



CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE, INDIA

UNIT - IV

DATABASE PROGRAMMING

MISSION

CHRIST is a nurturing ground for an individual's holistic development to make effective contribution to the society in a dynamic environment

VISION

Excellence and Service

CORE VALUES

Faith in God | Moral Uprightness
Love of Fellow Beings
Social Responsibility | Pursuit of Excellence

- <https://dev.mysql.com/downloads/connector/j/>

MySQL Community Downloads

Connector/J


General Availability (GA) Releases
Archives

Connector/J 9.1.0

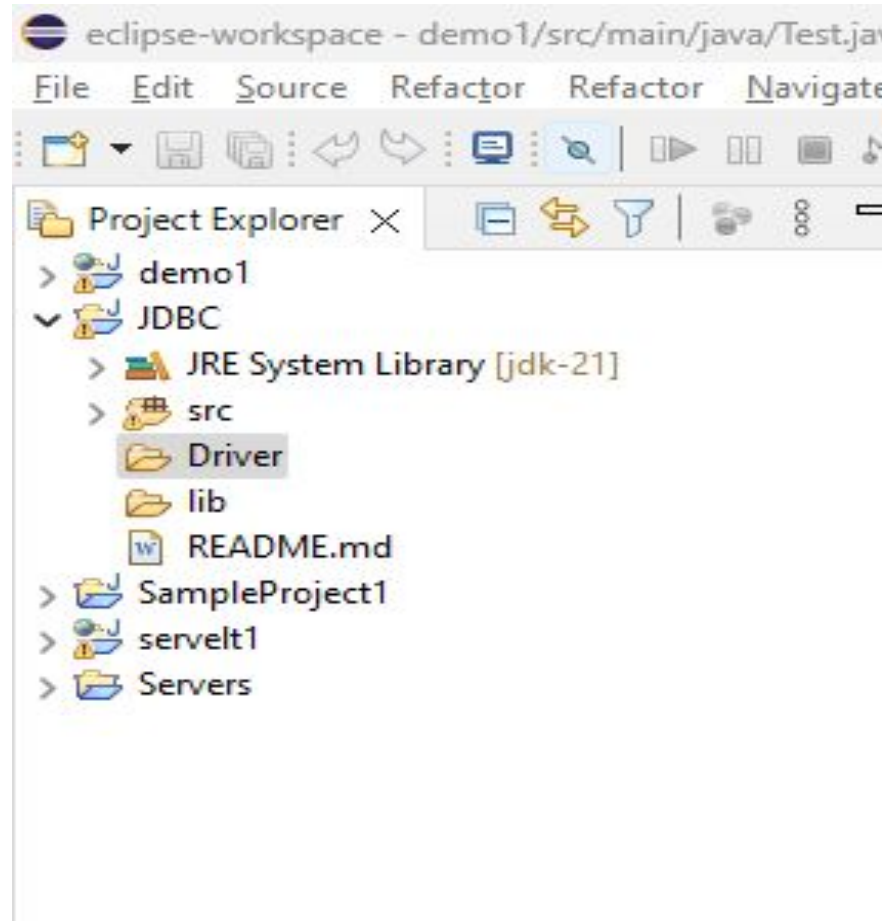
Select Operating System:

