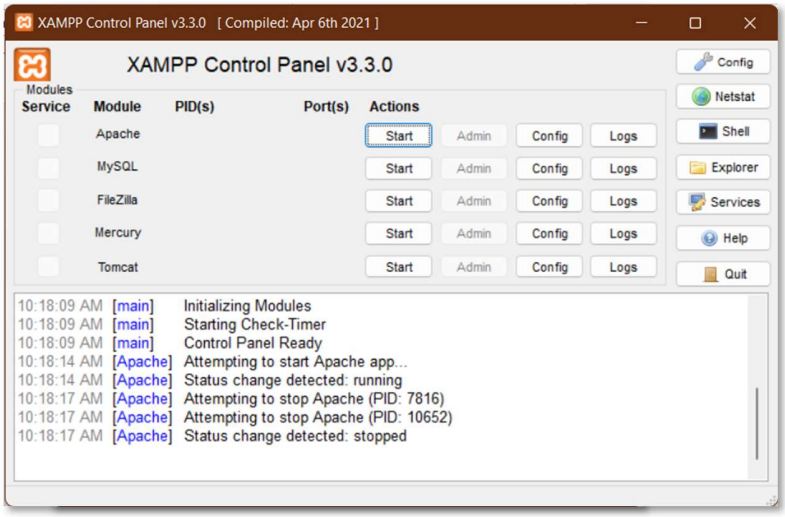
Java Database Connectivity (JDBC)

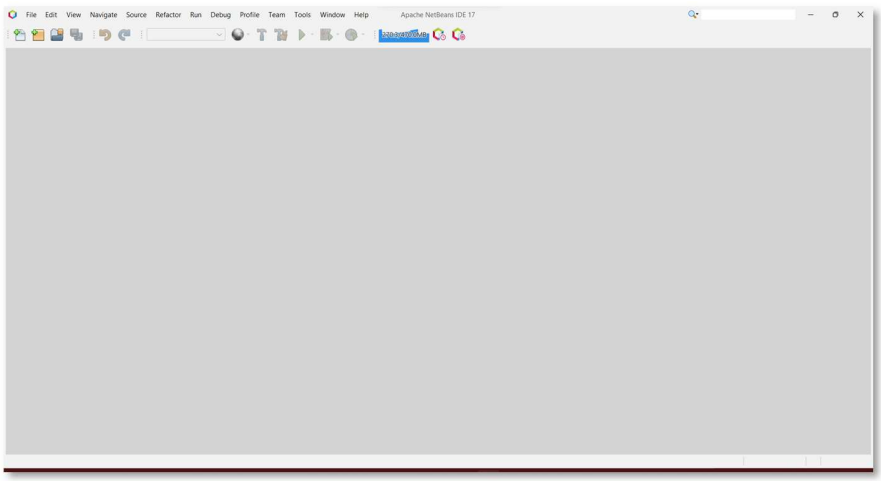
Software (Drivers) Required

- XAMPP Control Panel https://www.apachefriends.org/download.html
- Apache NetBeans 17 https://netbeans.apache.org/download/nb17/index.html
  - Installers and Packages ››› Apache-NetBeans-17-bin-windows-x64.exe (SHA-512, PGP ASC)
- Connector/J 8.0.32 https://dev.mysql.com/downloads/connector/j/
  - Select Operating System ››› Platform Independent
  - Platform Independent (Architecture Independent), ZIP Archive 8.0.32 4.8M

