Practical No. 3(a)
Q. Using RequestDispatcher Interface create a Servlet which will validate the password entered by the user, if the user has entered "Servlet" as password, then he will be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed.

index.html

```
<html>
  <head>
    <title>LoginPage! </title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>

    <h1> Login Form</h1>

    <form method ="post" action="MainServlet">
      Name:   
      <input type= "text" name= "uname"/><br><br>

      Password:   <input type= "password" name= "upass"/><br><br>


            
                 

      <input type = "submit" value="Login">
    </form>
  </body>
</html>
```

MainServlet.java

```
package server;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```java
import javax.servlet.RequestDispatcher;

public class MainServlet extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet MainServlet</title>");
            out.println("</head>");
            out.println("<body>");

            String n = request.getParameter("uname");
            String p = request.getParameter("upass");

            if(n.equals("admin") && p.equals("Servlet"))
            {
                RequestDispatcher rd = request.getRequestDispatcher("SecondServlet");
                rd.forward(request, response);

            }
            else
            {
                out.print("Sorry Invalid Credentials!!");
                RequestDispatcher rd = request.getRequestDispatcher("/index.html");
                rd.include(request,response);
            }
            out.println("</body>");
            out.println("</html>");
        }
    }
}
```

SecondServlet.java

```java
package server;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
```

```java
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class SecondServlet extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet SeondServlet</title>");
            out.println("</head>");
            out.println("<body>");

            String name = request.getParameter("uname");
            out.println("<h1>Welcome!!! </h1>"+name);

            out.println("</body>");
            out.println("</html>");
        }
    }
}
```
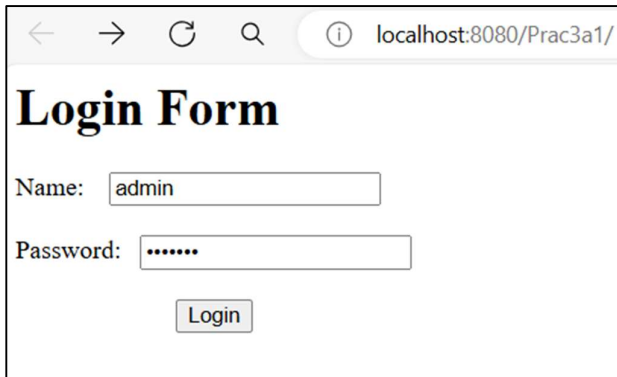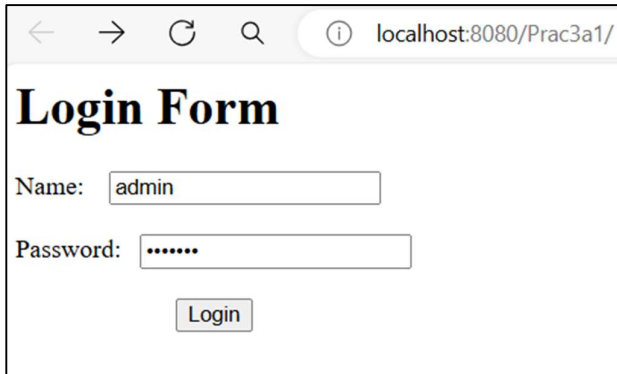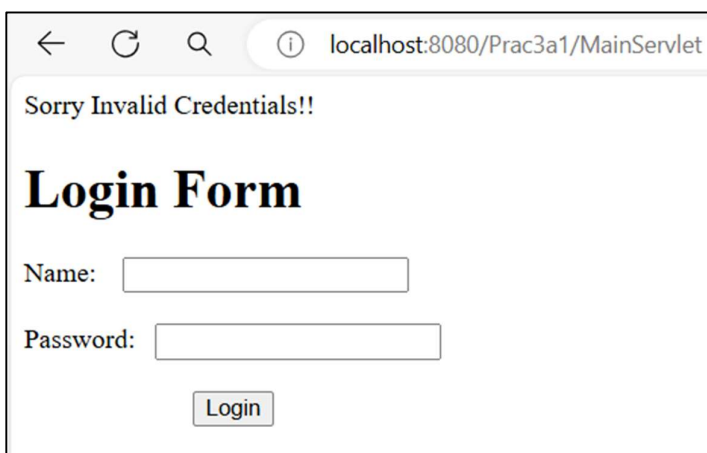
Output:

Login Form

Name: admin

Password: ••••••

Login

localhost:8080/Prac3a1/MainServlet

Welcome!!!

admin

Login Form

Name: admin

Password: ••••••

Login

localhost:8080/Prac3a1/MainServlet

Sorry Invalid Credentials!!

Login Form

Name:

Password:

Login

Practical No. 3(b)

Q. Create a servlet that uses Cookies to store the number of times a user has visited a servlet.

CookieServlet.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Cookie;

public class CookieServlet extends HttpServlet {
    private int i= 1;

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter())
        {

            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet CookieServlet</title>");
            out.println("</head>");
            out.println("<body>");


            String k = String.valueOf(i);

            Cookie c = new Cookie("Visit",k);

            response.addCookie(c);

            int j = Integer.parseInt(c.getValue());

            if(j==1)

            {
                    out.println("This is the first time you are visiting this page");
            }
```

```
        else
        {
            synchronized(CookieServlet.this)
            {
                out.println("You visited this Page "+i+" times");
            }
        }
        i++;
        out.println("</body>");
        out.println("</html>");
    }

    }

}
```
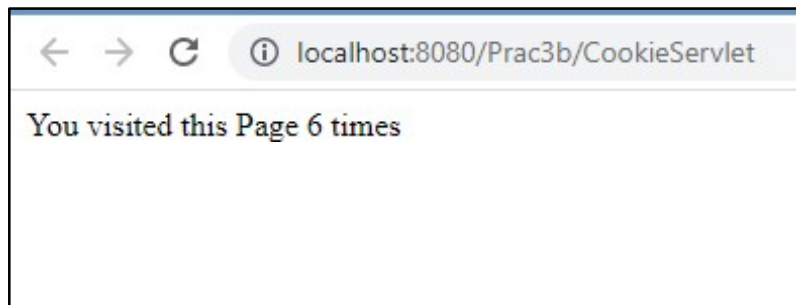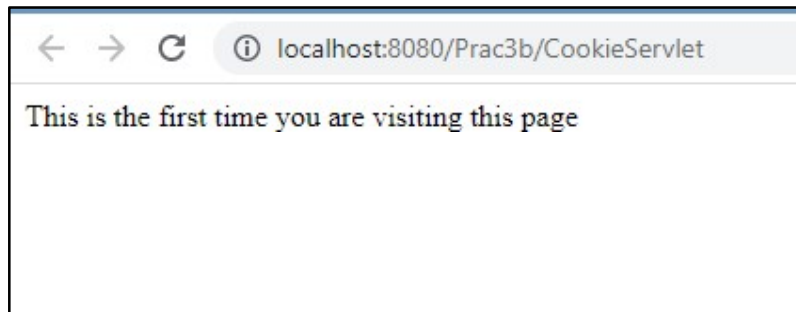
Output:

Practical No. 3(c)
Q. Write a servlet that accepts a username from an html form and stores it as a cookie variable. Write another servlet that returns the value of this cookie variable and displays it.

index.html

```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>

     <form action= "AddCookieServlet" method= "post">
       Name:   <input type= "text" name= "userName"/><br>
       <input type="submit" value="Go"/>
     </form>

