Java EE 第一次实习 JSP技术

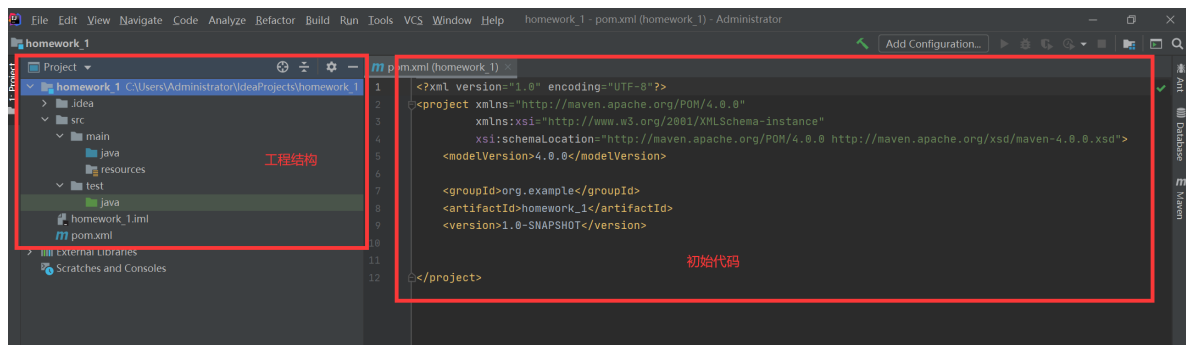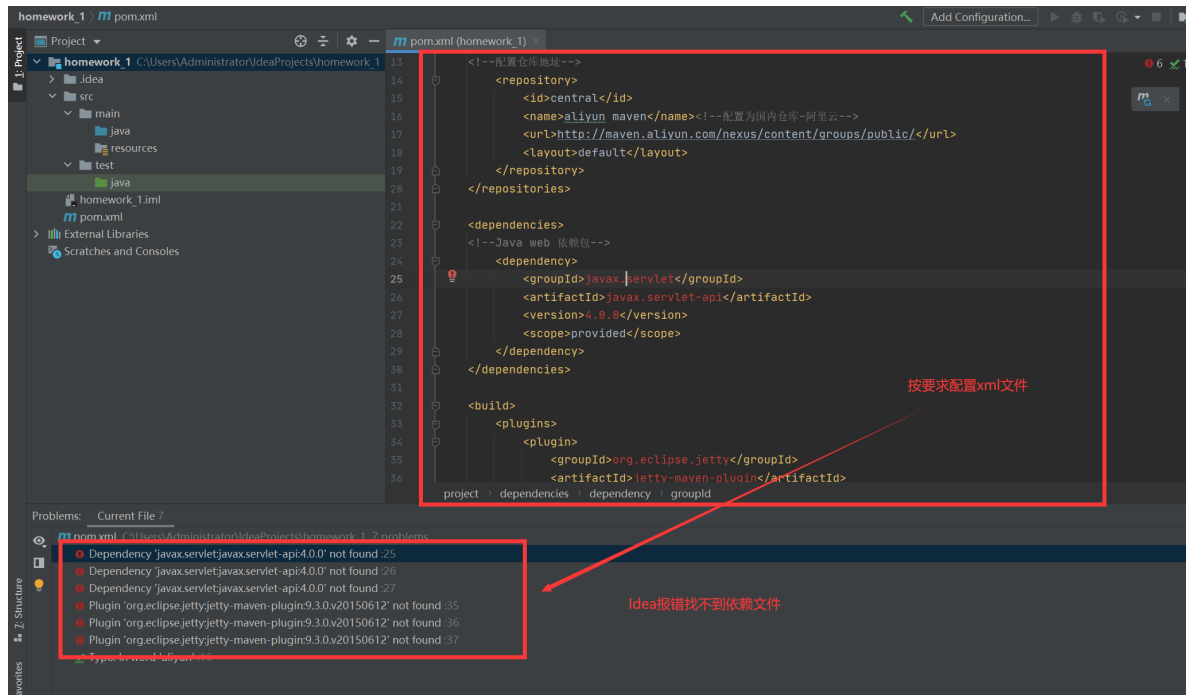| 课程	姓名	学号	班级
Java EE	张宇晨	2020012249	软工2001班

