

9. Write a program to save the information Firstname, Lastname and ContactNumber in a database.

Theory:

There are 5 steps to connect any java application with the database using JDBC. These steps are as follows:

- Register the Driver class
- Create connection
- Create statement
- Execute queries
- Close connection

Source Code:

File: Database.java

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
public class Database {
    Connection con;
    public Database() throws ClassNotFoundException, SQLException {
        Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");
        String server = "//Obs";
        int port = 1433;
        String database = "Lab2DB";
        String connectionStr = "jdbc:sqlserver:" + server + ":" + port + ";" +
"databaseName=" + database
        + ";IntegratedSecurity=true";
        con = DriverManager.getConnection(connectionStr);
        System.out.println("Connection Obtained.");
    }
    public static void main(String[] args) throws ClassNotFoundException, SQLException {
        new Database();
    }
    public Connection getConnection() {
        // TODO Auto-generated method stub
        return con;
    }
}
```

File: CreateTable.java

```
package q9Database;
```

```
import java.sql.Connection;  
import java.sql.SQLException;  
import java.sql.Statement;
```

```
public class CreateTable {
```

```
    Connection con;
```

```
    public CreateTable() throws ClassNotFoundException, SQLException {  
        Statement statement;  
        con = new Database().getConnection();  
        statement = con.createStatement();
```

```
        String create = "Create Table Student_tbl"  
            + "(id int, FirstName varchar(100), LastName varchar(100),  
ContactNumber varchar(10));";  
        statement.executeUpdate(create);  
        System.out.println("Table Created");  
    }
```

```
    public static void main(String[] args) throws ClassNotFoundException, SQLException {  
        new CreateTable();  
    }
```

```
}
```

File: InsertTable.java

```
package q9Database;
import java.sql.Connection;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;

public class InsertionTable{
    Statement statement;
    ResultSet set;

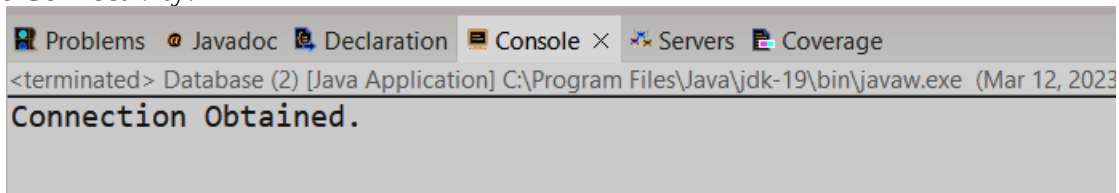
    public InsertionTable() throws ClassNotFoundException, SQLException {
        Connection conn = new Database().getConnection();
        statement = conn.createStatement();
        String insert = "INSERT INTO Student_tbl VALUES(1, 'Deepak','Nagarkoti',
'00099999')";
        String insert2 = "INSERT INTO Student_tbl VALUES(2, 'Samjhana','Subedi', '00999')";
        statement.executeUpdate(insert);
        statement.executeUpdate(insert2);
        System.out.println("Data Inserted Into Table");
        set = statement.executeQuery("SELECT * FROM Student_tbl");

        while (set.next()) {
            System.out.println("Student ID: " + set.getInt("id"));
            System.out.println("First Name: " + set.getString("FirstName"));
            System.out.println("Last Name: " + set.getString("LastName"));
            System.out.println("Contact Number: " + set.getString("ContactNumber"));
        }
    }

    public static void main(String[] args) throws ClassNotFoundException, SQLException{
        new InsertionTable();
    }
}
```

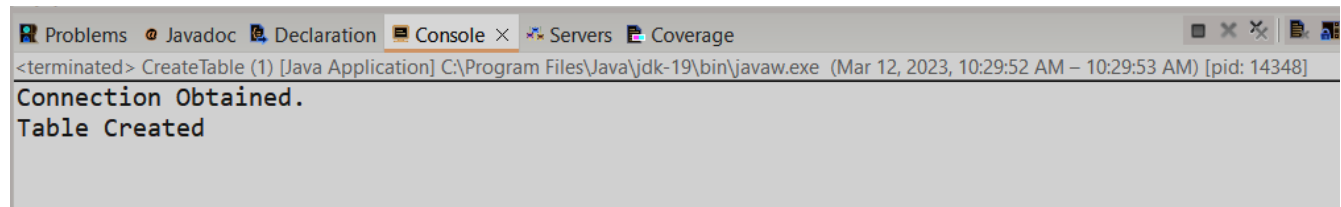
Output:

Database Connectivity:

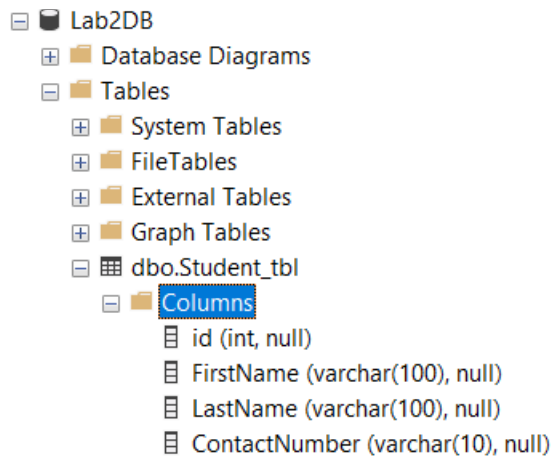


