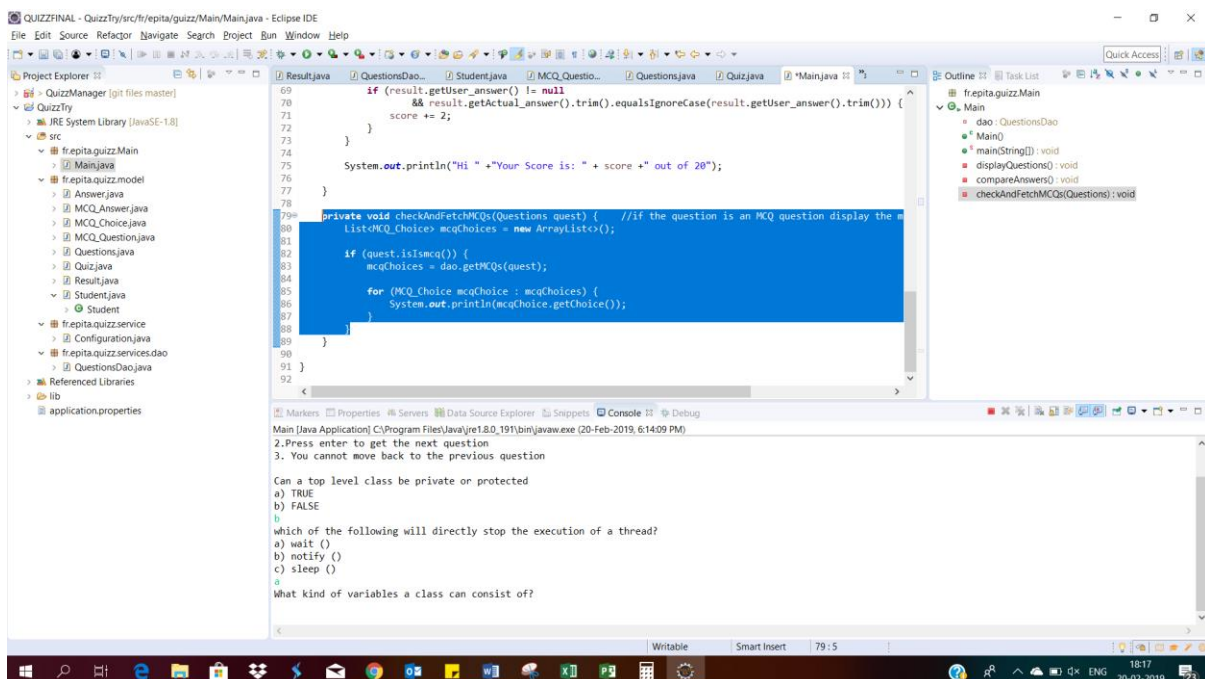
1.The Quiz Manager is a console-based application where anybody can take the quiz by entering their name. For every user who is taking the exam, the name and final marks will be stored in the database



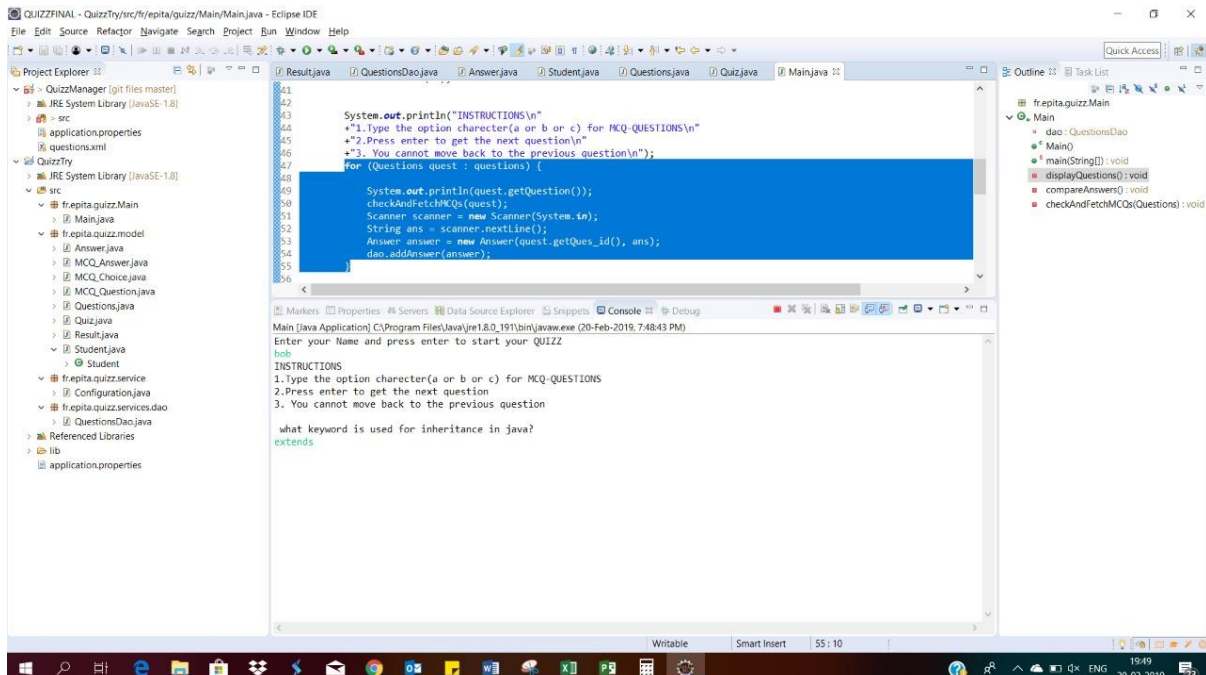
2.The user is notified with the “INSTRUCTIONS” for the exam for the user to follow