Platform Independent

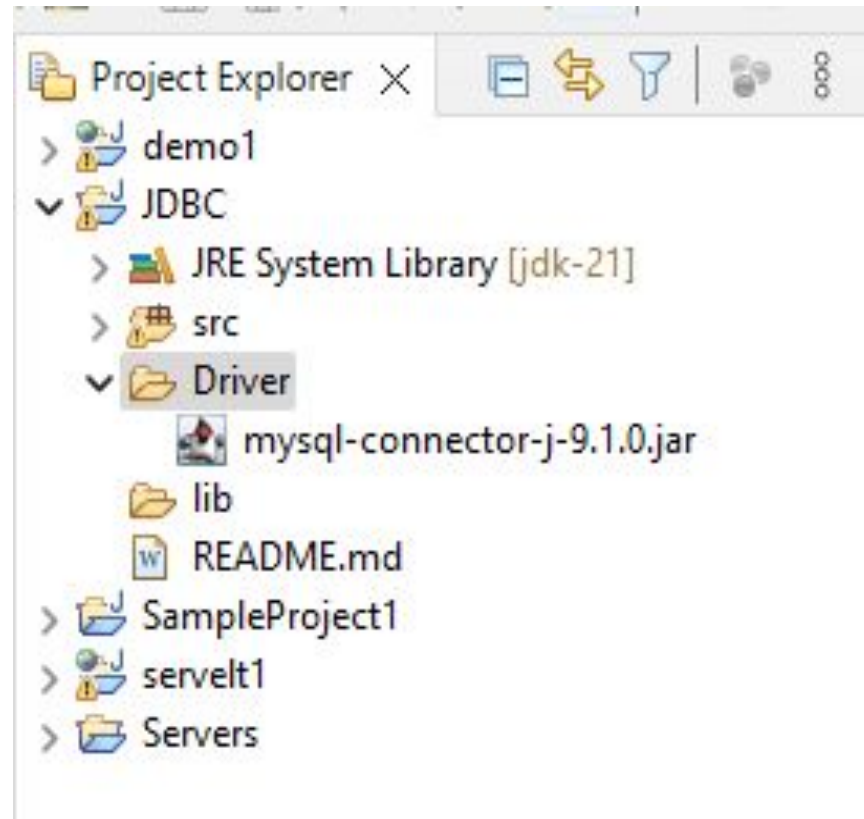
Platform Independent (Architecture Independent), Compressed TAR Archive (mysql-connector-j-9.1.0.tar.gz)	9.1.0	4.3M	Download
MD5: 91d6a629b6029a49f0f3e565dae32a49 Signature			
Platform Independent (Architecture Independent), ZIP Archive (mysql-connector-j-9.1.0.zip)	9.1.0	5.1M	Download
MD5: fb5cdf39e3b167b9d8a87480d70b24fd Signature			


We suggest that you use the [MD5 checksums](#) and [GnuPG signatures](#) to verify the integrity of the packages you download.