开发环境

Intellij IDEA 2020.2

实现内容

1. 创建Java Web的maven工程

a. 实习流程
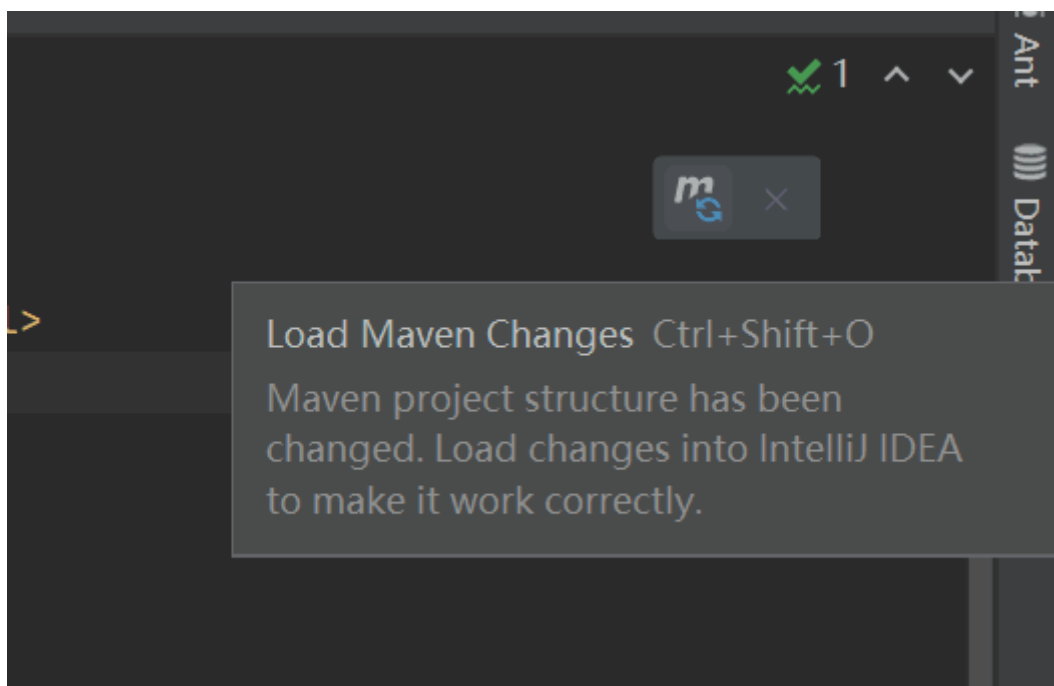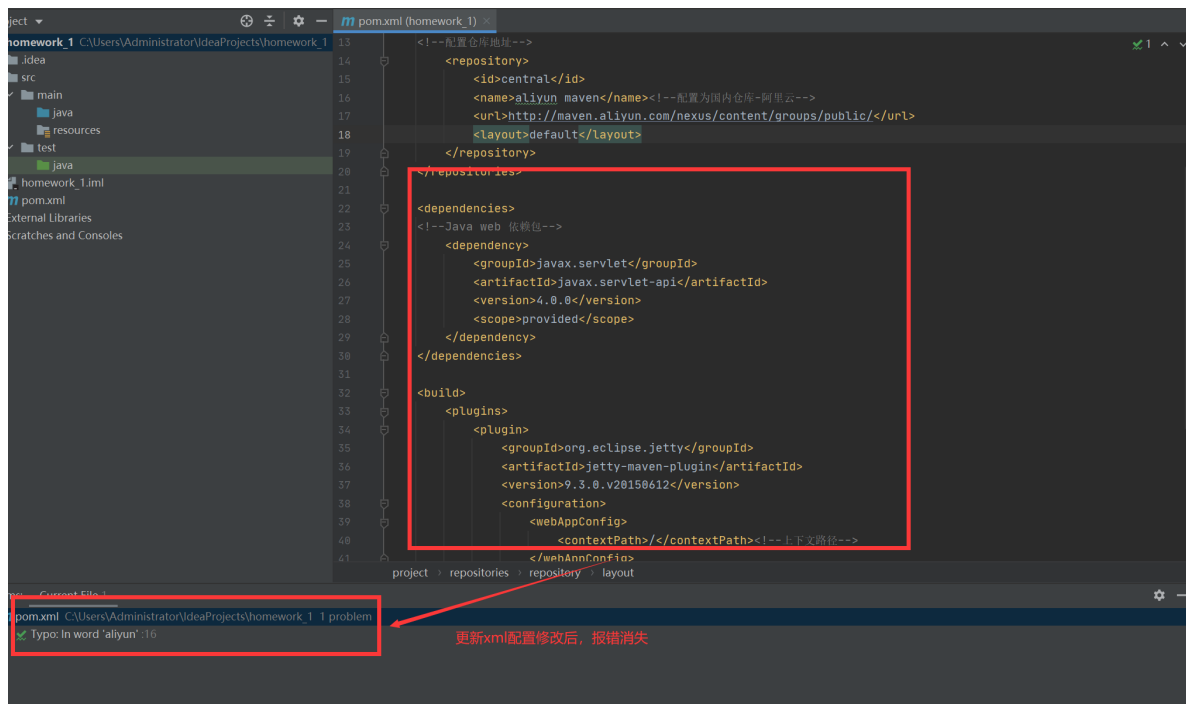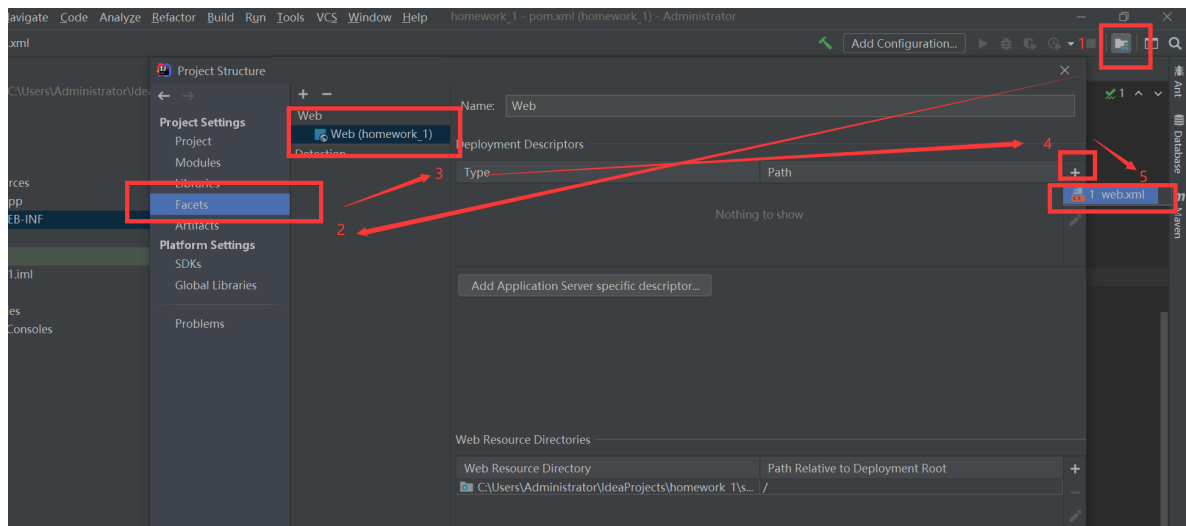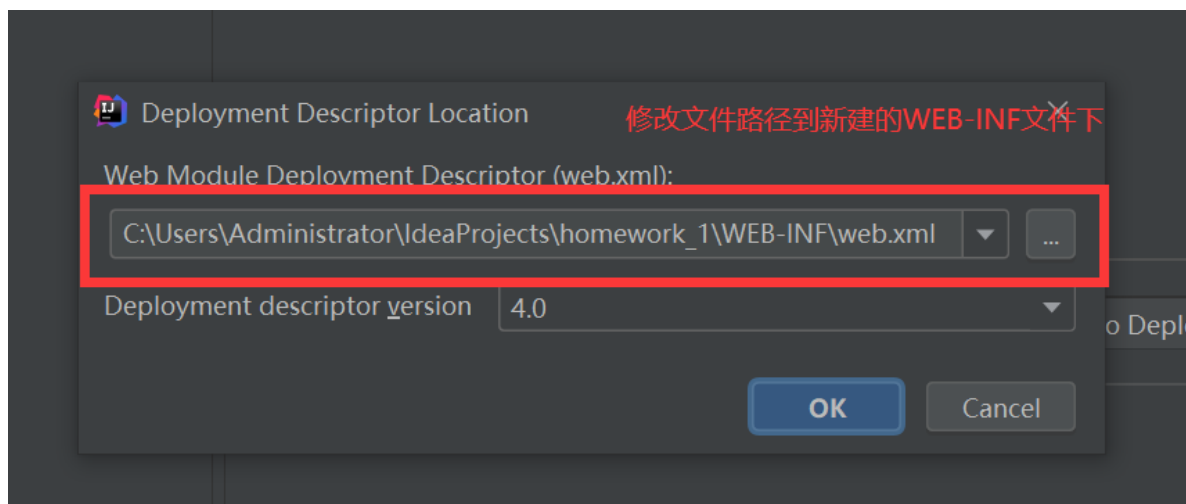
创建maven项目