Install XAMPP



Install Apache NetBeans

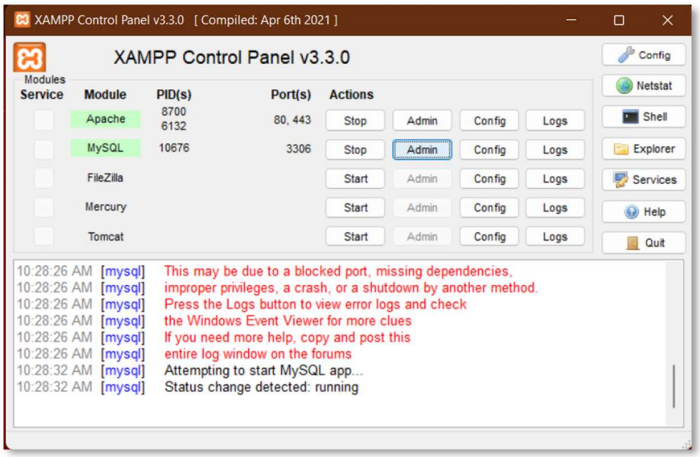


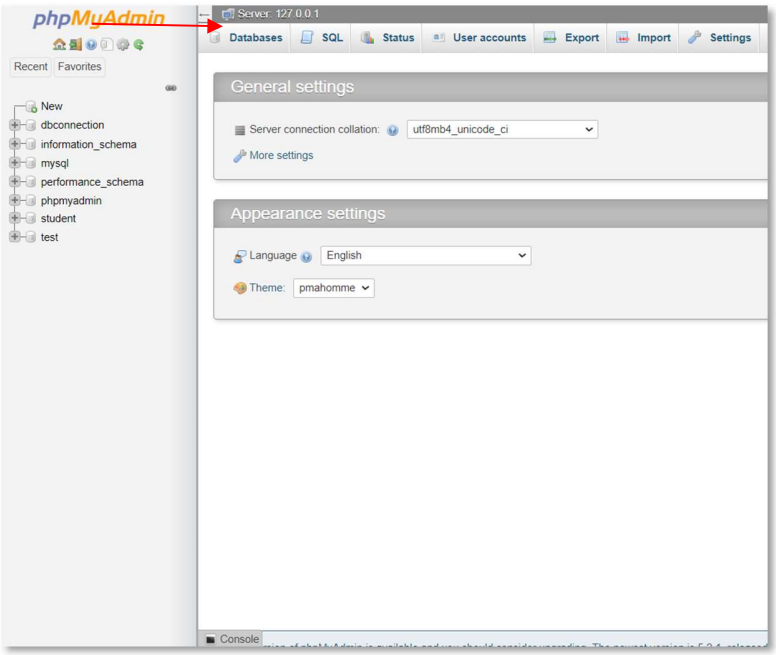
Extract Connector/J 8.0.32 (mysql-connector-j-8.0.32.zip) Important

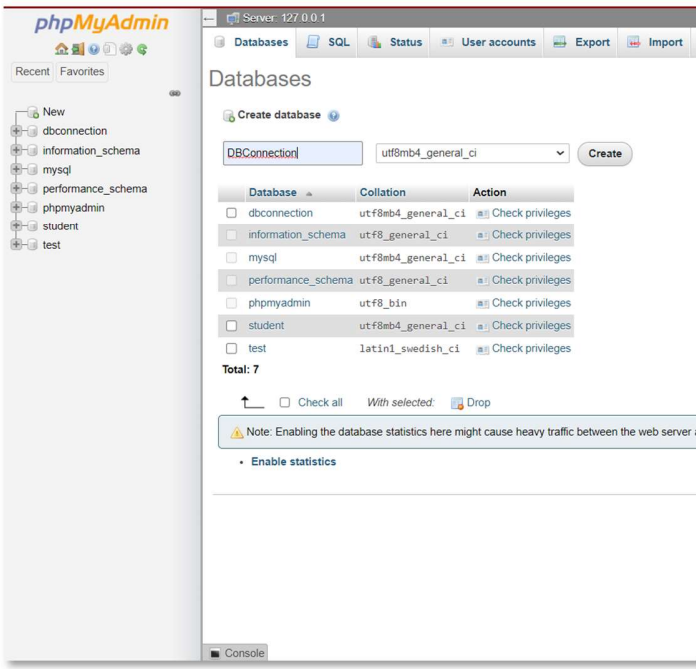
Steps for Java Database Connectivity (JDBC)

STEP 1

Open XAMPP Control Panel and Start Apache and MySQL, go to MySQL Admin, go for the Databases tab, and create a new database (you want to work with)



