

Java Servlets

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How to create a Java Web Application in Netbeans using MySQL as Database

First of all we need to create a database in MySQL Server with name contacts

Download Wamp Server which contains MySQL Server from www.wampserver.com

Open MySQL Console

Write the following command to create database contacts;

Create database contacts;

Write the following command to select database contacts for your work.

Use contacts;

Create a Table contacts within database contacts.

Create table contacts(name varchar(20),address varchar(20),email varchar(20),phoneno int(10));

Above commands will create a database named as contacts and will also create a table named as contacts with four fields

Name- varchar(20)

Address – varchar(20)

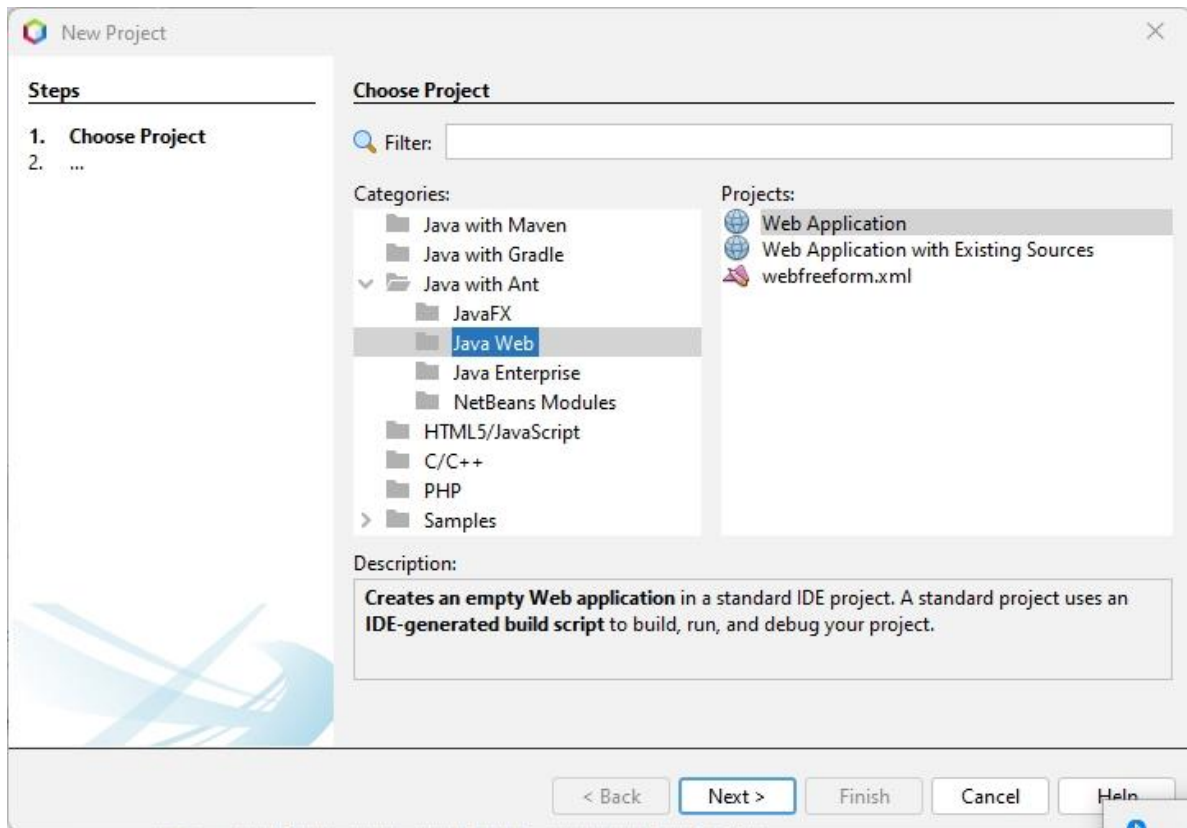
Email – varchar(20)

Phoneno – varchar(10)