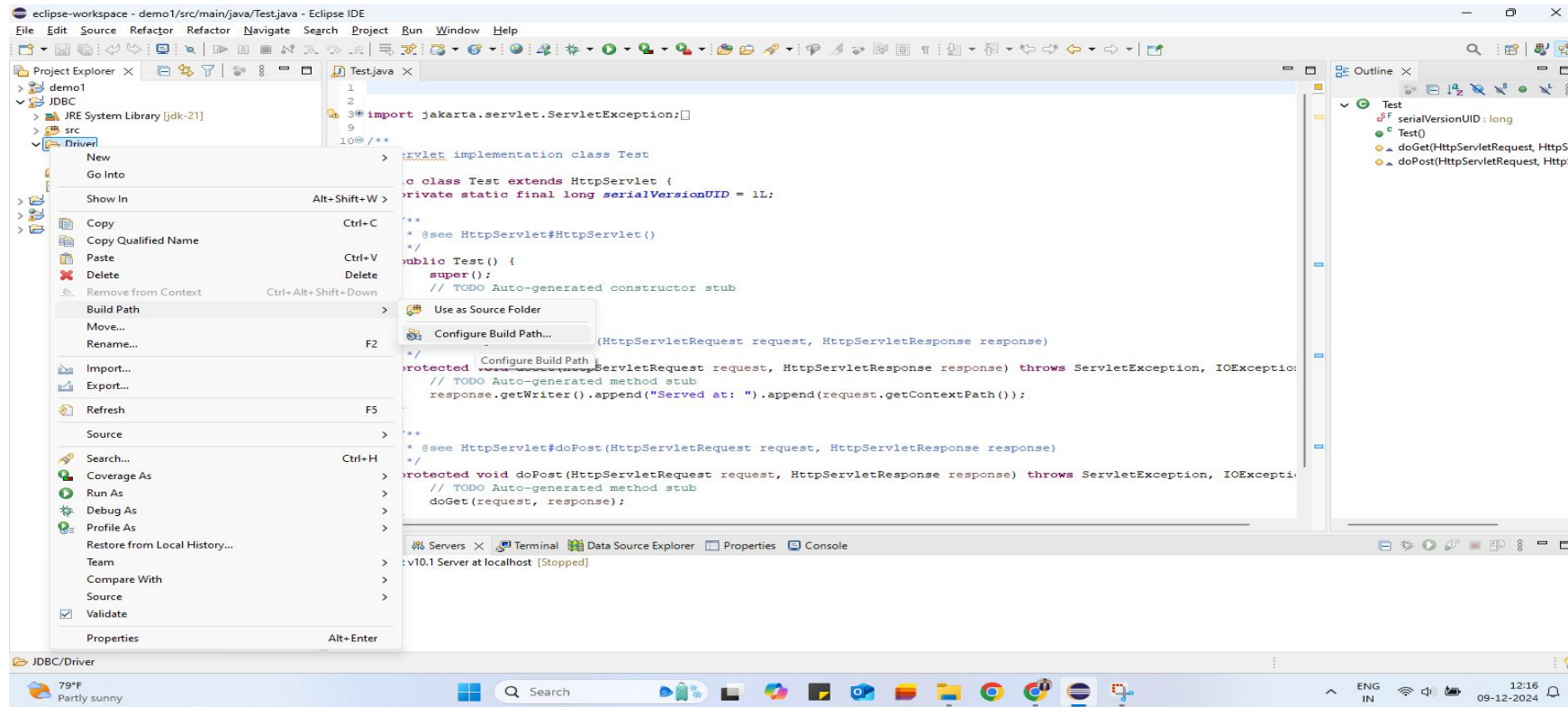
Create folder and name it as Driver



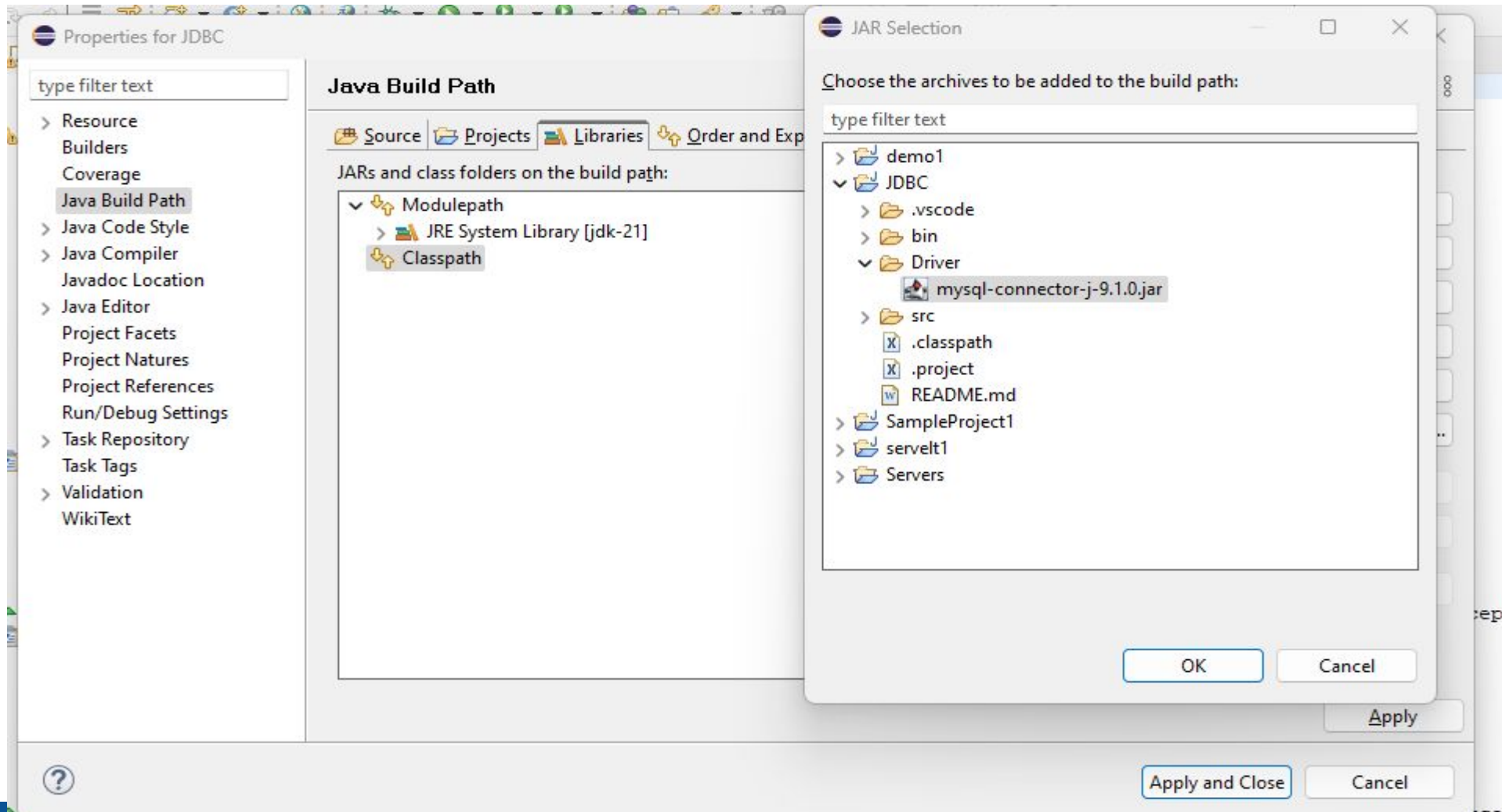
Copy mysql connector and paste it in driver folder