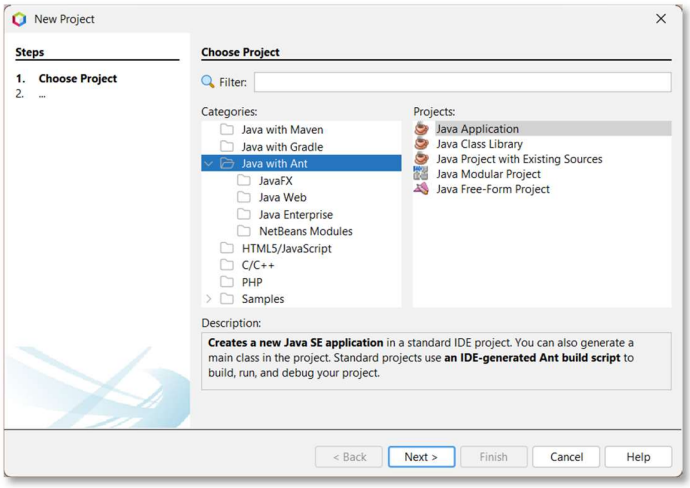


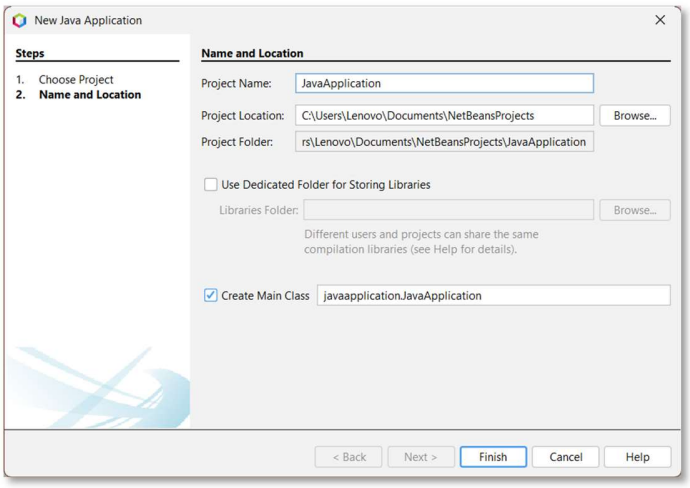


STEP 2

Open Apache NetBeans, File >>> New Project

1. Choose Project >> Java with Ant >> Java Application >> Next >
2. Name and Location >> Project Name (Give a name to the project and a file location) >> Finish

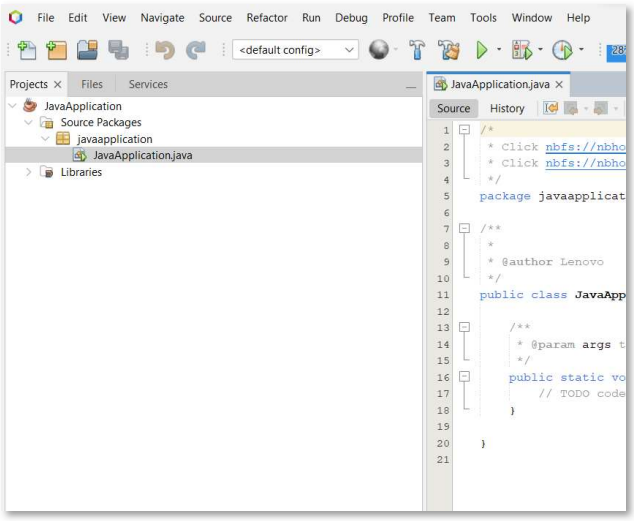


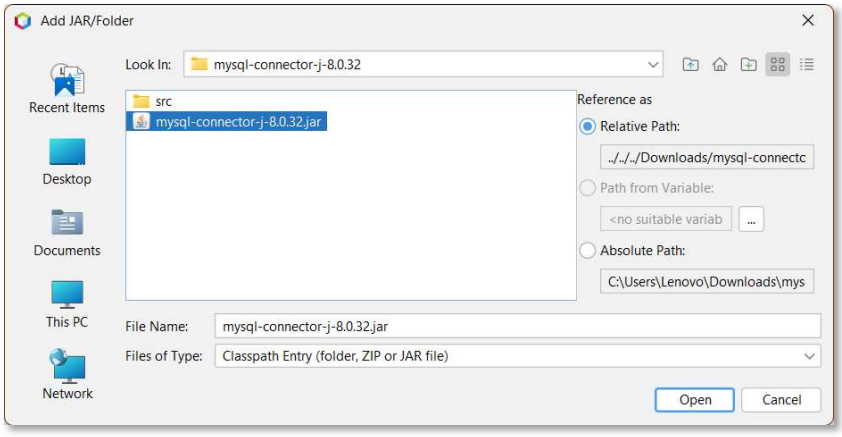


STEP 3

Right Click on Libraries (under Project) >>> Add JAR/Folder

IMPORTANT: Select mysql-connector-j-8.0.32.jar from extracted mysql-connector-j-8.0.32.zip

