**JAVA TERM PROJECT**

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**AIM:** To Implement an online quiz management system GUI in java.

**CONCEPTS USED:** This projected has been created using *NetBeans IDE 12* and *JDK version 15*. We have used java swing in the project. The advantage of using java swing is its lightweight components; since Swing components are written entirely in Java and do not map directly to platform-specific peers.

**IMPLEMENTATION:** The program begins with a welcome screen where a button is to be pressed to start the quiz. Also, on the welcome screen and the name of creator of the quiz the title of the quiz is also displayed using the JLabels. The GUI in this project comprises of a three different window.

A new JFrame *frame* is created and its visibility and default close operation is set. This is followed by creating our heading label *q0.*

After these fundamentals are handled, the task of setting of the quiz’s questions is begun. Each question is put inside a new panel. Each panel gets displayed on press of the buttons corresponding to the question number. Each question begins with a label displaying the question. This is followed by initializing four radio buttons, one for each option. Only one of the radio buttons lists the correct option, in this project. For every question, the dimensions of the label and the radio buttons is same. We use a button group instead. All the radio buttons of the question are added to a button group. Then, we add all these components to our frame using add(). This entire process is repeated for all ten questions.

Now, we come to a vital part of our application- the calculation of the score. For this, an integer *score* is initialized. We create a JButton titled ***Submit*** for this purpose. To ***Submit****,* an action listener is added. Using the **isSelected()** function of radio buttons, the integer score is calculated.

On the end screen we have a button called “***Show Results***”. On click of the button the score of the player is displayed with the progress bar showing the percentage.

All components of our window are added to the frame. Our application is ready.

**APPLICATIONS:** This **quiz application** can be implemented to take a basic quiz in any school/college/institution. The application is user-friendly with no hassle and every part of the window clear and separate. The system can be connected to a database using software like SQL to keep a record of quiz-takers and high scores. Additional information, apart from the quizzer’s name can also be taken by adding multiple text fields. Conducting quizzes on a computer system will reduce the amount of paperwork and manpower needed to calculate results, since the application itself is equipped to calculate scores and display results.