配置文件

报错，应该是网络问题，点击load Maven Changes

报错消失
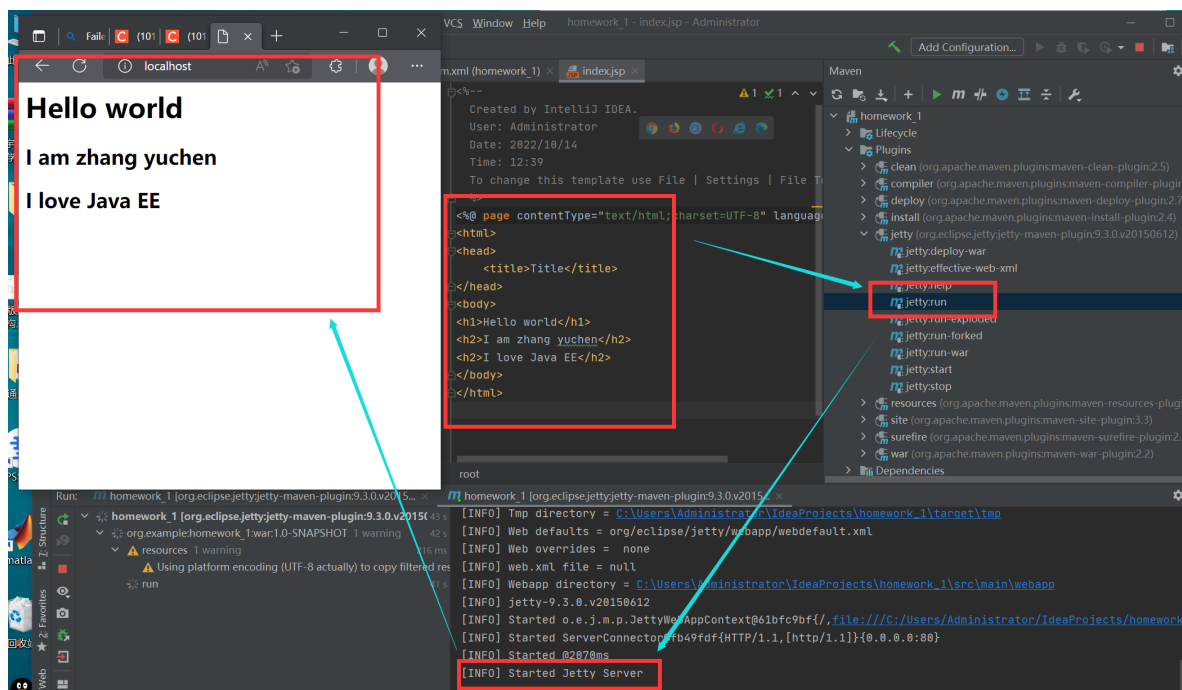
```
13      <!--配置仓库地址-->
14          <repository>
15              <id>central</id>
16              <name>aliyun maven</name><!--配置为国内仓库-阿里云-->
17              <url>http://maven.aliyun.com/nexus/content/groups/public/</url>
18              <layout>default</layout>
19          </repository>
20      </repositories>
21
22      <dependencies>
23      <!--Java web 依赖包-->
24          <dependency>
25              <groupId>javax.servlet</groupId>
26              <artifactId>javax.servlet-api</artifactId>
27              <version>4.0.0</version>
28              <scope>provided</scope>
29          </dependency>
30      </dependencies>
31
32      <build>
33          <plugins>
34              <plugin>
35                  <groupId>org.eclipse.jetty</groupId>
36                  <artifactId>jetty-maven-plugin</artifactId>
37                  <version>9.3.0.v20150612</version>
38                  <configuration>
39                      <webAppConfig>
40                          <contextPath>/</contextPath><!--上下文路径-->
41                      </webAppConfig>
```

project ▸ repositories ▸ repository ▸ layout

pom.xml C:\Users\Administrator\IdeaProjects\homework_1 1 problem
✓ Typo: In word 'aliyun' :16

更新xml配置修改后，报错消失

创建web项目

修改路径

修改文件路径到新建的WEB-INF文件下

Web Module Deployment Descriptor (web.xml):

C:\Users\Administrator\IdeaProjects\homework_1\WEB-INF\web.xml

Deployment descriptor version   4.0

OK   Cancel

创建JSP文件

运行报错问题

此种报错原因是端口冲突

一种解决方案是修改端口号再次运行，另一种是关闭正在占用此端口的服务

欢迎页

Hello world

I am zhang yuchen

I love Java EE

b. 代码展示

pom.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>org.example</groupId>
    <artifactId>homework_1</artifactId>
    <version>1.0-SNAPSHOT</version>
    <!--工程打包类型为 war 包-->
    <packaging>war</packaging>
    <repositories>
    <!--配置仓库地址-->
        <repository>
            <id>central</id>
            <name>aliyun maven</name><!--配置为国内仓库-阿里云-->
            <url>http://maven.aliyun.com/nexus/content/groups/public/</url>
            <layout>default</layout>
        </repository>
    </repositories>

    <dependencies>
    <!--Java web 依赖包-->
        <dependency>
            <groupId>javax.servlet</groupId>
            <artifactId>javax.servlet-api</artifactId>
            <version>4.0.0</version>
            <scope>provided</scope>
        </dependency>
    </dependencies>
```

```xml
    <build>
        <plugins>
            <plugin>
                <groupId>org.eclipse.jetty</groupId>
                <artifactId>jetty-maven-plugin</artifactId>
                <version>9.3.0.v20150612</version>
                <configuration>
                    <webAppConfig>
                        <contextPath>/</contextPath><!--上下文路径-->
                    </webAppConfig>
                    <httpConnector>
                        <port>80</port>
                    </httpConnector>
                </configuration>
            </plugin>
        </plugins>
    </build>

