

Unit -4: Database Connectivity

Assignments:

1. What is JDBC? How do you execute SQL statements in JDBC? Explain with example.
2. What are the common JDBC API components? Explain all the components.
3. What are the JDBC driver types, explain all with diagrammatic representation? When should each JDBC driver type be used?
4. Write a Java program using JDBC to extract name of those students who live in Kathmandu district, assuming that the student table has four attributes (ID, name, district, and age).
5. How prepared statements are different with statement? Explain with an example.
6. What are the benefits of using JDBC? What is prepared statement?
7. You have been assigned to develop a "Student Registration System" application. Your role involves creating a database schema called SRS and setting up a table named Student with fields for id, name, address, gender, email, and phoneno. Also, you need to write a program that generates a user-friendly GUI form for users to input student details and registers the data into the table upon clicking the "Register" Button.
8. What is row set? Explain cached row set in detail.
9. What are the steps to connect database in java?
10. Explain the types of JDBC statements with example?
11. What are the benefits of PreparedStatement over Statement? Explain with example.
12. Mention difference between result set and row set?
13. Explain all the types of result set with example.
14. Write a Java program to perform all four CRUD operations (Create, Read, Update, Delete) for an Employee table in a relational database. The Employee table has the following columns: employee_id (auto-incremented primary key), first_name, last_name, email, job_title, and salary. Provide a SQL command to create an employee table. Write a Java code for each operation.