Start Apache Netbeans 15

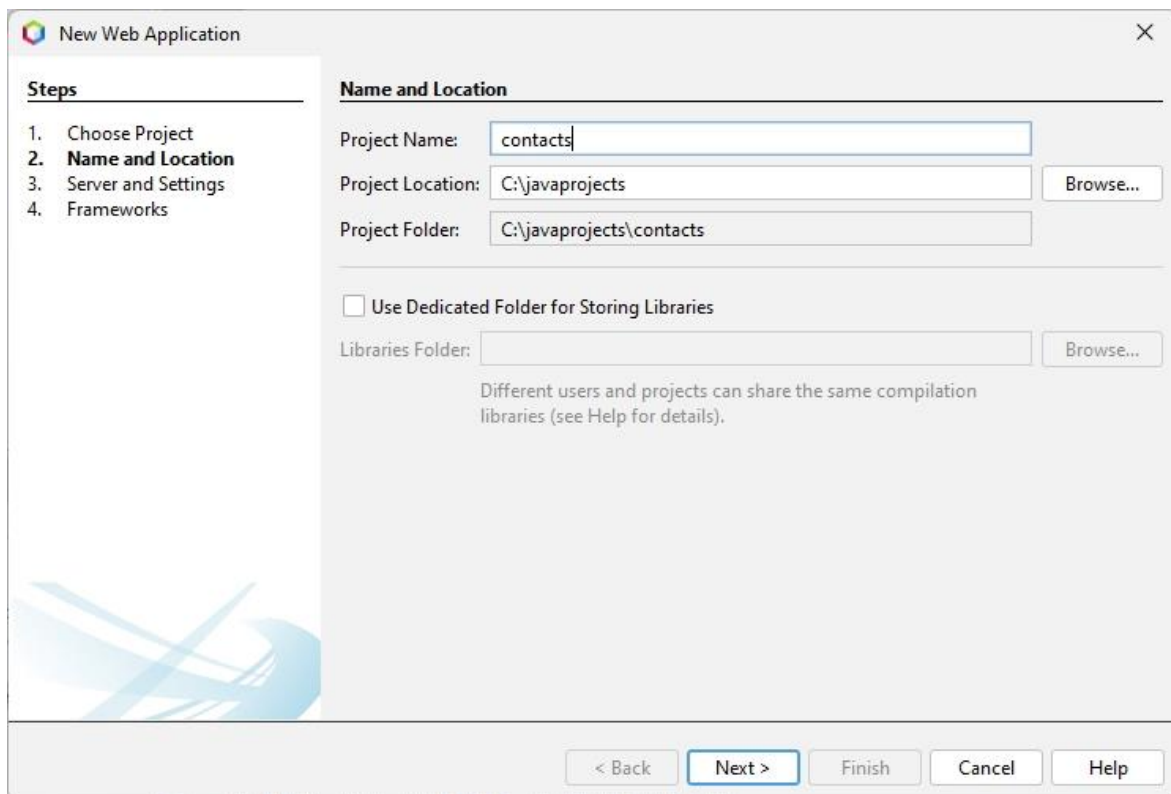
Go to File-> New Project

Following Window will appear

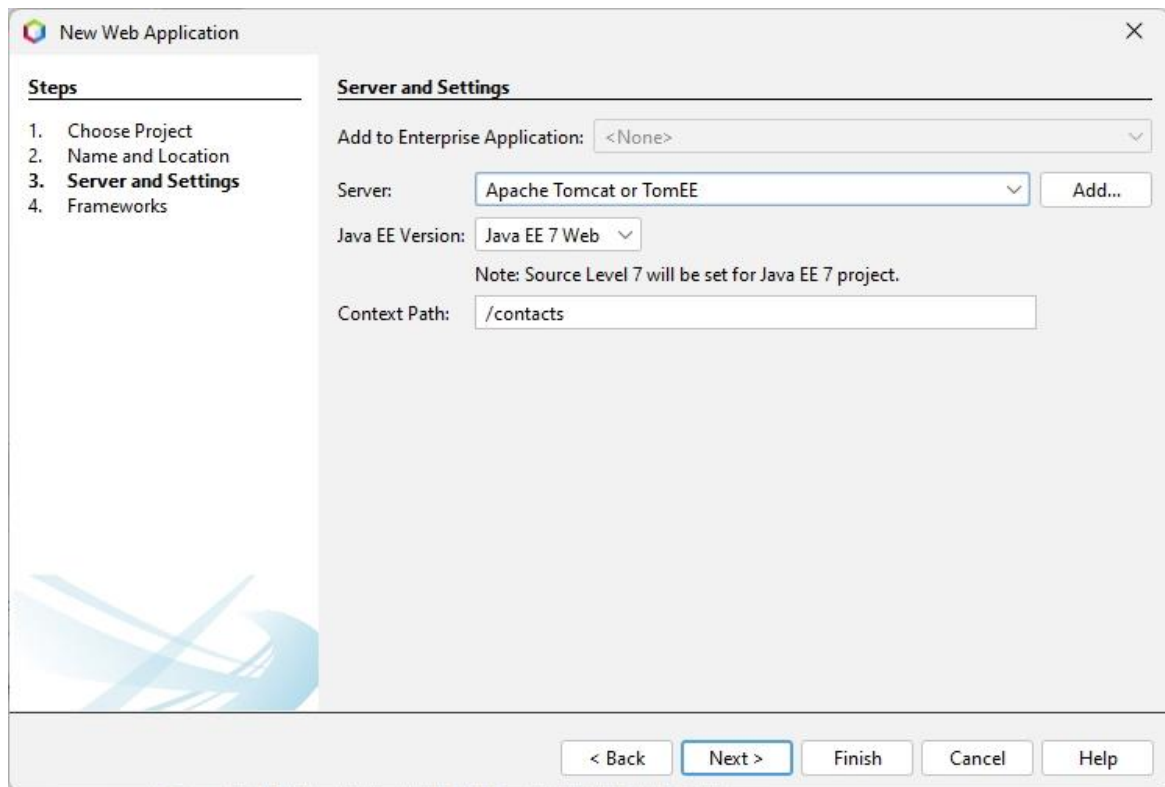


Click on Next

Give project name as contacts



Click on Next



Click on Finish

A new project has been created with name contacts

Copy this code in index.html

```
<html>

<head>