</project>
```
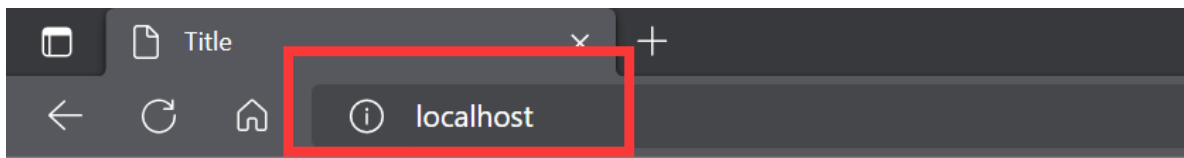
index.html

```jsp
<%--
  Created by IntelliJ IDEA.
  User: Administrator
  Date: 2022/10/14
  Time: 12:39
  To change this template use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<html>
<head>
    <title>Title</title>
</head>
<body>
<h1>Hello world</h1>
<h2>I am zhang yuchen</h2>
<h2>I love Java EE</h2>
</body>
</html>
```

2. 内置对象的使用

（1）.表单处理

a. 实习流程

HTML文档

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Form_Test</title>
</head>

<body>
    <form action="ok.jsp" method="post">
        <div class="labl_r" style="...">
            <div>姓名: </div>
            <input type="text" name="name" >
        </div>
        <div class="labl_r" style="...">
            <div>性别: </div>
            <input type="radio" name="sex" value="男">男
            <input type="radio" name="sex" value="女">女
        </div>
        <div class="labl_r" style="...">
            <div>年龄: </div>
            <input type="text" name="age">
        </div>
        <div class="labl_r" style="...">
            <div>爱好: </div>
            <input type="checkbox" name="hobs" value="运动">运动
            <input type="checkbox" name="hobs" value="旅游">旅游
            <input type="checkbox" name="hobs" value="阅读">阅读
            <input type="checkbox" name="hobs" value="体育">体育
        </div>
        <button type="submit">提交</button>
        <!--        <input id="tbutton" type="button" onclick="cal()" value="提交">-->
    </form>
</body>
```
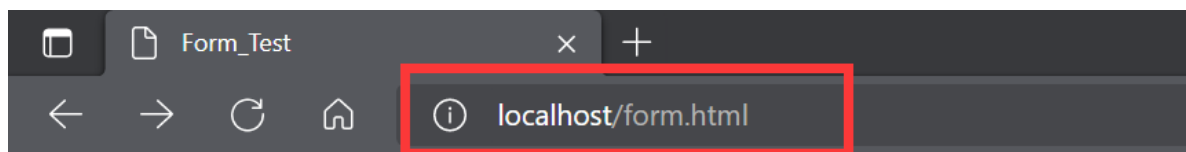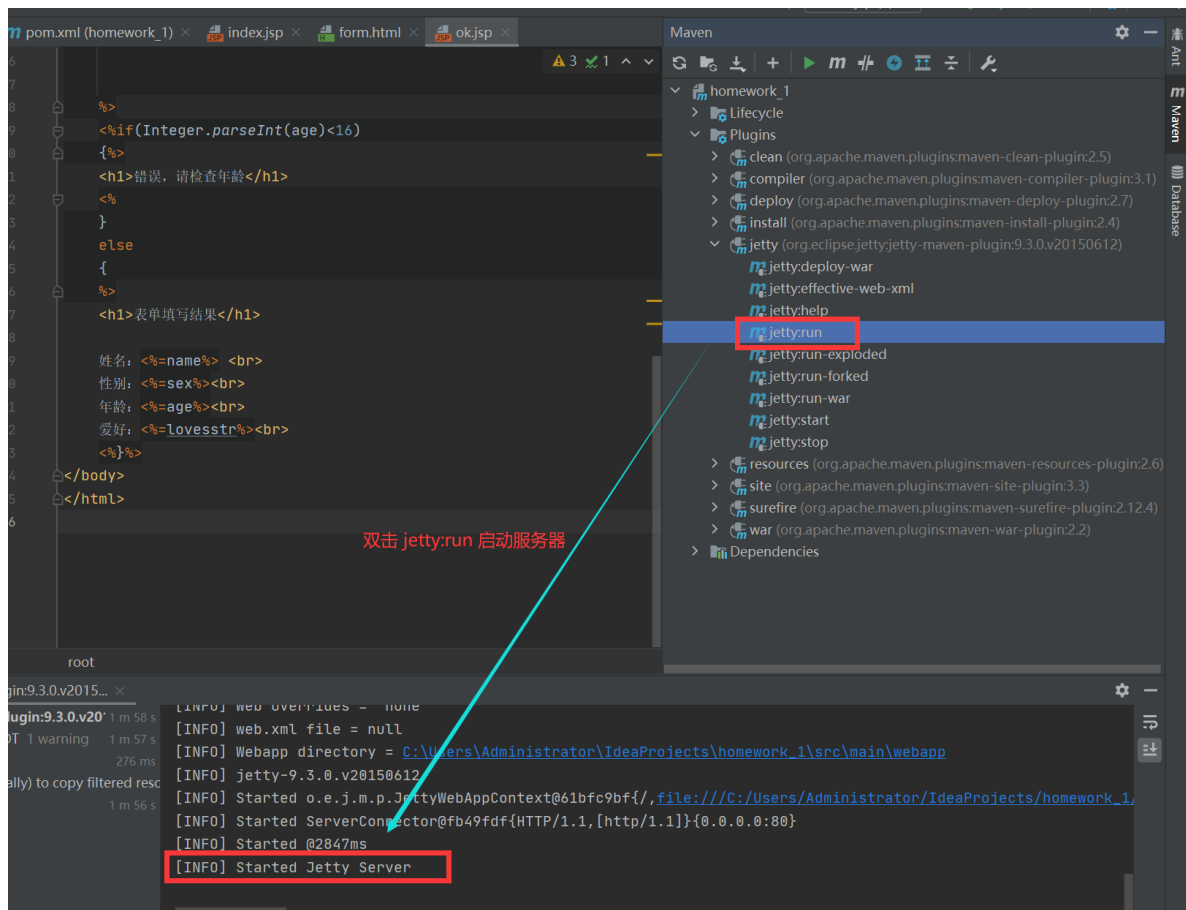
ok.jsp文件

```jsp
    <title>ok.jsp</title>
</head>
<body>
    <%
        request.setCharacterEncoding("UTF-8");
        String name = request.getParameter("name");
        String sex = request.getParameter("sex");
        String age = request.getParameter("age");
        String[] loves = request.getParameterValues("hobs");
        String lovesstr="";
        for(int i=0;i<loves.length;++i)          // 爱好字符串拼接
        {
            lovesstr+=loves[i];
            lovesstr+=" ";
        }

    %>
    <%if(Integer.parseInt(age)<16)          // 年龄检测
    {%>
    <h1>错误，请检查年龄</h1>
    <%
    }
    else
    {
    %>
    <h1>表单填写结果</h1>

    姓名：<%=name%>  <br>
    性别：<%=sex%><br>
    年龄：<%=age%><br>
    爱好：<%=lovesstr%><br>
    <%}%>
</body>
</html>
```

```
%>
<%if(Integer.parseInt(age)<16)
{%>
<h1>错误，请检查年龄</h1>
<%
}
else
{
%>
<h1>表单填写结果</h1>

姓名：<%=name%> <br>
性别：<%=sex%><br>
年龄：<%=age%><br>
爱好：<%=lovesstr%><br>
<%}%>
</body>
</html>
```

