SimpleServletAppStructure
  src
    by.epam.webex.controller
      Controller.java
      JspPageName.java
      RequestParameterName.java
    by.epam.webex.dao
      XMLDao.java
      XMLDaoException.java
      XMLDAOFactory.java
    by.epam.webex.dao.impl
      SaxXmlDao.java
    by.epam.webex.exception
      ProjectException.java
    by.epam.webex.logic
      CommandException.java
      CommandHelper.java
      CommandName.java
      ICommand.java
    by.epam.webex.logic.impl
      DoAnythingCommand.java
      NoSuchCommand.java
  JRE System Library [jre7]
  Apache Tomcat v7.0 [Apache Tomcat v7.0]
  Web App Libraries
  build
  WebContent
    jsp
      userPage.jsp
    META-INF
    WEB-INF
      lib
        jstl-1.2.jar
      web.xml
    error.jsp
    index.jsp

```java
package by.epam.webex.controller;

import java.io.IOException;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import by.epam.webex.logic.CommandException;
import by.epam.webex.logic.CommandHelper;
import by.epam.webex.logic.ICommand;


public class Controller extends HttpServlet {
```

```java
        private static final long serialVersionUID = 1L;


    public Controller() {
        super();
    }


        protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
            // TODO Auto-generated method stub
        }


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

            String commandName =
request.getParameter(RequestParameterName.COMMAND_NAME);
            ICommand command = CommandHelper.getInstance().getCommand(commandName);
            String page = null;
            try {
                page = command.execute(request);
            } catch (CommandException e) {
                page = JspPageName.ERROR_PAGE;
            } catch (Exception e){
                page = JspPageName.ERROR_PAGE;
            }

            RequestDispatcher dispatcher = request.getRequestDispatcher(page);

            if (dispatcher != null){
                dispatcher.forward(request, response);
            } else{
                errorMessageDireclyFromresponse(response);
            }

        }

        private void errorMessageDireclyFromresponse(HttpServletResponse response) throws
IOException{
            response.setContentType("text/html");
            response.getWriter().println("E R R O R");
        }

}




package by.epam.webex.controller;

public final class JspPageName {
        private JspPageName() {}

        public static final String USER_PAGE = "jsp/userPage.jsp";
```

```java
        public static final String ERROR_PAGE = "error.jsp";
}




package by.epam.webex.controller;

public final class RequestParameterName {

        private RequestParameterName() {}

        public static final String COMMAND_NAME = "command";
        public static final String SIMPLE_INFO = "simpleinfo";
        public static final String FILE_NAME = "filename";
}




package by.epam.webex.dao;

import java.util.List;

public interface XMLDao {
        List<Object> parse(String resourceName) throws XMLDaoException;
}




package by.epam.webex.dao;

import by.epam.webex.exception.ProjectException;

public class XMLDaoException extends ProjectException {

        private static final long serialVersionUID = 1L;

        public XMLDaoException(String msg){
                super(msg);
        }

        public XMLDaoException(String msg, Exception e){
                super(msg, e);
        }
}
```

```java
package by.epam.webex.dao;

import by.epam.webex.dao.impl.SaxXmlDao;

public class XMLDAOFactory {
    private final static XMLDAOFactory instance = new XMLDAOFactory();

    public static XMLDAOFactory getInstance() {
        return instance;
    }

    public XMLDao getDAO(DAOType type) throws XMLDaoException {
        XMLDao dao;
        switch (type) {
        case SAX:
            return SaxXmlDao.getInstance();
        default:
            throw new XMLDaoException("No sucj DAO");
        }
    }

    public enum DAOType {
        SAX, STAX, DOM;
    }
}
```

```java
package by.epam.webex.dao.impl;

import java.util.ArrayList;
import java.util.List;

import by.epam.webex.dao.XMLDao;
import by.epam.webex.dao.XMLDaoException;

public final class SaxXmlDao implements XMLDao{
    private final static SaxXmlDao instance = new SaxXmlDao();

    public static XMLDao getInstance(){
        return instance;
    }

    @Override
    public List<Object> parse(String resourceName) throws XMLDaoException{
        // stub
        List<Object> list = new ArrayList<>();
        list.add("First string from SAX DAO");
        list.add("Second string from SAX DAO");
        return list;
    }

}
```

```java
package by.epam.webex.exception;

public class ProjectException extends Exception{
        private static final long serialVersionUID = 1L;
        private Exception hiddenException;

        public ProjectException(String msg){
                super(msg);
        }

        public ProjectException(String msg, Exception e){
                super(msg);
                hiddenException = e;
        }

        public Exception getHiddenException(){
                return hiddenException;
        }
}
```

```java
package by.epam.webex.logic;

import by.epam.webex.exception.ProjectException;

public class CommandException extends ProjectException{

        private static final long serialVersionUID = 1L;

        public CommandException(String msg){
                super(msg);
        }

        public CommandException(String msg, Exception e){
                super(msg, e);
        }

}
```

```java
package by.epam.webex.logic;

import java.util.HashMap;
import java.util.Map;

import by.epam.webex.logic.impl.DoAnythingCommand;
import by.epam.webex.logic.impl.NoSuchCommand;

public final class CommandHelper {
```

```java
        private static final CommandHelper instance = new CommandHelper();

        private Map<CommandName, ICommand> commands = new HashMap<>();

        public CommandHelper() {
                commands.put(CommandName.DO_ANYTHING_COMMAND, new DoAnythingCommand());
                commands.put(CommandName.NO_SUCH_COMMAND, new NoSuchCommand());
        }

        public static CommandHelper getInstance() {
                return instance;
        }

        public ICommand getCommand(String commandName){
                CommandName name = CommandName.valueOf(commandName.toUpperCase());
                ICommand command;
                if ( null != name){
                        command = commands.get(name);
                } else{
                        command = commands.get(CommandName.NO_SUCH_COMMAND);
                }
                return command;
        }
}
```

```java
package by.epam.webex.logic;

public enum CommandName {
        DO_ANYTHING_COMMAND, NO_SUCH_COMMAND

}
```

```java
package by.epam.webex.logic;

import javax.servlet.http.HttpServletRequest;

public interface ICommand {
        public String execute(HttpServletRequest request) throws CommandException;
}
```

```java
package by.epam.webex.logic.impl;

import java.util.List;

import javax.servlet.http.HttpServletRequest;

import by.epam.webex.controller.JspPageName;
import by.epam.webex.controller.RequestParameterName;
import by.epam.webex.dao.XMLDAOFactory;
import by.epam.webex.dao.XMLDao;
import by.epam.webex.dao.XMLDaoException;
import by.epam.webex.logic.CommandException;
import by.epam.webex.logic.ICommand;

public class DoAnythingCommand implements ICommand {

    @Override
    public String execute(HttpServletRequest request) throws CommandException {
        String page = null;
        XMLDao dao = null;
        try {
            dao = XMLDAOFactory.getInstance().getDAO(XMLDAOFactory.DAOType.SAX);
            List<Object> info =
dao.parse(request.getParameter(RequestParameterName.FILE_NAME));
            request.setAttribute(RequestParameterName.SIMPLE_INFO, info);
            page =  JspPageName.USER_PAGE;
        } catch (XMLDaoException e) {
            throw new CommandException("cann't get DAO", e);
        }
        return page;
    }

}




package by.epam.webex.logic.impl;

import javax.servlet.http.HttpServletRequest;

import by.epam.webex.controller.JspPageName;
import by.epam.webex.logic.CommandException;
import by.epam.webex.logic.ICommand;

public class NoSuchCommand implements ICommand {

    @Override
    public String execute(HttpServletRequest request) throws CommandException {
        // stub
        return JspPageName.ERROR_PAGE;
    }

}
```