    <title>TODO supply a title</title>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

</head>

<body>

    <a href='addcontact.html'>Add Contact</a>

    <br>

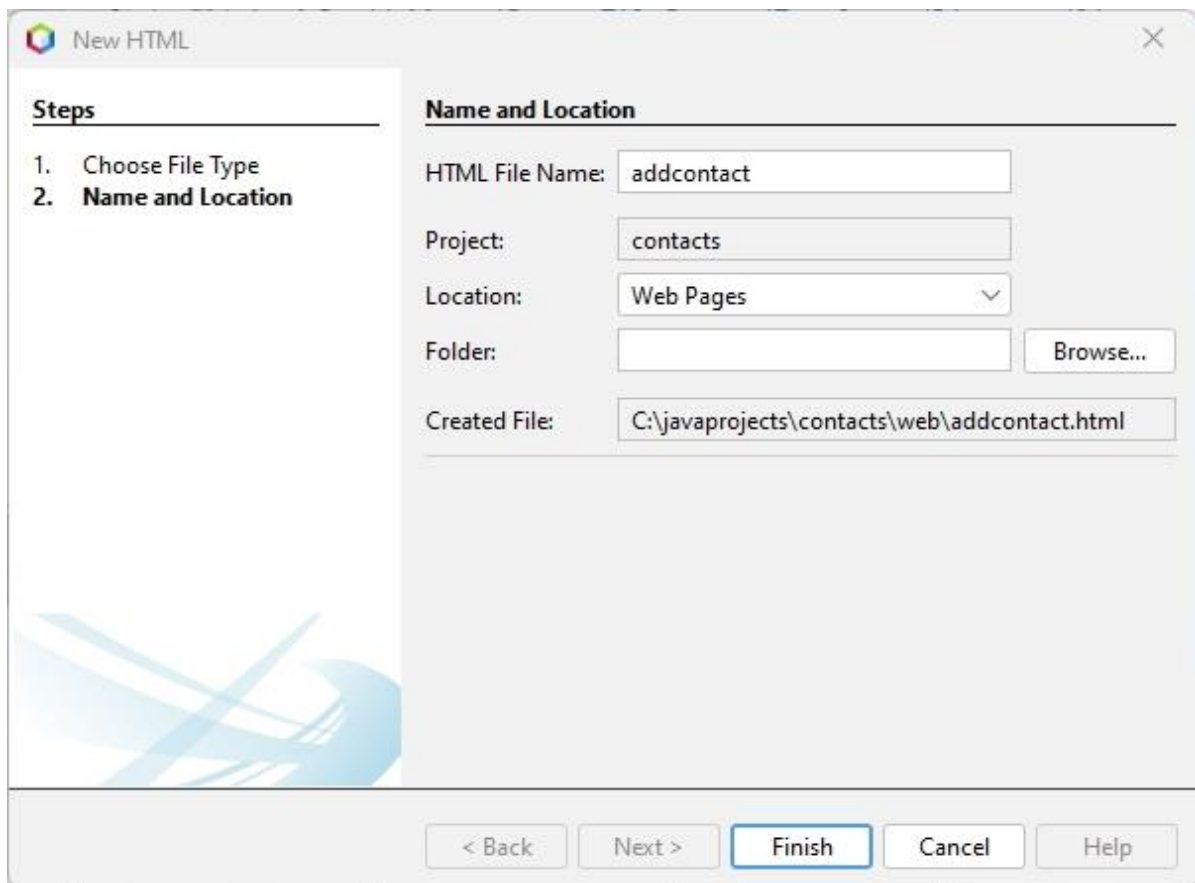
    <a href='searchcontact.html'>Search Contact</a>

    <br>

    <a href='deletecontact.html'>Delete Contact</a>
```

```
<br>
<a href='viewallcontacts'>View All Contacts</a>
<br>
</body>
</html>
```