root

双击 jetty:run 启动服务器

```
[INFO] web overrides = none
[INFO] web.xml file = null
[INFO] Webapp directory = C:\Users\Administrator\IdeaProjects\homework_1\src\main\webapp
[INFO] jetty-9.3.0.v20150612
[INFO] Started o.e.j.m.p.JettyWebAppContext@61bfc9bf{/,file:///C:/Users/Administrator/IdeaProjects/homework_1/
[INFO] Started ServerConnector@fb49fdf{HTTP/1.1,[http/1.1]}{0.0.0.0:80}
[INFO] Started @2847ms
[INFO] Started Jetty Server
```

通过浏览器访问本地HTML文件

填写表单后点击提交

点击提交

跳转到ok.jsp文件

输出结果

通过控制台可以看到请求传输记录

如果填写的年龄小于16岁

当年龄小于16岁的时，报错

b. 代码展示

form.html

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Form_Test</title>
</head>

<body>
    <form action="ok.jsp" method="post">
        <div class="labl_r" style="display: flex; flex-direction: row">
            <div>姓名: </div>
            <input type="text" name="name" >
```

```
            </div>
            <div class="labl_r" style="display: flex; flex-direction: row">
                <div>性别:  </div>
                <input type="radio" name="sex" value="男">男  
                <input type="radio" name="sex" value="女">女  
            </div>
            <div class="labl_r" style="display: flex; flex-direction: row">
                <div>年龄: </div>
                <input type="text" name="age">
            </div>
            <div class="labl_r" style="display: flex; flex-direction: row">
                <div>爱好:  </div>
                <input type="checkbox" name="hobs" value="运动">运动
                <input type="checkbox" name="hobs" value="旅游">旅游 
                <input type="checkbox" name="hobs" value="阅读">阅读
                <input type="checkbox" name="hobs" value="体育">体育
            </div>
            <button type="submit">提交</button>
            <!--         <input id="tbutton" type="button" onclick="cal()" value="提
交">-->
        </form>
    </body>
</body>
```
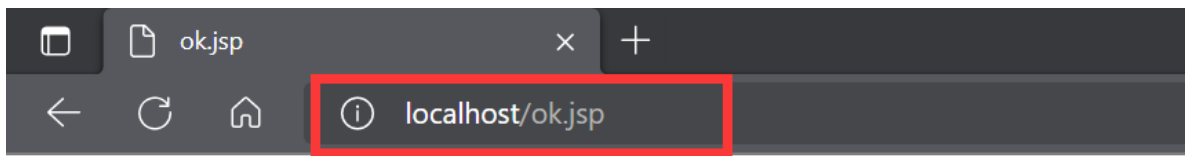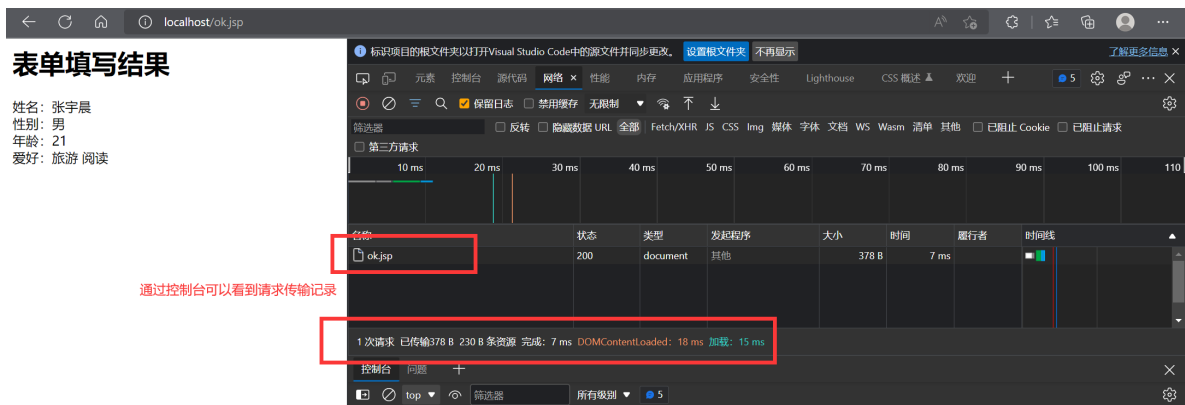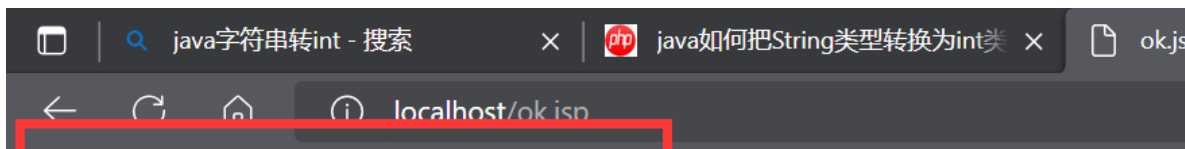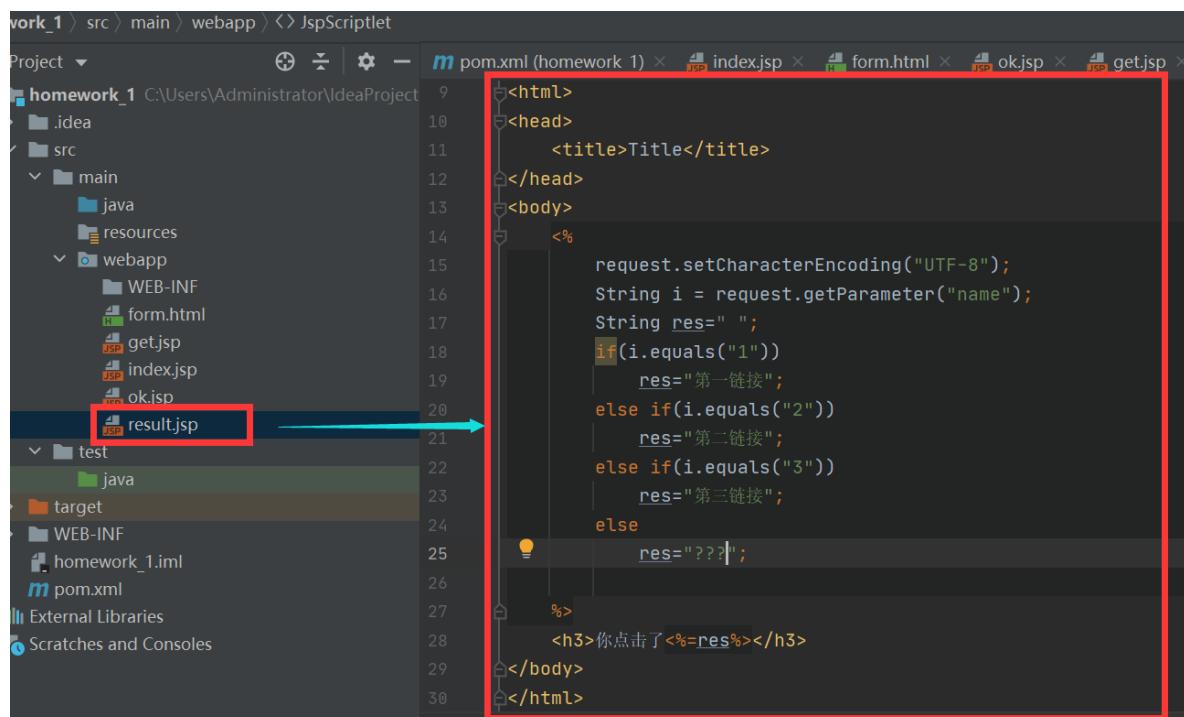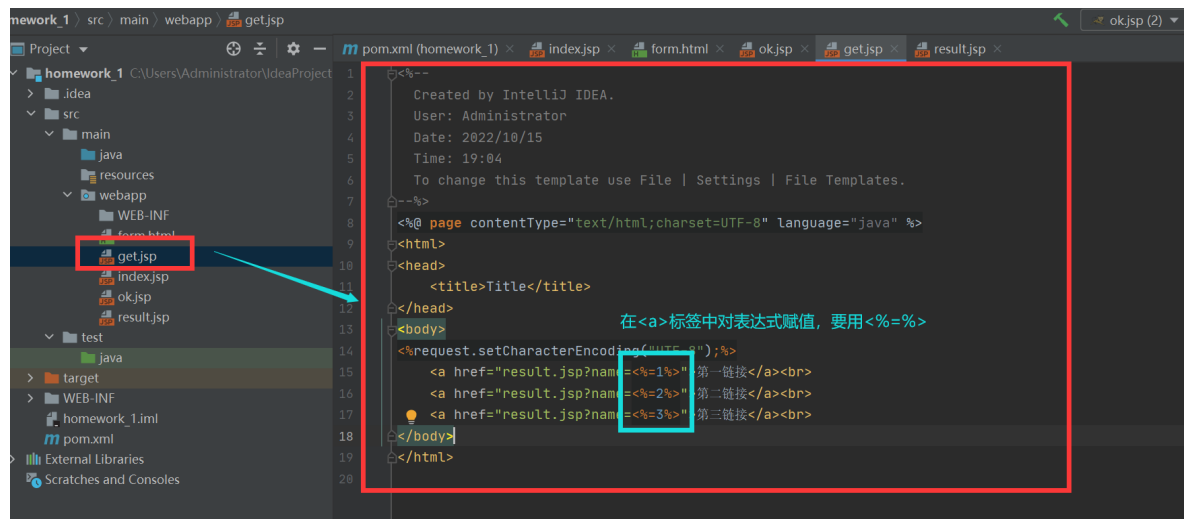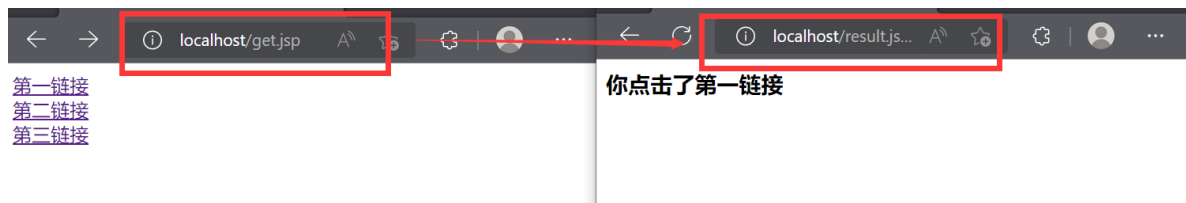
ok.jsp