```
Problems Javadoc Declaration Console × Servers Coverage
<terminated> Database (2) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 12, 2023)
Connection Obtained.
```

Table creation:

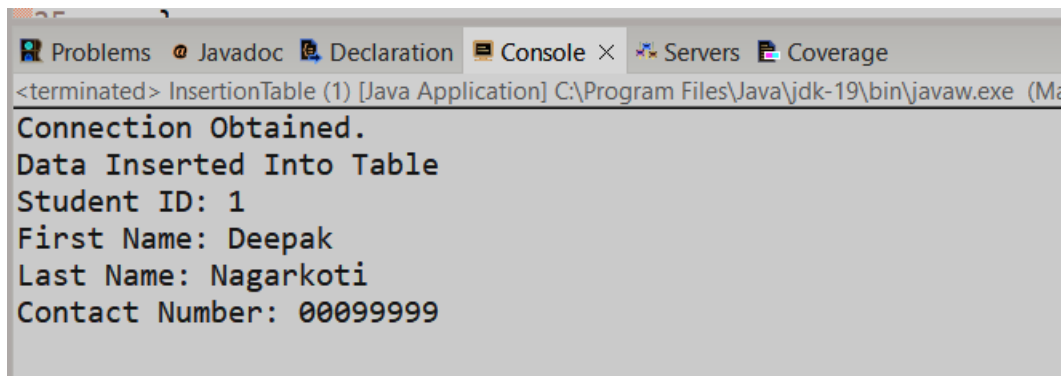


```
Problems Javadoc Declaration Console × Servers Coverage
<terminated> CreateTable (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 12, 2023, 10:29:52 AM – 10:29:53 AM) [pid: 14348]
Connection Obtained.
Table Created
```

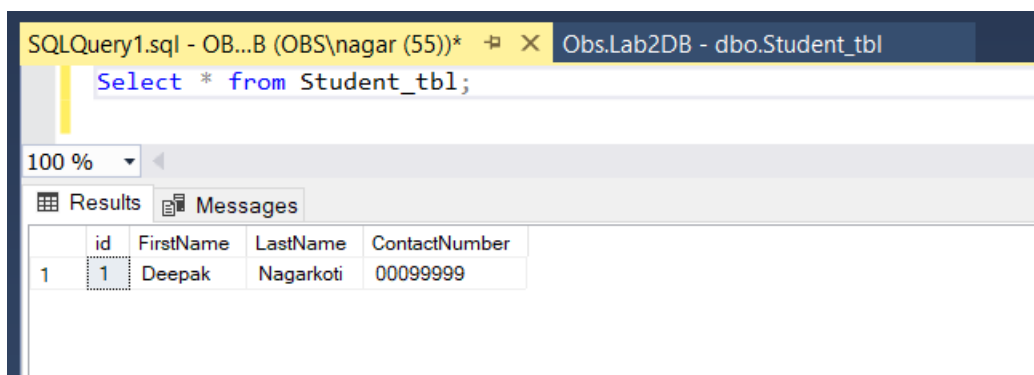


Lab2DB
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.Student_tbl
Columns
id (int, null)
FirstName (varchar(100), null)
LastName (varchar(100), null)
ContactNumber (varchar(10), null)

Insertion of data



```
Problems Javadoc Declaration Console × Servers Coverage
<terminated> InsertionTable (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Ma
Connection Obtained.
Data Inserted Into Table
Student ID: 1
First Name: Deepak
Last Name: Nagarkoti
Contact Number: 00099999
```



SQLQuery1.sql - OB...B (OBS\nagar (55))* × Obs.Lab2DB - dbo.Student_tbl

```
Select * from Student_tbl;
```

100 %

Results Messages

	id	FirstName	LastName	ContactNumber
1	1	Deepak	Nagarkoti	00099999

