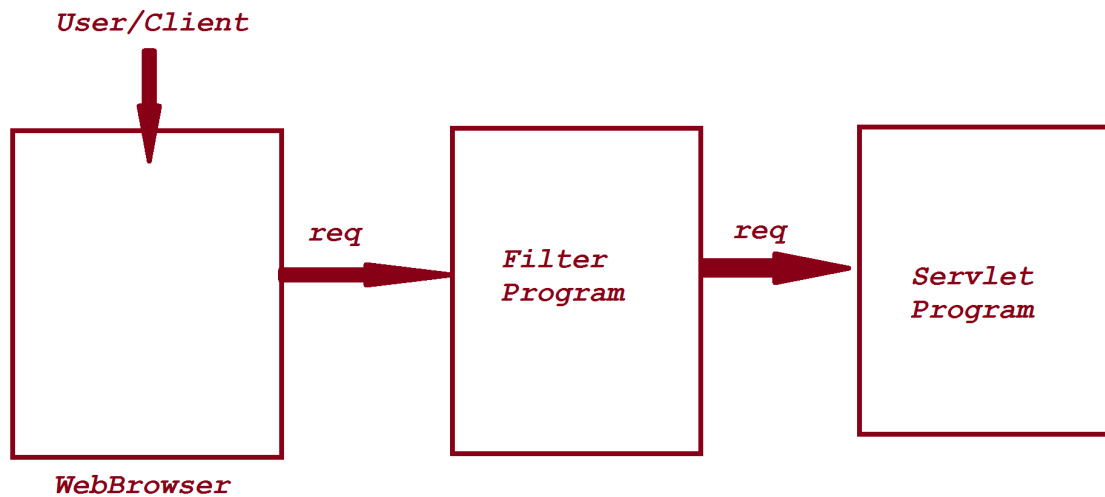


Dt : 18/12/2023



***imp**

Filters in Servlet Programming:

=>Filter is a pre-processing component which is executed before Servlet Program.

=>Filter is executed with same url-pattern of Servlet-program,which means Filter

and Servlet will have same url-pattern.

=>Filter-program will have highest priority in execution than Servlet-program.

=>In realtime Filter-program will hold security related code,which means Filter is

a Security layer of Servlet-program.

=>we use the following components to construct Filters:

1.Filter

2.FilterChain

3.FilterConfig

1.Filter:

=>'Filter' is an interface from javax.servlet package and which is implemented to

construct Filter-programs.

=>The following are some important methods from Filter:

public void init(javax.servlet.FilterConfig)

throws javax.servlet.ServletException;

public abstract void doFilter(javax.servlet.ServletRequest,

javax.servlet.ServletResponse, javax.servlet.FilterChain)

throws java.io.IOException, javax.servlet.ServletException;

public void destroy();

2.FilterChain:

=>FilterChain is an interface from javax.servlet package and which is instantiated

automatically while doFilter()-method execution.

=>This FilterChain will provide the following method to interlink Servlet-program

having same url-pattern:

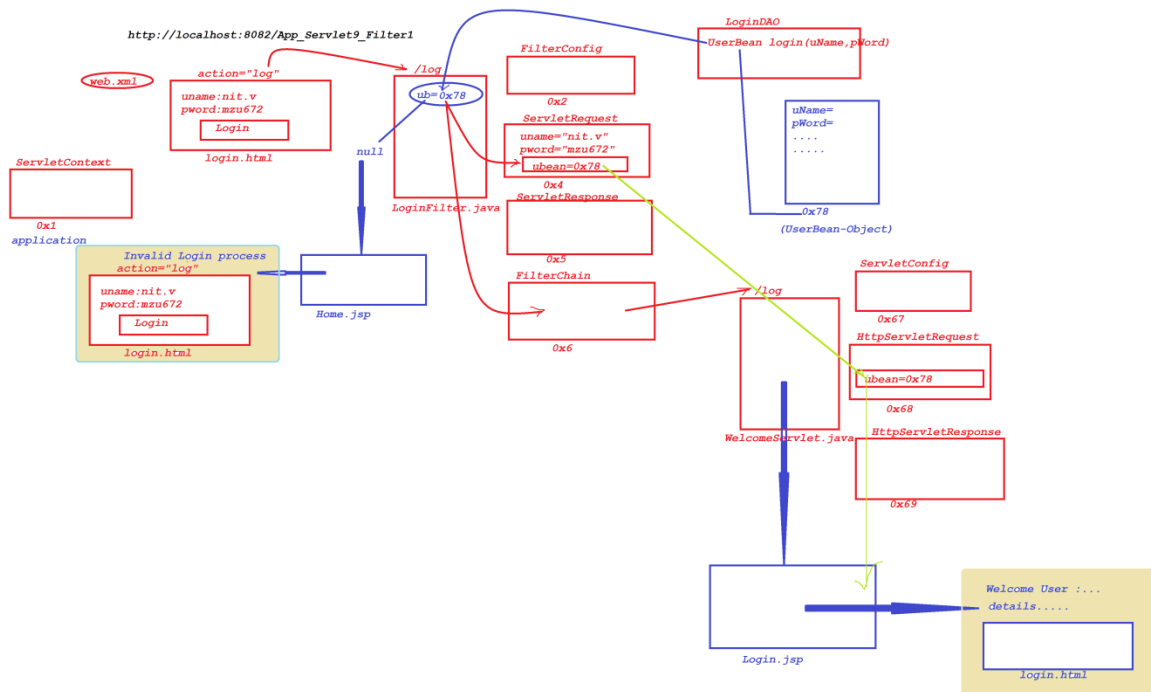
public abstract void doFilter(javax.servlet.ServletRequest,

javax.servlet.ServletResponse) throws java.io.IOException,

javax.servlet.ServletException;