```
<%--
  Created by IntelliJ IDEA.
  User: Administrator
  Date: 2022/10/15
  Time: 14:06
  To change this template use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<html>
<head>
    <title>ok.jsp</title>
</head>
<body>
    <%
        request.setCharacterEncoding("UTF-8");
        String name = request.getParameter("name");
        String sex = request.getParameter("sex");
        String age = request.getParameter("age");
        String[] loves = request.getParameterValues("hobs");
        String lovesstr="";
        for(int i=0;i<loves.length;++i)
        {
            lovesstr+=loves[i];
            lovesstr+=" ";
        }


    %>
    <%if(Integer.parseInt(age)<16)
    {%>
    <h1>错误，请检查年龄</h1>
        <%
```

```
    }
    else
    {
    %>
    <h1>表单填写结果</h1>

    姓名：<%=name%>  <br>
    性别：<%=sex%><br>
    年龄：<%=age%><br>
    爱好：<%=lovesstr%><br>
    <%}%>
</body>
</html>
```

（2）.超链接传值

a. 实习流程

你点击了第一链接

b. 代码展示

get.jsp

```
<%--
  Created by IntelliJ IDEA.
  User: Administrator
  Date: 2022/10/15
  Time: 19:04
  To change this template use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<html>
<head>
    <title>Title</title>
</head>
<body>
<%request.setCharacterEncoding("UTF-8");%>
    <a href="result.jsp?name=<%=1%>">第一链接</a><br>
    <a href="result.jsp?name=<%=2%>">第二链接</a><br>
    <a href="result.jsp?name=<%=3%>">第三链接</a><br>
</body>
</html>
```

result.jsp

```
<%--
  Created by IntelliJ IDEA.
  User: Administrator
  Date: 2022/10/15
  Time: 19:05
  To change this template use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<html>
<head>
    <title>Title</title>
</head>
<body>
    <%
        request.setCharacterEncoding("UTF-8");
        String i = request.getParameter("name");
        String res=" ";
        if(i.equals("1"))
            res="第一链接";
        else if(i.equals("2"))
            res="第二链接";
        else if(i.equals("3"))
            res="第三链接";
        else
            res="???";
```