   </body>
</html>
```

AddCookieServlet.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Cookie;

public class AddCookieServlet extends HttpServlet {

   @Override
   protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
     response.setContentType("text/html;charset=UTF-8");
     try (PrintWriter out = response.getWriter())
        {
        out.println("<!DOCTYPE html>");
        out.println("<html>");
         out.println("<head>");
        out.println("<title>Servlet AddCookieServlet</title>");
```

```java
            out.println("</head>");
            out.println("<body>");

            String n = request.getParameter("userName");
            out.print("Welcome "+n);

            Cookie ck = new Cookie("uname",n);
            response.addCookie(ck);

            out.print("<form action='GetCookie' method='post'>");
            out.print("<input type='submit' value='Go'>");
            out.print("</form>");
            out.close();

            out.println("</body>");
            out.println("</html>");

        }catch(Exception e){System.out.println(e);}

    }
}
```

GetCookie.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Cookie;

public class GetCookie extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet GetCookie</title>");
            out.println("</head>");
```
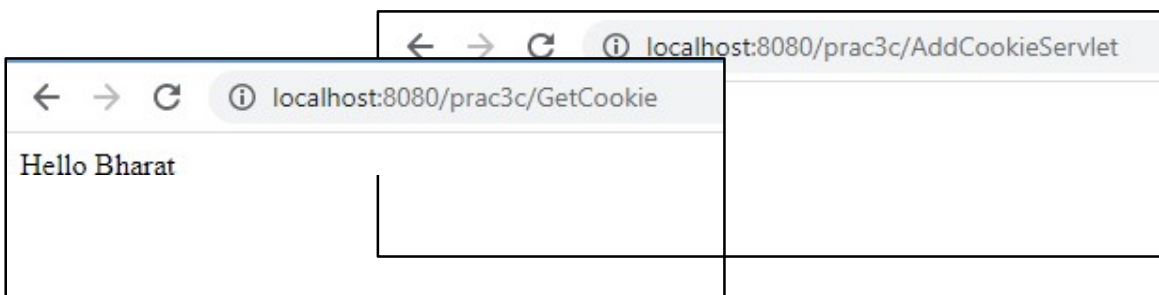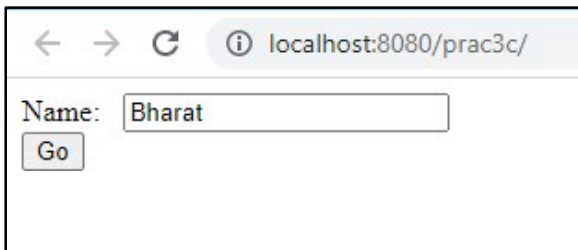
```
            out.println("<body>");

            Cookie ck[] = request.getCookies();
            out.print("Hello "+ck[0].getValue());

            out.close();

            out.println("</body>");
            out.println("</html>");
        }catch(Exception e){System.out.println(e);}
    }
}
```

Output:

Practical No. 3(d)
Q. Create a servlet demonstrating the use of session creation and destruction. Also check whether the user has visited this page first time or has visited earlier also using sessions.

SessionServlet.java

```java
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

public class SessionServlet extends HttpServlet {
    private int counter;

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {

            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet SessionServlet</title>");
            out.println("</head>");
            out.println("<body>");

            HttpSession session = request.getSession(true);
            if(session.isNew())
            {
                out.print("This is the first time you have visiting this page");
                ++counter;
            }
            else
            {
                synchronized(SessionServlet.this)
                {
                    if(counter==10)
                    {
                        session.invalidate();
                        counter=0;
                        request.getSession(false);
                    }
                    else
```

```
          {
              out.print("You have visited this page "+(++counter)+" times");
          }
      }
   }
   out.println("</body>");
   out.println("</html>");
}
}
}
```

Output:

← → C ⓘ localhost:8080/prac3d/SessionServlet

This is the first time you have visiting this page

← → C ⓘ localhost:8080/prac3d/SessionServlet

You have visited this page 10 times

← → C ⓘ localhost:8080/prac3d/SessionServlet

← → C ⓘ localhost:8080/prac3d/SessionServlet

This is the first time you have visiting this page