Go to Web Pages under the project contacts and add a new HTML Page with name addcontact.html

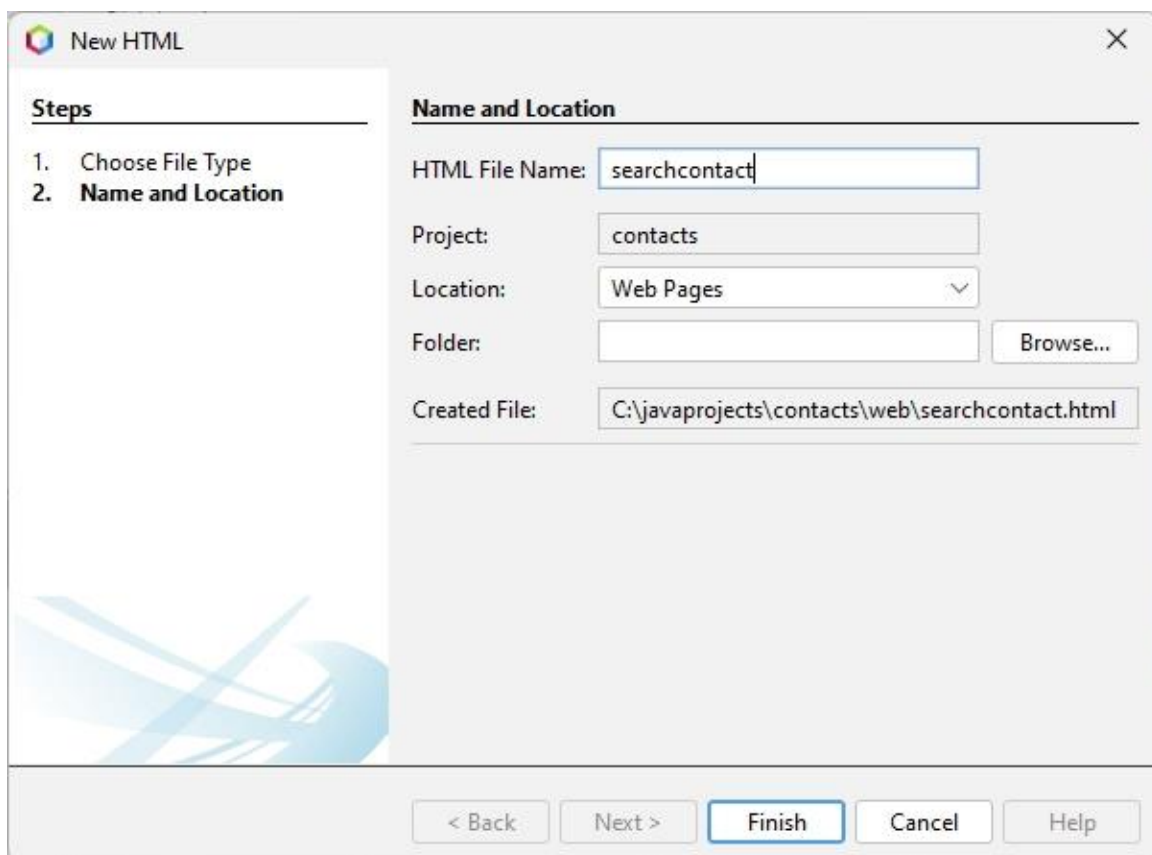


Double Click on addcontact.html file and paste the following code

```
<html>
<head>
  <title>TODO supply a title</title>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
  <form action='addcontact' method='post'>
```

```
Name : <input type='text' value='raman' name='nametxt'>
<br>
Address : <input type='text' value='address1' name='addresstxt'>
<br>
Email : <input type='text' value='email1' name='emailtxt'>
<br>
Phone No : <input type='text' value='1234567890' name='phonetxt'>