```
    %>
    <h3>你点击了<%=res%></h3>
 </body>
 </html>
```

（3）-（4）.登陆验证与cookie的使用

a. 实习流程

login.jsp中获取登陆状态

check.jsp中绑定登陆状态错误信息

```java
boolean pass = false;
if(name.equals("zyc"))
{
    if(pwd.equals("123"))
    {
        pass = true;
        session.setAttribute("permission", name);
        request.setAttribute("succ"," ");
        if(rem!=null)
        {
            Cookie cname = new Cookie("uname",name);
            Cookie cwd = new Cookie("uwd",pwd);
            response.addCookie(cname);
            response.addCookie(cwd);
        }
    }
    else
    {
        //密码错误
        request.setAttribute("succ","密码错误");
        request.getRequestDispatcher("login.jsp").forward(request, response);
    }
}
else{
    //用户名不存在
    request.setAttribute("succ","用户不存在");
    request.getRequestDispatcher("login.jsp").forward(request, response);
}
if(pass)
{
    response.sendRedirect("admin.jsp");
}
```
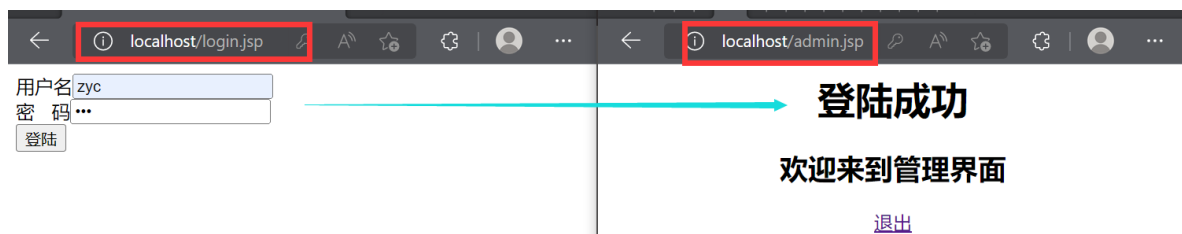
用户名和密码正确则正常跳转到admin页面

密码错误则将succ"密码错误"绑定到requet对象

带着request对象的属性，跳转回登陆界面

用户名错误则绑定"用户名错误"

登陆失败

输入了错误密码

密码错误

输入了错误用户名

用户不存在

登陆成功

登陆成功

欢迎来到管理界面

退出

登陆验证

```
To change this template Use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<html>
<head>
    <title>Title</title>
</head>
<body>
<%
    Object check = session.getAttribute("permission");
    if(check == null)          进行登陆验证，如果permission属性为空则跳回登陆页面
    {
        response.sendRedirect("login.jsp");
        return;
    }
    else
    {
%>
    <h1 align="center">登陆成功</h1>
    <h2 align="center">欢迎来到管理界面</h2>
    <p align="center"><a href="login.jsp">退出</a></p>
<%}%>
</body>
</html>
```
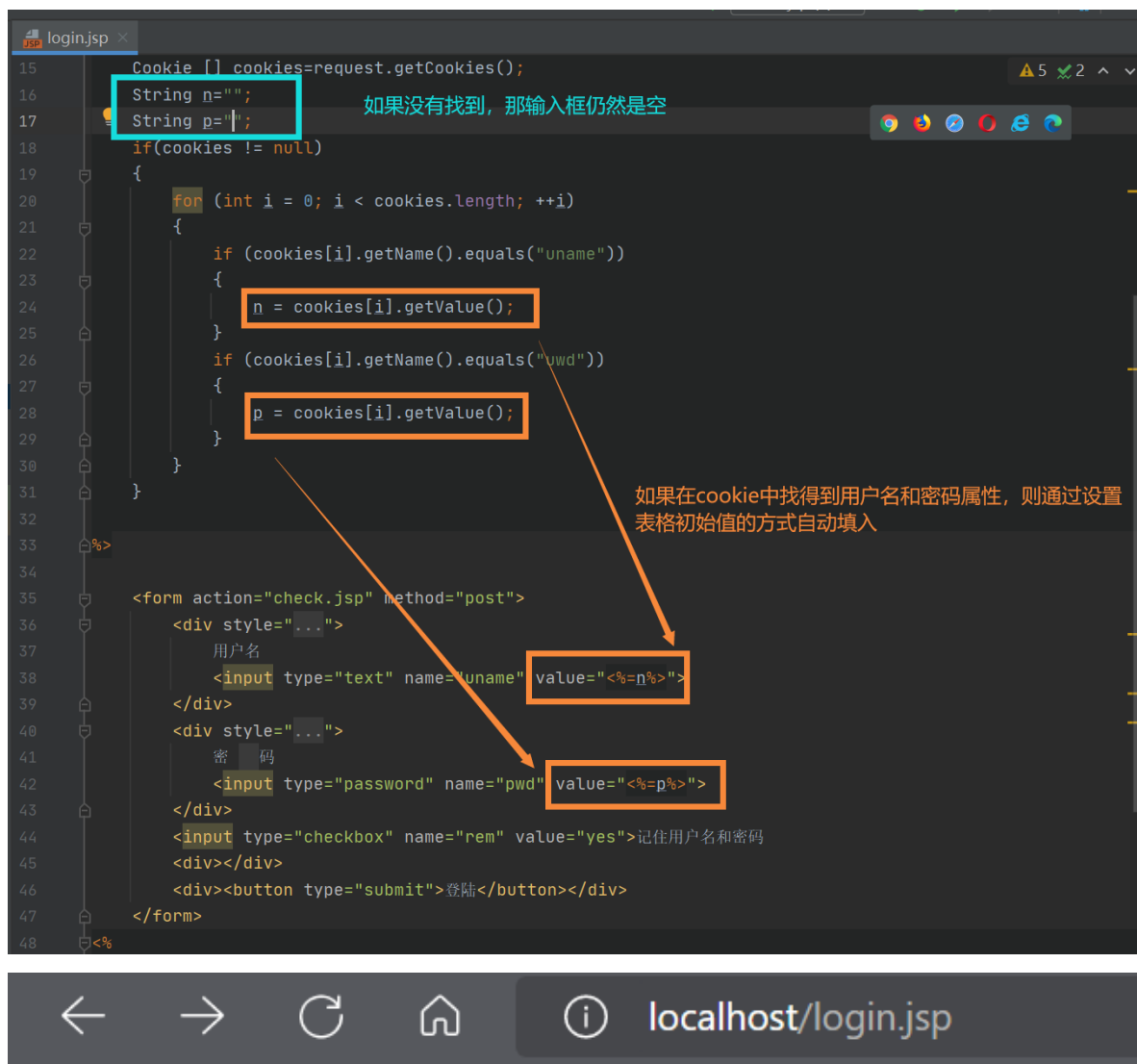
记住密码