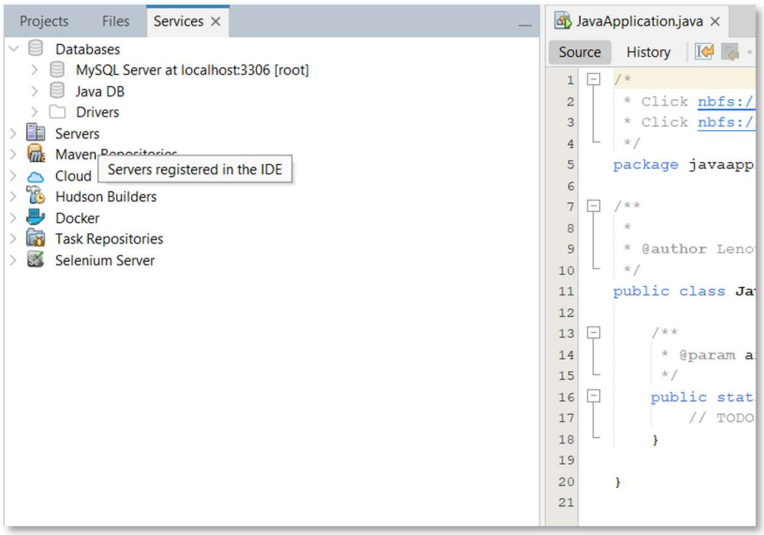


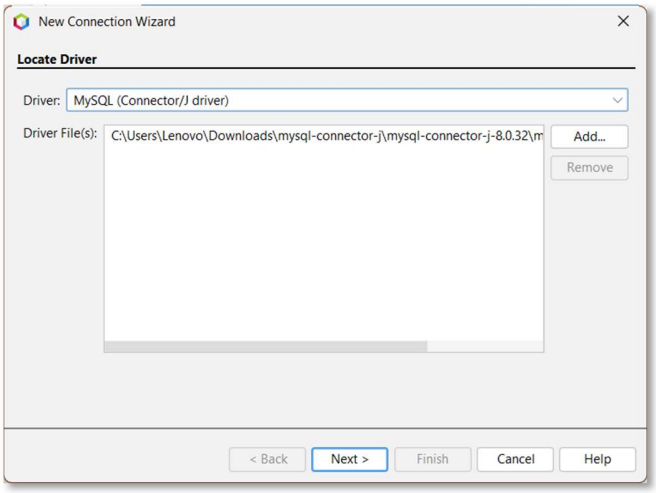


STEP 4

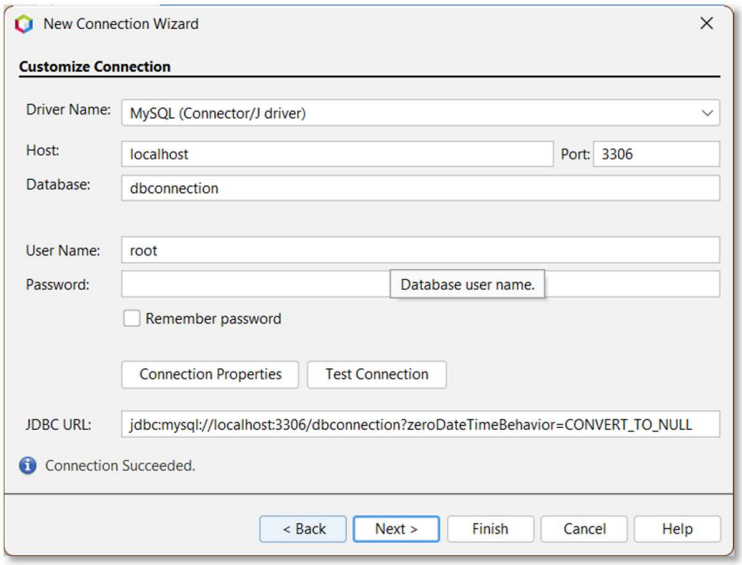
Switch on Services Tab,

Right Click on Databases (under Services) >> New Connection >> Locate Driver >> Add... Select mysql-connector-j-8.0.32.jar (extracted)





