6. a) Write a Servlet for User validation web application, where the user submits a login name and password to the server. The name and password are checked against the data already available in Database and if the data matches, a successful login page is returned. Otherwise a failure message is shown to the user.

ServletUserVali.java

```
import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;


public class FirstServlet extends HttpServlet {

public void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {


                response.setContentType("text/html");

                PrintWriter out = response.getWriter();


                String n=request.getParameter("username");

                String p=request.getParameter("userpass");


try {

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

Connection conn = DriverManager.getConnection(“jdbc:mysql://localhost/mydb”, “root”, “Gcet@123”);


                Statement stmt = conn.createStatement();

                String sql= "SELECT * FROM user WHERE name=n and pass=p";

                ResultSet rs = stmt.executeQuery(sql);
```

```
                if(rs.next()){
                        out.println("Welcome "+n);
                } else{
                        out.println("Sorry username or password error");
                        RequestDispatcher rd=request.getRequestDispatcher("/index.html");
                        rd.include(request,response);
                }
                rs.close();
                stmt.close();
                conn.close();
        } catch(Exception e){
                e.printStackTrace();
        }
out.close();
}
}
```

Web.xml

```
<web-app>
        <servlet>
                <servlet-name> FirstServlet  </servlet-name>
                <servlet-class> FirstServlet  </servlet-class>
        <servlet>
        <servlet-mapping>
                <servlet-name> FirstServlet  </servlet-name>
                <url-pattern>/ servlet1</ url-pattern >
```

```
        </servlet-mapping>
</web-app>
```

b) Modify the above Program to an XML file instead of database.

FirstServlet.java

```
Import  javax.servlet.http.*;


public class SecondServlet extends HttpServlet {
public void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {

                response.setContentType("text/html");
                PrintWriter out = response.getWriter();

                String n=request.getParameter("username");
                String p=request.getParameter("userpass");



                ServletConfig config = getServletConfig();
                String name = config.getInitParameter(“username”);
                String pass = config.getInitParameter("password");

                if(n.equals(name)&&p.equals(pass)){
                        out.println("Welcome "+n);
                } else{
                        out.println("Sorry username or password error");
                        RequestDispatcher rd=request.getRequestDispatcher("/index.html");
```

```
                rd.include(request,response);
            }

        out.close();
}
}
```

Web.xml

```
<web-app>
        <servlet>
            <servlet-name>SecondServlet</servlet-name>
            <servlet-class>SecondServlet</servlet-class>
            <init-param>
<param-name>username</param-name>
<param-value>admin</param-value>
</init-param>
<init-param>
<param-name>password</param-name>
<param-value>123456</param-value>
</init-param>
        <servlet>
        <servlet-mapping>
            <servlet-name>SecondServlet</servlet-name>
            <url-pattern>/servlet2</ url-pattern >
        </servlet-mapping>
```

</web-app>

7. a) Write a Servlet for A simple calculator web application that takes two numbers and an operator (+,-,/,*and %)from an HTML page and returns the result page with the operation performed on the operands.

Calc.java

```
import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;


public class Calculator extends HttpServlet{

public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException{

        try{

                response.setContentType("text/html");

                PrintWriter out= response.getWriter();

                int a1= Integer.parseInt(request.getParameter("n1"));

                int a2= Integer.parseInt(request.getParameter("n2"));

                String op = request.getParameter("r1");

                if(op.equals(“add”))

                out.println("<h1>Addition is </h1>"+(a1+a2));

                else if (op.equals(“sub”))

                out.println("<h1>Subtraction is </h1>"+(a1-a2));

                else if (op.equals(“mul”))

                out.println("<h1>Multiplication is </h1>"+(a1*a2));
```

```
                else if (op.equals(“div”))
                out.println("<h1>Division</h1>"+(a1/a2));
                else
                        out.println(“Please select the operator”);
                }
        catch(Exception e){
                e.printStackTrace();
        }
    }
}
```

Web.xml

```
<web-app>
    <servlet>
        <servlet-name>Servlet3</servlet-name>
        <servlet-class>Calculator</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>Servlet3</servlet-name>
        <url-pattern>/cal</url-pattern>
    </servlet-mapping>
    <welcome-file-list>
        <welcome-file>index.html</welcome-file>
    </welcome-file-list>
</web-app>
```

7. b) Write a Servlet for web application that lists all cookies stored in the browser on clicking "List Cookies" button. Add cookies if necessary.

FirstServlet.java

```
import javax.servlet.http.*;


public class FirstServlet extends HttpServlet {

        public void doPost(HttpServletRequest request, HttpServletResponse response){

                try{

                        response.setContentType("text/html");

                        PrintWriter out = response.getWriter();

                        String n=request.getParameter("userName");

                        out.print("Welcome "+n);

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

                        out.print("<form action='servlet2'>");

                        out.print("<input type='submit' value='go'>");

                        out.print("</form>");

                        out.close();

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

```
        }
}
```

SecondServlet.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

public class SecondServlet extends HttpServlet {
        public void doPost(HttpServletRequest request, HttpServletResponse response){
                try{
                        response.setContentType("text/html");
                        PrintWriter out = response.getWriter();
                        Cookie ck[]=request.getCookies();
                        out.print("Hello "+ck[0].getValue());
                        out.close();
                }catch(Exception e){System.out.println(e);}
        }
  }
```

Web.xml

```
<web-app>
```

```
        <servlet>
<servlet-name>s1</servlet-name>
<servlet-class>FirstServlet</servlet-class>
</servlet>
        <servlet-mapping>
<servlet-name>s1</servlet-name>
<url-pattern>/servlet1</url-pattern>
</servlet-mapping>

<servlet>
<servlet-name>s2</servlet-name>
<servlet-class>SecondServlet</servlet-class>
</servlet>
        <servlet-mapping>
<servlet-name>s2</servlet-name>
<url-pattern>/servlet2</url-pattern>
</servlet-mapping>
  </web-app>
```