3. There are two types of questions MCQ and open choice. Every time we check whether the question is MCQ or Open choice



4. For the open choice questions, we are letting the user to enter the open text answers



```
31
32
33 System.out.println("INSTRUCTIONS\n"
34 + "1.Type the option character(a or b or c) for MCQ_QUESTIONS\n"
35 + "2.Press enter to get the next question\n"
36 + "3. You cannot move back to the previous question\n");
37 for (Questions quest : questions) {
38
39     System.out.println(quest.getQuestion());
40     checkAndFetchMCQs(quest);
41     Scanner scanner = new Scanner(System.in);
42     String ans = scanner.nextLine();
43     Answer answer = new Answer(quest.getQues_id(), ans);
44     dao.addAnswer(answer);
45 }
46
47
48
49
50
51
52
53
54
55
56
```

Main [Java Application] C:\Program Files\Java\jre1.8.0\_191\bin\javaw.exe (20-Feb-2019, 7:48:43 PM)

Enter your Name and press enter to start your QUIZZ

HI

INSTRUCTIONS

1.Type the option character(a or b or c) for MCQ\_QUESTIONS

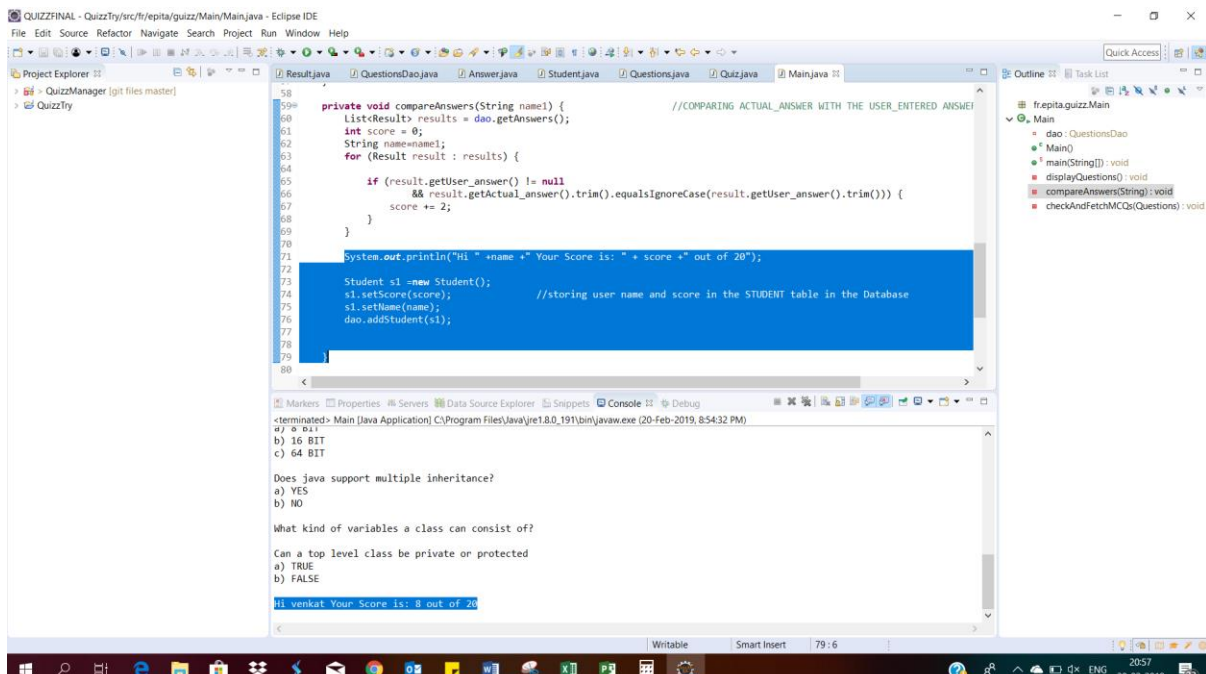
2.Press enter to get the next question

3. You cannot move back to the previous question

what keyword is used for inheritance in java?