Name the Databases you created under XAMPP databases Optional Test Connection) and Finish

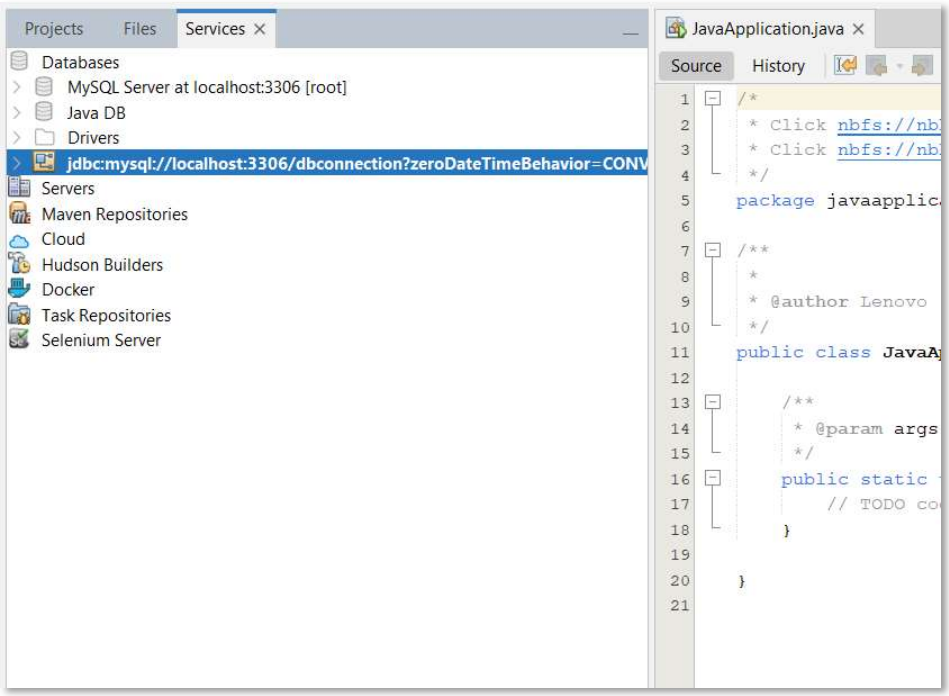


STEP 5

Under Services Tab, inside Databases copy the new jdbc url

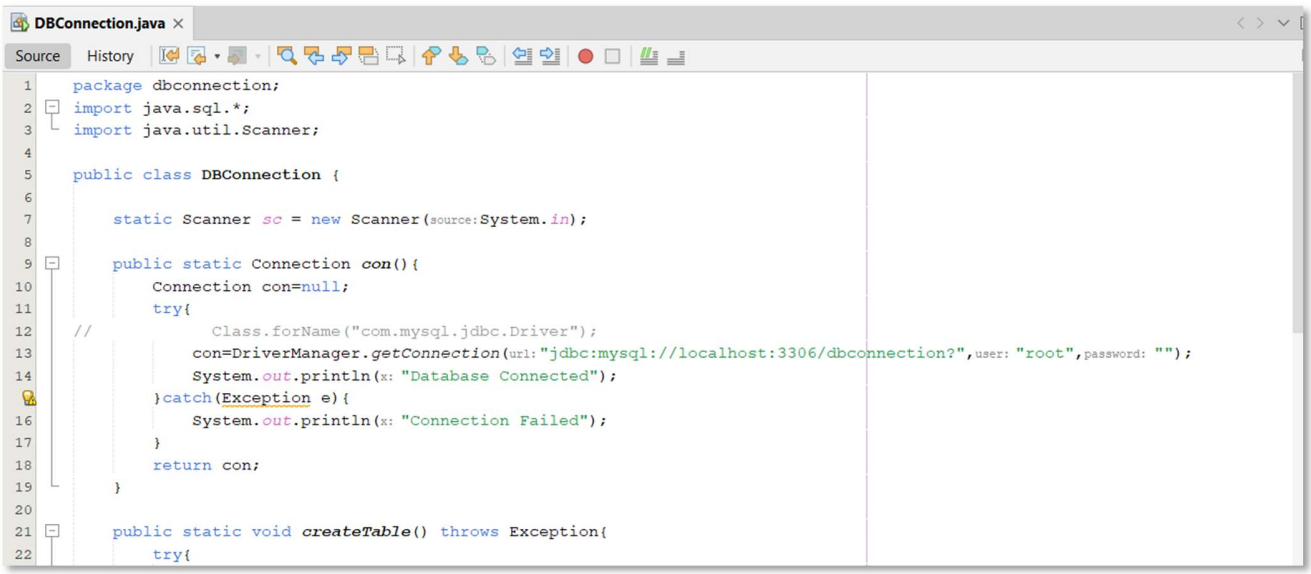
jdbc:mysql://localhost:3306/dbconnection?