Ex-application:

Layout:



login.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<form action="log" method="post">
UserName:<input type="text" name="uname"><br>
```

```
Password:<input type="password" name="pword"><br>
<input type="submit" value="Login">
</form>
</body>
</html>
```

UserBean.java

```
package test;
import java.io.*;
@SuppressWarnings("serial")
public class UserBean implements Serializable{
    private String uName,pWord,fName,lName,addr,mId;
    private long phNo;
    public UserBean() {}
    public String getuName() {
        return uName;
    }
    public void setuName(String uName) {
        this.uName = uName;
    }
    public String getpWord() {
        return pWord;
    }
    public void setpWord(String pWord) {
        this.pWord = pWord;
    }
    public String getfName() {
        return fName;
    }
    public void setfName(String fName) {
        this.fName = fName;
    }
    public String getlName() {
        return lName;
    }
    public void setlName(String lName) {
        this.lName = lName;
    }
    public String getAddr() {
        return addr;
    }
}
```

```

}
public void setAddr(String addr) {
    this.addr = addr;
}
public String getmId() {
    return mId;
}
public void setmId(String mId) {
    this.mId = mId;
}
public long getPhNo() {
    return phNo;
}
public void setPhNo(long phNo) {
    this.phNo = phNo;
}
}

```

DBInfo.java

```

package test;
public interface DBInfo
{
    public static final String
    dbUrl="jdbc:oracle:thin:@localhost:1521:xe";
    public static final String uName="system";
    public static final String pWord="manager";
}

```

DBConnection.java

```

package test;

import java.sql.*;

import static test.DBInfo.*;

```

```
public class DBConnection
```

```
{
```

```
    private static Connection con=null;
```

```
    private DBConnection() {}
```

```
    static
```

```
    {
```

```
        try {
```

```
            Class.forName("oracle.jdbc.driver.OracleDriver");
```

```
            con = DriverManager.getConnection(dbUrl,uName,pWord);
```

```
        }catch(Exception e) {e.printStackTrace();}
```

```
    }
```

```
    public static Connection getCon()
```

```
    {
```

```
        return con;
```

```
    }
```

```
}
```

```
LoginDAO.java
```

```
package test;
```

```
import java.sql.*;
```

```
public class LoginDAO {
```

```
    public UserBean ub = null;
```

```
    public UserBean login(String uName,String pWord) {
```

```
        try {
```

```
            Connection con = DBConnection.getCon();
```

```
            PreparedStatement ps = con.prepareStatement
```

```

        ("select * from UserReg57 where uname=?
and pword=?");
        ps.setString(1, uName);
        ps.setString(2, pWord);
        ResultSet rs = ps.executeQuery();
        if(rs.next()) {
            ub = new UserBean();
            ub.setuName(rs.getString(1));
            ub.setpWord(rs.getString(2));
            ub.setfName(rs.getString(3));
            ub.setlName(rs.getString(4));
            ub.setAddr(rs.getString(5));
            ub.setmId(rs.getString(6));
            ub.setPhNo(rs.getLong(7));
        }
    } catch (Exception e) {e.printStackTrace();}
    return ub;
}
}

```

LoginFilter.java

package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.annotation.*;

@WebFilter("/log")

public class LoginFilter implements Filter{

@Override

public void doFilter(ServletRequest req,ServletResponse res,FilterChain chain)

throws ServletException,IOException{

UserBean ub = new LoginDAO().login(req.getParameter("uname"),

```

        req.getParameter("pword"));

    if(ub==null) {

        req.setAttribute("msg","Invalid Login process...<br>");

        req.getRequestDispatcher("Home.jsp").forward(req, res);

    }else {

        req.setAttribute("ubean", ub);

        chain.doFilter(req, res);//linking Servlet_program

    }

}

}

WelcomeServlet.java

package test;

import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;

import javax.servlet.annotation.*;

@SuppressWarnings("serial")

@WebServlet("/log")

public class WelcomeServlet extends HttpServlet{

    @Override

    protected void doPost(HttpServletRequest req,HttpServletResponse res)throws

    ServletException,IOException{

```



```
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
String msg = (String)request.getAttribute("msg");
out.println(msg);
%>
<jsp:include page="login.html"/>
</body>
</html>
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app>
  <welcome-file-list>
    <welcome-file>login.html</welcome-file>
  </welcome-file-list>
</web-app>
```

```
=====
=====
```