Click configure build path



Configure path → Libraries→classpath→Add Jars→File→driver→mysql connector



- `cd "C:\Program Files\MySQL\MySQL Server 8.0\bin"`
- `mysql -u root -p`

Table Creation

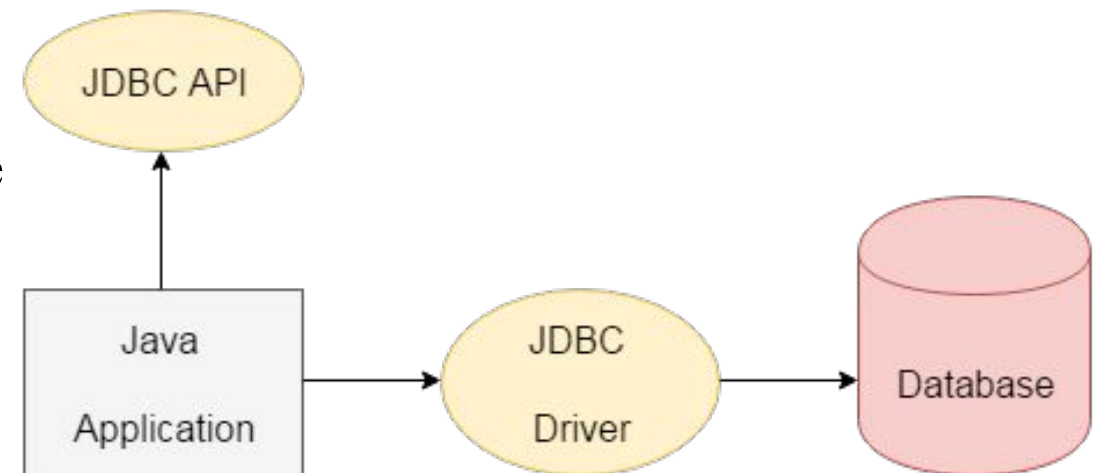
```
mysql> use medicaldatainfo;  
Database changed
```

```
mysql> create table table1(patientid int,patientname varchar(20),age int);  
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> |
```


Introduction to JDBC

- Before JDBC, ODBC API was the database API to connect and execute the query with the database. But, ODBC API uses ODBC driver which is written in C language (i.e. platform dependent and unsecured). That is why Java has defined its own API (JDBC API) that uses JDBC drivers (written in Java language).
- We can use JDBC API to handle database using Java program and can perform the following activities:
 - Connect to the database
 - Execute queries and update statements to the database
 - Retrieve the result received from the database.