Replace it with your database name and copy it



STEP 6

Now write the code in the editor for establishing connectivity with the database and carrying out various SQL quires for creating table and inserting, updating, deleting data.



- Remember to replace jdbc url copied in **Step 5** with DriverManager.getConnection url below.
- For performing different task remember to uncomment different methods within main method

```
package dbconnection;

import java.sql.*;

import java.util.Scanner;


public class DBConnection {


   static Scanner sc = new Scanner(System.in);


   public static Connection con(){

      Connection con=null;

      try{

//          Class.forName("com.mysql.jdbc.Driver");

         con=DriverManager.getConnection("jdbc:mysql://localhost:3306/dbconnection?","root","");

         System.out.println("Database Connected");

      }catch(Exception e){

         System.out.println("Connection Failed");

      }

      return con;

   }


   public static void createTable() throws Exception{

      try{

         Connection con=con();

         PreparedStatement create=con.prepareStatement("CREATE TABLE IF NOT EXISTS bit(roll varchar(11),name
varchar(255),branch varchar(255))");
```

```
            create.executeUpdate();
        }catch(Exception e){
            System.out.println(e);
        }finally{
            System.out.println("Function Completed: Table Created");
        }

    }
    public static void insertVal() throws Exception{
        try{
            Connection con=con();
            System.out.println("Enter your name");
            String name = sc.nextLine();
            System.out.println("Enter your roll");
            String roll = sc.nextLine();
            System.out.println("Enter your branch");
            String branch = sc.nextLine();
            System.out.println("Inserting Data...");
            PreparedStatement insert=con.prepareStatement("INSERT INTO bit
VALUES('"+roll+"','"+name+"','"+branch+"')");
            insert.executeUpdate();
        }catch(Exception e){
            System.out.println(e);
        }finally{
            System.out.println("Function Completed: Value Inserted");
        }

    }
    public static void deleteVal() throws Exception{
```

```
        try{
            Connection con=con();
            System.out.println("Enter roll to be deleted");
            String roll= sc.nextLine();
            PreparedStatement delete=con.prepareStatement("DELETE FROM bit WHERE roll='"+roll+"'");
            delete.executeUpdate();
        }catch(Exception e){
            System.out.println(e);
        }finally{
            System.out.println("Function Completed: Value Deleted");
        }

    }
    public static void display() throws Exception{
        try{
            Connection con=con();
            Statement stmt=con.createStatement();
            ResultSet rs=stmt.executeQuery("SELECT * FROM bit");
            while(rs.next()){
                String name=rs.getString("name");
                String roll=rs.getString("roll");
                String branch=rs.getString("branch");
//                int semester=rs.getInt("semester");
                System.out.println(roll+" "+name+" "+branch);
            }
        }catch(Exception e){
            System.out.println(e);
        }finally{
```

```
            System.out.println("Function Completed: Data Displayed");
        }


    }


    public static void main(String args[]) throws Exception{
        con();
//      createTable();
//      insertVal();
//      deleteVal();
//      display();
    }


}
```