extends

5. Once the quiz is taken, the answers are evaluated and result is displayed on the console and stored in the database along with the name



```
58
59 private void compareAnswers(String name) { //COMPARING ACTUAL_ANSWER WITH THE USER_ENTERED ANSWER
60     List<Result> results = dao.getAnswers();
61     int score = 0;
62     String name=name;
63     for (Result result : results) {
64
65         if (result.getUser_answer() != null
66             && result.getActual_answer().trim().equalsIgnoreCase(result.getUser_answer().trim())) {
67             score += 2;
68         }
69     }
70
71     System.out.println("Hi " + name + " Your Score is: " + score + " out of 20");
72
73     Student s1 = new Student();
74     s1.setScore(score); //storing user name and score in the STUDENT table in the Database
75     s1.setName(name);
76     dao.addStudent(s1);
77
78
79
80
```

<terminated> Main [Java Application] C:\Program Files\Java\jre1.8.0\_191\bin\javaw.exe (20-Feb-2019, 8:54:32 PM)

a) YES

b) 16 BIT

c) 64 BIT

Does java support multiple inheritance?

a) YES

b) NO

What kind of variables a class can consist of?

Can a top level class be private or protected

a) TRUE

b) FALSE

HI venkat Your Score is: 8 out of 20



## Database

We have created 4 tables - STUDENT, ANSWERS, MCQ\_CHOICE and QUESTIONS in the DB.

### Student Table

The screenshot shows the H2 Database tool interface. On the left, the database structure is displayed, including tables ANSWERS, MCQ\_CHOICE, QUESTIONS, and STUDENT. The STUDENT table is expanded, showing columns ID, NAME, and SCORE. The main area shows the SQL query `select *from student` and its results in a table with 3 rows and 12 ms execution time.

ID	NAME	SCORE
1	soumya	16
2	jack	6
3	venkat	8

### Answer Table

The screenshot shows the H2 Database tool interface. On the left, the database structure is displayed, including tables ANSWERS, MCQ\_CHOICE, QUESTIONS, and STUDENT. The ANSWERS table is expanded, showing columns ANSWER\_ID, ACTUAL\_ANSWER, USER\_ANSWER, QUESTION\_ID, and MCQ\_ID. The main area shows the SQL query `select *from Answers` and its results in a table with 10 rows and 5 ms execution time.

ANSWER_ID	ACTUAL_ANSWER	USER_ANSWER	QUESTION_ID	MCQ_ID
1	b		1	2
2	a	a	2	3
3	c		3	8
4	a	a	4	11
5	b		5	10
6	class variables, local variables, instance variables		6	null
7	a	a	7	14
8	a		8	17
9	extends	extends	9	null
10	class		10	null

## Choice Table

jdbc:h2:~/test

ANSWERS

MCQ\_CHOICE

MCQ\_ID

CHOICE

QUESTION\_ID

Indexes

QUESTIONS

STUDENT

INFORMATION\_SCHEMA

Sequences

Users

H2 1.4.197 (2018-03-18)

Run Run Selected Auto complete Clear SQL statement

select \*from MCQ\_CHOICE

select \*from MCQ\_CHOICE;

MCQ_ID	CHOICE	QUESTION_ID
1	a) YES	1
2	b) NO	1
3	a) 0	2
4	b) NULL	2
5	c) NOT DEFINED	2
6	a) 8 BIT	3
7	b) 16 BIT	3
8	c) 64 BIT	3
9	a) TRUE	5
10	b) FALSE	5
11	a) STATIC BINDING	4
12	b) DYNAMIC BINDING	4
13	c) BOTH	4
14	a) wait ()	7
15	b) notify ()	7
16	c) sleep ()	7
17	a) run()	8
18	b) start()	8
19	c) main()	8

## Questions Table

jdbc:h2:~/test

ANSWERS

MCQ\_CHOICE

QUESTIONS

ID

QUESTION\_TEXT

TOPICS

DIFFICULTY

ISMCQ

Indexes

STUDENT

INFORMATION\_SCHEMA

Sequences

Users

H2 1.4.197 (2018-03-18)

Run Run Selected Auto complete Clear SQL statement:

select \*from questions

select \*from questions;

ID	QUESTION_TEXT	TOPICS	DIFFICULTY	ISMCQ
1	Does java support multiple inheritance?	(JAVA_BASICS)	1	TRUE
2	What is the default value of int variable?	(JAVA_BASICS)	1	TRUE
3	What is the size of long variable?	(JAVA_BASICS)	2	TRUE
4	Method Overloading is an example of	(JAVA_BASICS)	3	TRUE
5	Can a top level class be private or protected	(Inheritance)	2	TRUE
7	which of the following will directly stop the execution of a thread?	(MULTITHREADING)	3	TRUE
8	which will contain the body of the thread?	(MULTITHREADING)	3	TRUE
9	what keyword is used for inheritance in java?	(OOPS)	3	FALSE
10	what java keyword is used to define a class?	(OOPS)	3	FALSE
6	What kind of variables a class can consist of?	(Inheritance)	3	FALSE

## Bibliography:

- <https://thomas-broussard.fr/>
- <https://www.javacodeexamples.com>
- <https://www.jetbrains.com/help/idea/working-with-code-documentation.html>
- <http://h2database.com/html/main.html>
- <https://www.codecademy.com/>