Connecting to the database

```
import java.sql.Connection;  
import java.sql.DriverManager;  
import java.sql.SQLException;  
import java.sql.Statement;  
  
public class CreateDatabase1 {  
    static final String DB_URL = "jdbc:mysql://localhost:3306";  
  
    static final String USER = "root";  
    static final String PASSWORD = "root";  
}
```

```
Run | Debug
public static void main(String[] args)
{
    try(Connection conn = DriverManager.getConnection(DB_URL, USER, PASSWORD);

        Statement stmt = conn.createStatement();
        {
            String sql = "create database medical";
            stmt.executeUpdate(sql);
            System.out.println(x:"Database Created Successfully123...");
        } catch (SQLException e)
        {
            e.printStackTrace();
        }
    }
}
```

Fetching Data from Database

```
import java.sql.*;
class crud_operation{
Run | Debug
public static void main(String args[]){
try{
Class.forName(className:"com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection(url:"jdbc:mysql://localhost:3306/medical",user:"root",password:"root");
//here medical is database name, root is username and password
Statement stmt=con.createStatement();
ResultSet rs=stmt.executeQuery(sql:"select * from Medicalinfo1");
while(rs.next())
System.out.println(rs.getInt(columnIndex:1)+" "+rs.getString(columnIndex:2)+" "+rs.getInt(columnIndex:3));
con.close();
}catch(Exception e){ System.out.println(e);}
}
}
```

Output

```
Loading class `com.mysql.jdbc.Driver'. This is  
and manual loading of the driver class is gene  
10 Kushal 18  
PS C:\Java Programs\JDBC>
```


Insert Operations in JDBC

```
import java.sql.*;
public class insert {

    Run | Debug
    public static void main(String args[]){

        try{
            //Class.forName("com.mysql.jdbc.Driver");
            Connection con=DriverManager.getConnection(url:"jdbc:mysql://localhost:3306/medical",user:"root",password:"root");
            //here medical is database name, root is username and password
            Statement stmt=con.createStatement();
            String sql = "insert into Medicalinfo1" +"(patientid,patientname,age)" + "values (11, 'Purusoth', 20)" ;
            stmt.executeUpdate(sql);
            System.out.println(x:"Insert complete.");
            con.close();
        }catch(Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

Delete Operation

```
import java.sql.*;
public class delete {
    Run | Debug
    public static void main(String args[]){
        Connection conn = null;
        Statement stmt = null;
        try {
            try {
                Class.forName(className:"com.mysql.jdbc.Driver");
            } catch (Exception e) {
                System.out.println(e);
            }
            conn = (Connection) DriverManager.getConnection(url:"jdbc:mysql://localhost:3306/medical",user:"root",password:"root");
            System.out.println(x:"Connection is created successfully:");
            stmt = (Statement) conn.createStatement();
            String query1 = "delete from Medicalinfo1 " + "where payientid=10";
            stmt.executeUpdate(query1);
            System.out.println(x:"Record is deleted from the table successfully.....");
        }
    }
}
```



```

System.out.println(x:"Connection is created successfully:");
stmt = (Statement) conn.createStatement();
String query1 = "delete from Medicalinfo1 " + "where payientid=10";
stmt.executeUpdate(query1);
System.out.println(x:"Record is deleted from the table successfully.....");
} catch (SQLException excep) {
    excep.printStackTrace();
} catch (Exception excep) {
    excep.printStackTrace();
} finally {
    try {
        if (stmt != null)
            conn.close();
    } catch (SQLException se) {}
    try {
        if (conn != null)
            conn.close();
    } catch (SQLException se) {
        se.printStackTrace();
    }
}
System.out.println(x:"Please check it in the MySQL Table. Record is now deleted.....");
}
}

```