

## **Lab 9 and 10 (Swing with JDBC Assignments)**

Q.1) Write an applet to display the date and time .the time is to be shown like a digital clock.

Requirements:

- Create a JLabel to display the current time.
- Use java.util.Timer or javax.swing.Timer to update the time every second.
- Format the time using SimpleDateFormat.
- The clock should start as soon as the application launches and update in real-time.

Q.2) Create a graphical login and registration page using Java Swing, connecting to a MySQL database with JDBC. The program should allow users to register with a username, password, and email, and then log in using their credentials.

Q.3) Develop a basic calculator that can perform simple arithmetic operations using ActionListener, Focus Listener, and Key Board Listener.

Q.4) Develop a basic student management system to add, delete, update, and view student records.

Requirements:

- Create a form with fields like Student ID, Name, Age, Gender, Department, etc.
- Provide buttons for Add, Update, Delete, and View.
- Use a JTable to display the list of students.
- Use JDBC to connect to a MySQL database and perform CRUD operations.
- Implement ActionListener for each button to handle respective actions.

Q.5) Create a text editor with basic functionalities (open, save, edit, clear).

Requirements:

- Create a text area using JTextArea to write and edit text.
- Provide buttons or menu options for Open, Save, Clear, and Exit.
- Use JFileChooser to open and save files.
- Implement ActionListener to handle file operations.
- Add a status bar at the bottom to show the number of characters or lines.

Q.6) Build a simple quiz application with multiple-choice questions.

Requirements:

- Display questions with four options and a Submit button.
- Track and display the score as the user progresses through the questions.
- Provide a Next button to move to the next question.
- Show a Finish button at the end of the quiz to display the final score.
- Use JLabel for questions and JRadioButton for answer choices.