<br>
<input type='submit' value='Add Contact'>
<br>
<input type='reset'>
</form>
</body>
</html>
```

Now add html file names as searchcontact.html



Click Finish

Paste the following code in searchcontact.html file

```
<html>

<head>

  <title>TODO supply a title</title>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

</head>

<body>

  <form action='searchbyname' method='post'>

    Name : <input type='text' value='raman' name='nametxt'>

    <br>

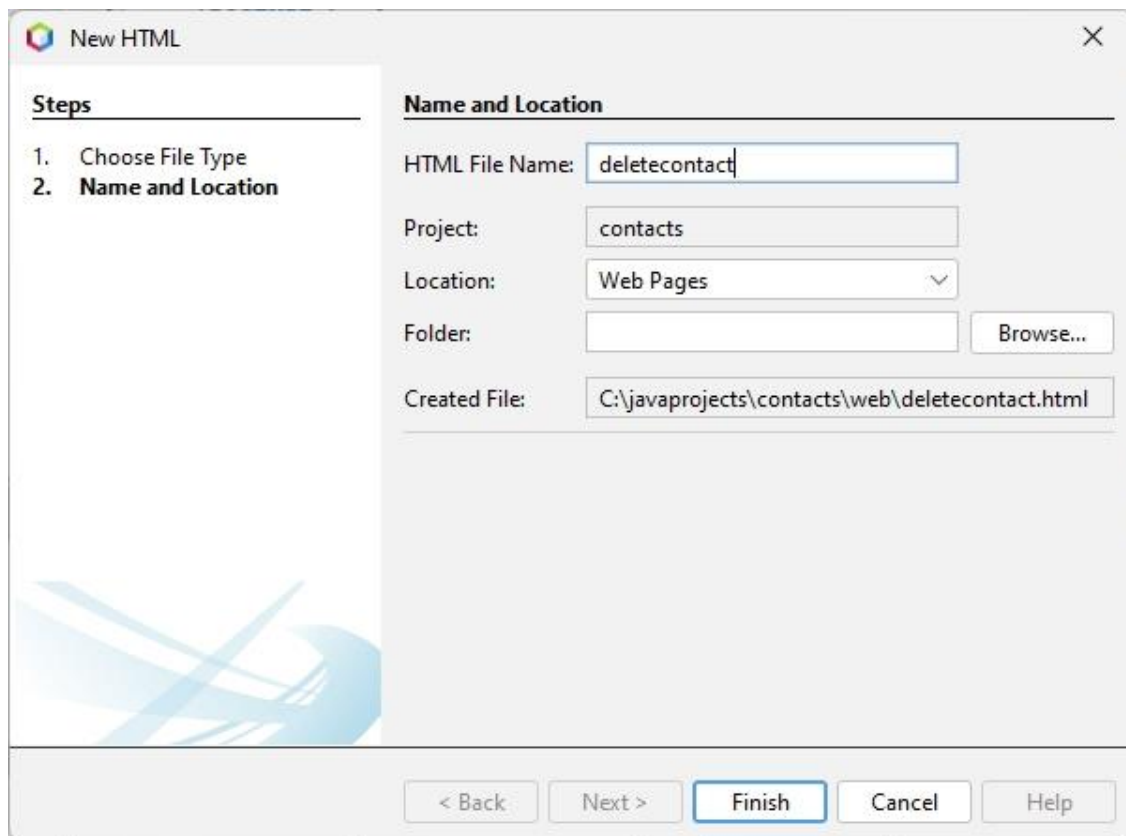
    <input type='submit' value='Search'>

  </form>

</body>

</html>
```

