Day - 5
Static and Dynamic Response

In the previous session we had seen how we can send input to the servlet via the browser. In this session we see how a Servlet can send a response back to the client. The response will be a HTML file as browsers can render only HTML.

There are two ways through which we can send response to the browser-
- Static html
- Dynamic html

Static HTML:

We will first create a html file called **staticresp.html** and the file will be created in **WEB-INF** folder

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
    <h3>Thank you for your response</h3>
</body>
</html>
```
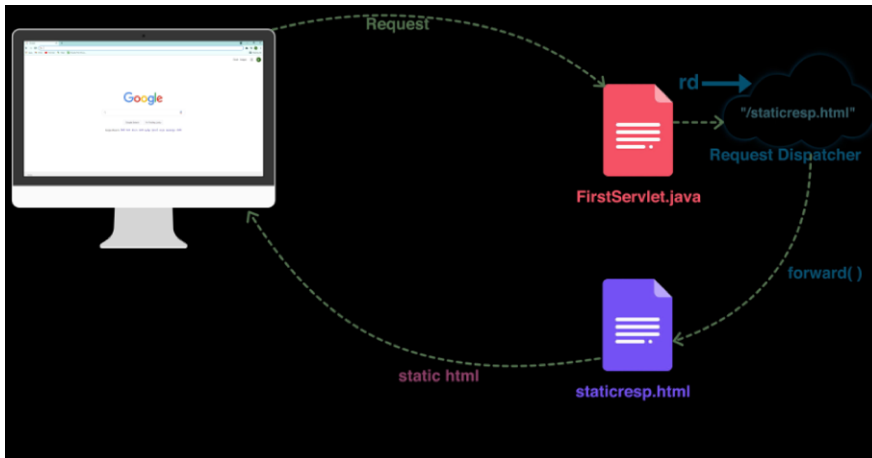
Whenever a servlet takes an already created html file as response then we call it as static html

So when the client sends a request to FirstServlet.java,the servlet has to provide a response so it will forward the request to staticresp.html and now this html file should be sent as response back to the client.

To achieve this an object called **Request Dispatcher** is automatically created by the web container and this object's responsibility is to take a request from one resource and transfer it to another resource present in the same web application.

We have to mention to the Request Dispatcher object to whom it has to forward the request by mentioning the path and since we are in the same web project, we can mention **Relative URL.**

After mentioning the path, with the help of **forward( ),** we can forward the request to *staticresp.html*

Let us implement this in our code-

```java
package com.tap.servlets;

public class FirstServlet extends HttpServlet {


    @Override
    protected void doGet(HttpServletRequest req, HttpServletResponse resp)
            throws ServletException, IOException {

        String name = req.getParameter("name");
        String desig = req.getParameter("desig");
        String[] pV = req.getParameterValues("techskills");

        System.out.println("name = "+name);
        System.out.println("designation = "+desig);

        for(String i : pV) {
            System.out.println(i);
        }

//       send response to the client
        RequestDispatcher rd =
req.getRequestDispatcher("/staticresp.html");
        rd.forward(req, resp);
    }
}
```

And after we enter the details and click on submit, we get the following response in the browser, which was sent by the *staticresp.html*

This is how static html works, called as **static** because the response does not change, it remains static and we see that even if we submit different data in the form, we will always get the response.
So whenever a servlet sends a html file as response, then it will be a static html as the content of the html file does not change.
But what if we wanted the response to change, everytime a different response is sent?
For that we have to use **Dynamic html.**
If we want to get dynamic response, then we have to write the html code inside the servlet and **PrintWriter** should be able to write the response in the browser.
Let us see how to achieve that-

```java
package com.tap.servlets;

public class FirstServlet extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest req, HttpServletResponse resp)
                throws ServletException, IOException {

        String name = req.getParameter("name");
        String desig = req.getParameter("desig");
        String[] pV = req.getParameterValues("techskills");

        System.out.println("name = "+name);
        System.out.println("designation = "+desig);

        for(String i : pV) {
                System.out.println(i);
```

```
            }

//          send response to the client
            resp.setContentType("text/html");
            PrintWriter writer = resp.getWriter();
            writer.println("<html>\r\n"
                      + "<head>\r\n"
                      + "<meta charset=\"ISO-8859-1\">\r\n"
                      + "<title>Insert title here</title>\r\n"
                      + "</head>\r\n"
                      + "<body>\r\n"
                      + "   <h3>Thank you for your response"+ name
+"</h3>\r\n"
                      + "</body>\r\n"
                      + "</html>");


      }

}
```
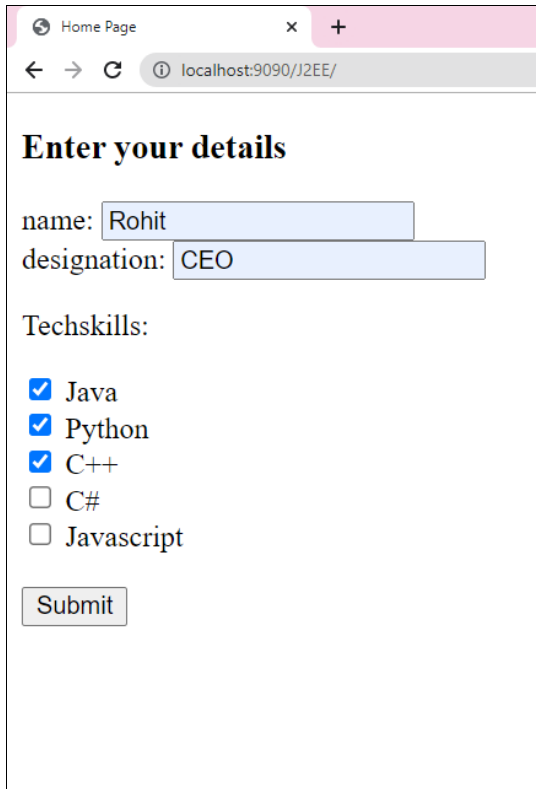
And click on submit after entering the following-

Enter your details

name: Rohit

designation: CEO

Techskills:

☑ Java
☑ Python
☑ C++
☐ C#
☐ Javascript

Submit

We will get the response as shown below-

Output:

Again if we send different input, response will change too as it is a Dynamic html response