**Course 2 - Backend and Database Development**

**Day 12: 9 Jan 2025**

**JDBC :** Java Database Connectivity :

JDBC provided set of API (Application programming interface) ie set of classes and interfaces which help to connect any database ie mysql or oracle or db2 or mongodb using java technologies.

Java Program Database

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JDBC

Which help to store, retrieve, delete and update

Steps to connect database ie mysql using Java technologies.

1. Import the package. sql package provided set of classes and interface which help to connect the database using java.

import java.sql.\*;

import javax.sql.\*;

1. JDBC throw checked exception. So we need to use try-catch or throws concept if we are planning to write jdbc code in main method or user defined method.
2. Load the Driver. Driver is a pre defined class provided by vendor which help to connect the database.

Syntax to load the driver

Class.forName(“drivername”);

In Java Class is a pre defined. The name itself is Class. class(keyword which help to create user defined class). Class is class, the name itself is class which is part of lang package.

Class Vs class

Class contains one pre defined method as forName. This method is static which hep to load the Driver.

com.mysql.cj.jdbc.Driver . Driver is pre defined class part of com package, mysql, cj,jdbc are sub class of respective package. This class not a part of java software. We need to download jar file manually or using **maven build tool**.

1. Establish the connection

Connection con = DriverManager.getConnection(url,username,password);

DriverManager is a pre defined class part of sql package. which contains getConnection static method. which takes 3 parameter is url, username, password and this method return type is Connection interface reference.

url🡪 jdbc:mysql://localhost:3306/databasename

username🡪root

password 🡪root@123

database task

please open mysql terminal with username and password

then create the database.

create database mydb; this command is use to create the database

use mydb; this command is use to move inside the database

create table employee(eid int primary key,ename varchar(30), salary float);

1. Do operation on database
   1. Using Statement : Statement is a interface which provide set of method which help to do operation on table using java.

DML Operation : Insert or Delete or Update

Statement stmt = con.createStatement();

int result = stmt.**executeUpdate**(“DML Query”);

if query executed successfully it return > 0 else it return error or zero base upon type of query.

* 1. Retrieve record

ResultSet rs = stmt.**executeQuery**(“select query”);

ResultSet is like a iterator which point to that query.

rs.next(). If record present it scan that record.