Now add a HTML file named as deletecontact.html file



Paste the following code in deletecontact.html file

```

<html>

<head>

    <title>TODO supply a title</title>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

</head>

<body>

    <form action='deletebyname' method='post'>

        Name : <input type='text' value='raman' name='nametxt'>

        <br>

        <input type='submit' value='Delete By Name'>

    </form>

</body>

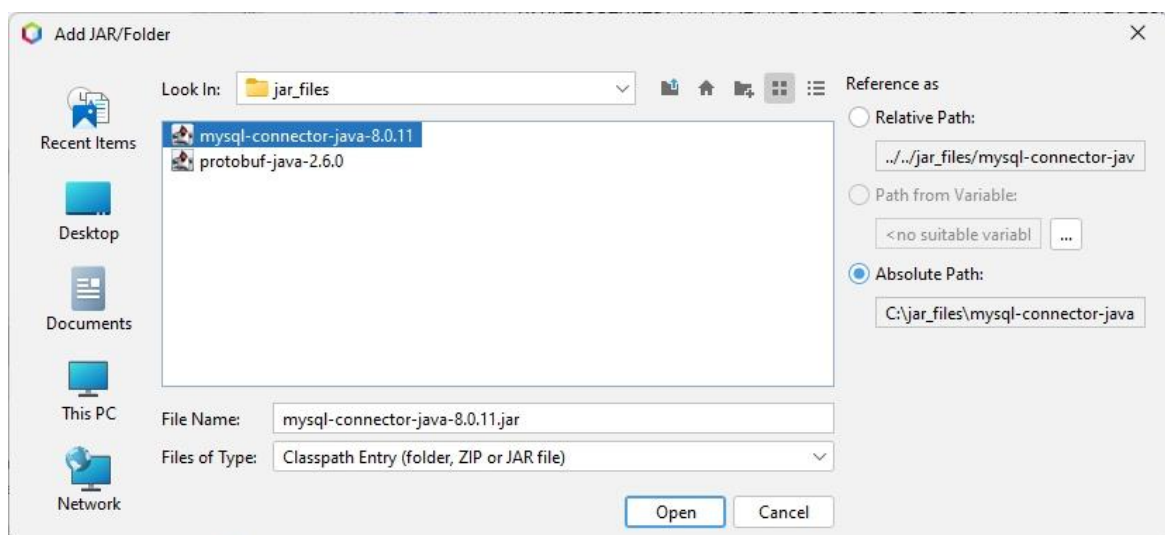
</html>

```

Now we have done creating html files now we will create Servlets for processing data from HTML Files

To make MySQL Java Web Application you need a mysql connector jar file

Go to Libraries under the Project contacts and go to (Add JAR/Folder) and select jar file mysql-connector-java-8.0.11.jar



We will create a servlet addcontact which will process data from addcontact.html file

Go to Source Packages-> default package

Create a Servlet addcontact

New Servlet

Steps

1. Choose File Type
2. **Name and Location**
3. Configure Servlet Deployment

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

Warning: It is highly recommended that you do not place Java classes in the default package.

< Back **Next >** Finish Cancel Help

Click Finish

Following are the imports for addcontact servlet

```
import jakarta.servlet.ServletException;  
import jakarta.servlet.annotation.WebServlet;  
import jakarta.servlet.http.HttpServlet;  
import jakarta.servlet.http.HttpServletRequest;  
import jakarta.servlet.http.HttpServletResponse;  
import java.io.IOException;  
import java.io.PrintWriter;  
import java.sql.Connection;  
import java.sql.DriverManager;  
import java.sql.Statement;
```

