Lab Questions (Advanced Java)

1. Write a java program to create login form with user id, password, ok button, and cancel button. Handle key events such that pressing 'l' performs login and pressing 'c' clears text boxes and puts focus on user id text box. Assume user table having fields Uid and Password in the database named account.

2. Discuss various scopes of JSP objects briefly. Create a HTML file with principal, time and rate. Then create a JSP file that reads values from the HTML form, calculates simple interest and displays it

3. Write a java program that writes objects of Employee class in the file named emp.doc. Create Employee class as of your interest.

4. Write a java program using TCP such that client sends number to server and displays its factorial. The server computes factorial of the number received from client.

5. Describe any two types of Layout manager. Using swing components, design a form with three buttons with captions "RED," "BLUE," and "GREEN," respectively. Then write a program to handle the event such that when the user clicks the button, the color of that button will be the same as its caption.

6. Write a JavaFX application with components, buttons, text fields, and labels, arranged in a VBox or HBox layout.

7. Assume a table MOVIE(id, title, genre). Now, using JDBC, perform the following queries:
   a. Add any three records to the MOVIE table.
   b. Using a prepared statement, update the genre to "Comedy" having the title "Jatra".

8. Write a TCP client-server system in which the client program sends two integers to a server program, which returns the greatest among them.

9. Suppose that 9 integers are written in a file named "magic.txt" in the arrangement of 3×3 separated by space. Write a program to check whether the integers in all rows, all columns, and both diagonals sum to the same constant or not.

10. Explain feature of object-oriented programming. Create a class Distance with private variables feet of type integer and inches of type floating point. Use suitable constructor, and methods for adding and comparing two distance objects. [Hint: 1 feet = 12 inches]

11. Why do we need layout management? Explain any two layout managers with example. Write a simple GUI program that displays "Hello World" in a text field. The program should display output if user clicks a button.

12. Compare AWT with Swing. Write a GUI program using components to find sum and difference of two numbers. Use two text fields for giving input and a label for output. The program should display sum if user presses mouse and difference if user release mouse.

13. Write a GUI program in java to calculate simple interest, program takes input (Principle, Rate, Years) from input textfields, and has a button named FIND SI, the result is shown in a textfield.

14. Write a Swing program to create a simple form to input employee details such as name, age, gender, and salary, and saves them to a file when the "Save" button is clicked.

15. Write a JDBC program in java to connect to a database named 'practical', and create a simple table for 'employee', add an employee detail and retrieve it from database.

16. Develop a servlet application to implement cookies and sessions. When a user enters their name, the application should display the name through cookies and sessions.