```
 13   <body>
 14   <%
 15       request.setCharacterEncoding("UTF-8");
 16       String name = request.getParameter("uname");
 17       String pwd = request.getParameter("pwd");
 18       String rem = request.getParameter("rem");
 19       boolean pass = false;
 20       if(name.equals("zyc"))
 21       {
 22           if(pwd.equals("123"))          密码正确，且选择了要记住用户名和密码
 23           {
 24               pass = true;
 25               session.setAttribute("permission", name);
 26               request.setAttribute("succ","");
 27               if(rem!=null)
 28               {
 29                   Cookie cname = new Cookie("uname",name);
 30                   Cookie cwd = new Cookie("uwd",pwd);         则将用户名和密码存入cookies中
 31                   response.addCookie(cname);
 32                   response.addCookie(cwd);
 33               }
 34           }
 35           else
 36           {
 37               //密码错误
 38               request.setAttribute("succ","密码错误");
 39               request.getRequestDispatcher("login.jsp").forward(request, response);
 40           }
 41       }
 42       else{
 43           //用户名不存在
 44           request.setAttribute("succ","用户不存在");
 45           request.getRequestDispatcher("login.jsp").forward(request, response);
 46       }
 47       if(pass)
      root >
```

自动填入

```
Cookie [] cookies=request.getCookies();
String n="";
String p="";                          如果没有找到，那输入框仍然是空
if(cookies != null)
{
    for (int i = 0; i < cookies.length; ++i)
    {
        if (cookies[i].getName().equals("uname"))
        {
            n = cookies[i].getValue();
        }
        if (cookies[i].getName().equals("uwd"))
        {
            p = cookies[i].getValue();
        }
    }
}
%>

<form action="check.jsp" method="post">
    <div style="...">
        用户名
        <input type="text" name="uname" value="<%=n%>">
    </div>
    <div style="...">
        密   码
        <input type="password" name="pwd" value="<%=p%>">
    </div>
    <input type="checkbox" name="rem" value="yes">记住用户名和密码
    <div></div>
    <div><button type="submit">登陆</button></div>
</form>
<%
```

如果在cookie中找到用户名和密码属性，则通过设置
表格初始值的方式自动填入

localhost/login.jsp

用户名 zyc
密　码 •••
□记住用户名和密码
登陆

成功登陆一次后，已经自动记住密码并自动填入了

b. 代码展示

login.jsp

```
<%--
  Created by IntelliJ IDEA.
  User: Administrator
  Date: 2022/10/15
  Time: 19:55
  To change this template use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<html>
<head>
    <title>Title</title>
```

```jsp
</head>
<body>
<%
    Cookie [] cookies=request.getCookies();
    String n="";
    String p="";
    if(cookies != null)
    {
        for (int i = 0; i < cookies.length; ++i)
        {
            if (cookies[i].getName().equals("uname"))
            {
                n = cookies[i].getValue();
            }
            if (cookies[i].getName().equals("uwd"))
            {
                p = cookies[i].getValue();
            }
        }
    }

%>

    <form action="check.jsp" method="post">
        <div style="display: flex; flex-direction: row">
            用户名
            <input type="text" name="uname" value="<%=n%>">
        </div>
        <div style="display: flex; flex-direction: row">
            密   码
            <input type="password" name="pwd" value="<%=p%>">
        </div>
        <input type="checkbox" name="rem" value="yes">记住用户名和密码
        <div></div>
        <div><button type="submit">登陆</button></div>
    </form>
<%
    if(request.getAttribute("succ")!=null)
    {
%>
    <%=request.getAttribute("succ")%>
<%}%>
</body>
</html>
```

check.jsp

```jsp
<%--
  Created by IntelliJ IDEA.
  User: Administrator
  Date: 2022/10/15
  Time: 19:56
  To change this template use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<html>
```

```jsp
<head>
    <title>Title</title>
</head>
<body>
<%
    request.setCharacterEncoding("UTF-8");
    String name = request.getParameter("uname");
    String pwd = request.getParameter("pwd");
    String rem = request.getParameter("rem");
    boolean pass = false;
    if(name.equals("zyc"))
    {
        if(pwd.equals("123"))
        {
            pass = true;
            session.setAttribute("permission", name);
            request.setAttribute("succ"," ");
            if(rem!=null)
            {
                Cookie cname = new Cookie("uname",name);
                Cookie cwd = new Cookie("uwd",pwd);
                response.addCookie(cname);
                response.addCookie(cwd);
            }
        }
        else
        {
            //密码错误
            request.setAttribute("succ","密码错误");
            request.getRequestDispatcher("login.jsp").forward(request,
response);
        }
    }
    else{
        //用户名不存在
        request.setAttribute("succ","用户不存在");
        request.getRequestDispatcher("login.jsp").forward(request, response);
    }
    if(pass)
    {
        response.sendRedirect("admin.jsp");
    }
%>
</body>
</html>
```

admin.jsp

```jsp
<%--
  Created by IntelliJ IDEA.
  User: Administrator
  Date: 2022/10/15
  Time: 19:56
  To change this template use File | Settings | File Templates.
--%>
<%@ page contentType="text/html;charset=UTF-8" language="java" %>
```

```
<html>
<head>
    <title>Title</title>
</head>
<body>
<%
    Object check = session.getAttribute("permission");
    if(check == null)
    {
        response.sendRedirect("login.jsp");
        return;
    }
    else
    {
%>
    <h1 align="center">登陆成功</h1>
    <h2 align="center">欢迎来到管理界面</h2>
    <p align="center"><a href="login.jsp">退出</a></p>
    <%}%>
</body>
</html>
```

思考题

问：

在（3）题中check.jsp页面存储错误信息应使用哪个对象：request、session、application？为什么？

答：

应该使用request对象。
原因：
密码或用户名错误是与请求相关的，即每次请求用户可能输入的不是同一对用户名和密码。
而request请求对象对于客户的每个请求都是不一样的，所以对每次请求都会重新创建和删除这个范围的对象。
request对象的这一特性满足本题（3）的要求，对客户的每次请求，创建一个request对象，根据每次请求中的用户名和密码信息校验反馈。在到下一次请求的时候，request对象是另一个新的request对象，此时用户名和密码的校验反馈不会受上一次请求的影响。

session对象的生命周期是整个会话期，application对象的生命周期是应用启动到应用结束，这两个对象都无法满足题目要求。

补充

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I love Java EE

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login.jsp
form.html
get.jsp