Following is the code for processrequest function or method

```
protected void processRequest(HttpServletRequest request, HttpServletResponse response)  
    throws ServletException, IOException {
```

```

response.setContentType("text/html;charset=UTF-8");

PrintWriter out = response.getWriter();

try {
    /* TODO output your page here. You may use following sample code. */

    String name=request.getParameter("nametxt");

    String address=request.getParameter("addresstxt");

    String email=request.getParameter("emailtxt");

    int phoneno=Integer.parseInt(request.getParameter("phonetxt"));


        String driverName = "com.mysql.jdbc.Driver";

        Class.forName(driverName);

String url ="jdbc:mysql://127.0.0.1:3306/contacts";

Statement stmt;


        Connection con =DriverManager.getConnection(url,"root", "");

        // Create a connection to the database


        int rs;

        stmt = con.createStatement();

        rs = stmt.executeUpdate("insert into contacts values('"+ name + "','"+
address + "','"+ email + "','"+ phoneno + "');");

        out.write("Contact Record Added");

    }

    catch(Exception e)

    {

        out.write(e.toString());

    }

}

```

Now what is processRequest Method

This is the method which processes request from html page and gives back the response

Now Add another servlet deletebyname

New Servlet

Steps

1. Choose File Type
2. **Name and Location**
3. Configure Servlet Deployment

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

Warning: It is highly recommended that you do not place Java classes in the default package.

< Back Next > Finish Cancel Help

Click on Finish

Following are the imports for deletebyname servlet

```
import jakarta.servlet.ServletException;  
import jakarta.servlet.annotation.WebServlet;  
import jakarta.servlet.http.HttpServlet;  
import jakarta.servlet.http.HttpServletRequest;  
import jakarta.servlet.http.HttpServletResponse;  
import java.io.IOException;  
import java.io.PrintWriter;  
import java.sql.Connection;  
import java.sql.DriverManager;  
import java.sql.ResultSet;  
import java.sql.Statement;
```

Following is the code for processRequest Method or function

```
protected void processRequest(HttpServletRequest request, HttpServletResponse response)
```

```

        throws ServletException, IOException {
response.setContentType("text/html;charset=UTF-8");

PrintWriter out = response.getWriter();
try {
    /* TODO output your page here. You may use following sample code. */

    Statement stmt;

        int rs;

        String name=request.getParameter("nametxt");


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

        String url ="jdbc:mysql://127.0.0.1:3306/contacts";

        Connection con =DriverManager.getConnection(url,"root", "");

        stmt = con.createStatement();

        rs = stmt.executeUpdate("delete from contacts where name='" + name + "'");

        if(rs>0)

        {

            out.write("Record Deleted");

        }

        else

        {

            out.write("Record Not Found");

        }

    }

catch(Exception e)

{

    out.write(e.toString());

}

}

```

Now add a servlet searchbyname

New Servlet

Steps

1. Choose File Type
2. **Name and Location**
3. Configure Servlet Deployment

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

Warning: It is highly recommended that you do not place Java classes in the default package.

< Back Next > Finish Cancel Help

Click Finish

Following are the imports for searchbyname servlet

```
import jakarta.servlet.ServletException;  
import jakarta.servlet.annotation.WebServlet;  
import jakarta.servlet.http.HttpServlet;  
import jakarta.servlet.http.HttpServletRequest;  
import jakarta.servlet.http.HttpServletResponse;  
import java.io.IOException;  
import java.io.PrintWriter;  
import java.sql.Connection;  
import java.sql.DriverManager;  
import java.sql.ResultSet;  
import java.sql.Statement;
```

Following is the code for processRequest Method or function

```
protected void processRequest(HttpServletRequest request, HttpServletResponse response)  
    throws ServletException, IOException {  
    response.setContentType("text/html;charset=UTF-8");
```

```

PrintWriter out = response.getWriter();

try{
    /* TODO output your page here. You may use following sample code. */

    Statement stmt;

        ResultSet rs;

    String name=request.getParameter("nametxt");


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

        String url ="jdbc:mysql://127.0.0.1:3306/contacts";

        Connection con =DriverManager.getConnection(url,"root", "");

        stmt = con.createStatement();

        rs = stmt.executeQuery("SELECT * from contacts where name='" + name + "'");


        String name1;

    String address1;

    String email1;

    String phoneno1;

    int rno;

    boolean found=false;

        while(rs.next()){

            found=true;

            name1=rs.getString("name");

            address1=rs.getString("address");

            email1=rs.getString("email");

            phoneno1=String.valueOf(rs.getInt("phoneno"));

            out.write("Name : " + name1);

            out.write("<br>");

            out.write("Address : " + address1);

            out.write("<br>");

            out.write("Email : " + email1);

            out.write("<br>");

```

```

        out.write("Phone No : " + phoneno1);

        out.write("<br>");

        out.write("<hr>");

    }

    if(found==false)

    {

        out.write("No Record found for name " + name);

    }

}

catch(Exception e)

{

    out.write(e.toString());

}

}

```

Now add a servlet viewallcontacts

New Servlet

Steps

1. Choose File Type
2. **Name and Location**
3. Configure Servlet Deployment

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

Warning: It is highly recommended that you do not place Java classes in the default package.