userPage.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=utf-8"
    pageEncoding="utf-8"%>

<%@ taglib prefix="fmt" uri="http://java.sun.com/jsp/jstl/fmt"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>Insert title here</title>
</head>
<body>

<table>

    <c:forEach var="movie" items="${simpleinfo}" >
        <tr> <td>${movie}</td> </tr>
    </c:forEach>
</table>

</body>
</html>
```

error.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=utf-8"
        pageEncoding="utf-8"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>Error page</title>
</head>
<body>
        <h1>E R R O R</h1>
</body>
</html>
```

index.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=utf-8"
    pageEncoding="utf-8"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<title>Index Page</title>
</head>
<body>
```

```html
        <form action="controller" method="post">
                <input type="hidden" name="command" value="do_anything_command" />
                <input type="hidden" name="filename" value="myfile" />
                <input type="text" name="xxx" value=""/>
                <input type="submit" value="SAX" /><br/>
        </form>
</body>
</html>
```

web.xml
```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
     xmlns="http://java.sun.com/xml/ns/javaee"
     xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd"
     id="WebApp_ID" version="2.5">
     <display-name>SimpleServletAppStructure</display-name>
     <welcome-file-list>
            <welcome-file>index.html</welcome-file>
            <welcome-file>index.htm</welcome-file>
            <welcome-file>index.jsp</welcome-file>
            <welcome-file>default.html</welcome-file>
            <welcome-file>default.htm</welcome-file>
            <welcome-file>default.jsp</welcome-file>
     </welcome-file-list>

     <servlet>
            <description></description>
            <display-name>Controller</display-name>
            <servlet-name>Controller</servlet-name>
            <servlet-class>by.epam.webex.controller.Controller</servlet-class>
     </servlet>

     <servlet-mapping>
            <servlet-name>Controller</servlet-name>
            <url-pattern>/controller</url-pattern>
     </servlet-mapping>

</web-app>
```