< Back **Next >** Finish Cancel Help

Click Finish

Following are the imports for viewallcontacts Servlet

```

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

```

Following is the code for processRequest function or Method

```
protected void processRequest(HttpServletRequest request, HttpServletResponse response)
```

```

    throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            /* TODO output your page here. You may use following sample code. */

            Statement stmt;

            ResultSet rs;

            String name=request.getParameter("nametxt");

            Class.forName("com.mysql.jdbc.Driver");
            String url ="jdbc:mysql://127.0.0.1:3306/contacts";
            Connection con =DriverManager.getConnection(url,"root", "");
            stmt = con.createStatement();
            rs = stmt.executeQuery("SELECT * from contacts");

            String name1;
            String address1;
            String email1;

```



```

String phoneno1;

int rno;

boolean found=false;

    while(rs.next()){

        found=true;

        name1=rs.getString("name");
        address1=rs.getString("address");
        email1=rs.getString("email");
        phoneno1=String.valueOf(rs.getInt("phoneno"));

        out.write("Name : " + name1);

        out.write("<br>");

        out.write("Address : " + address1);

        out.write("<br>");

        out.write("Email : " + email1);

        out.write("<br>");

        out.write("Phone No : " + phoneno1);

        out.write("<br>");

        out.write("<hr>");

    }

    if(found==false)

    {

        out.write("No Records in the database");

    }

}

catch(Exception e)

{

    out.write(e.toString());

}

}

```

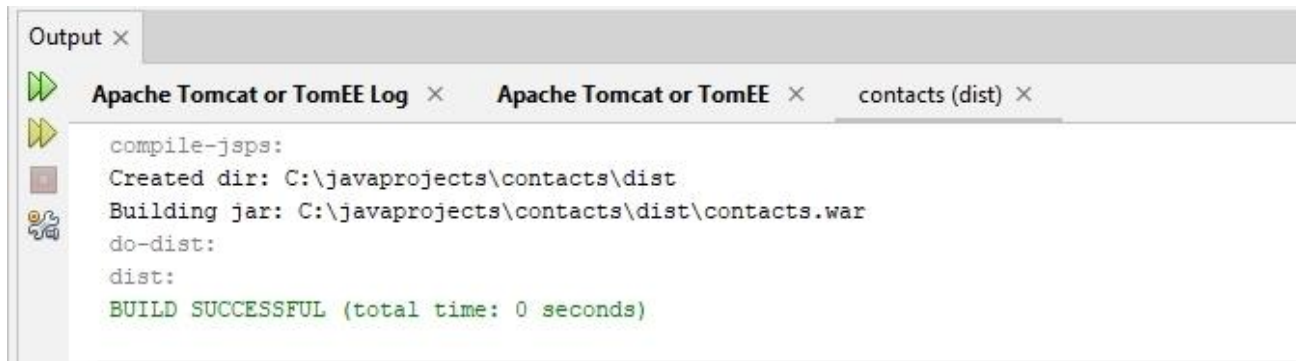
Now the Coding part is Done

Now Build and Run the project

Right Click on contacts project and select option Build

After the successful Build

Following Output will Appear



To Run this project in Web Browser

Following output will appear in the browser

[Add Contact](#)
[Search Contact](#)
[Delete Contact](#)
[View All Contacts](#)

Click on Add Contact Link

And Following output will appear

Name :
Address :
Email :
Phone No :

This is the output for Search By Name Page

Name :

This is the output for Delete By Name Page

Name :

This is the Output for View All Contacts Page

Name : raman
Address : address1
Email : email1
Phone No : 1234567890

Name : raman1
Address : address1
Email : email1
Phone No : 1234567890

Name : raman
Address : address1
Email : email1
Phone No : 1234567890

Project is Done.