Day 47

一、一个Servlet中处理多个不同的请求（掌握）

第一版，switch

```java
package com.qf.shop.controller;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;

@WebServlet(name = "UserController",value = "/user")
public class UserController extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
        // localhost:8080/shop/user?method=login&
        // 接收参数method，对method进行判断
        String method = request.getParameter("method");
        switch (method){
            case "login":
                login(request,response);
                break;
            case "register":
                register(request,response);
                break;
            case "active":
                active(request,response);
                break;
            default:
                response.getWriter().write("访问的资源不存在..");
                break;
        }
    }

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

    public void login(HttpServletRequest request, HttpServletResponse response) throws
IOException {
        response.getWriter().write("user中的login被调用啦...");
    }

    public void register(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("user中的register被调用啦...");
    }
```

```java
    public void active(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("user中的active被调用啦...");
    }
}
```

第二版 反射

```java
package com.qf.shop.controller;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.lang.reflect.InvocationTargetException;
import java.lang.reflect.Method;

@WebServlet(name = "UserController02",value = "/user02")
public class UserController02 extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
        // localhost:8080/shop/user?method=login&
        // 接收参数method，对method进行判断
        String methodStr = request.getParameter("method");
        // 使用反射的方式
        Class<? extends UserController02> clazz = this.getClass();
        try {
            // 通过反射方式获取方法
            Method method = clazz.getMethod(methodStr, HttpServletRequest.class,
HttpServletResponse.class);
            // 调用方法
            method.invoke(this,request,response);

        } catch (NoSuchMethodException | IllegalAccessException |
InvocationTargetException e) {
            // 没有找到方法
            response.getWriter().write("访问资源不存在...");
            e.printStackTrace();
        }
    }

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

    public void login(HttpServletRequest request, HttpServletResponse response) throws
IOException {
        response.getWriter().write("user02中的login被调用啦...");
    }

    public void register(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("user02中的register被调用啦...");
```

```java
    }

    public void active(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("user02中的active被调用啦...");
    }
}
```

第三版 抽取公共内容形成父类

- BaseController.java

```java
package com.qf.shop.controller;

import javax.servlet.ServletException;
import javax.servlet.ServletRequest;
import javax.servlet.ServletResponse;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.lang.reflect.InvocationTargetException;
import java.lang.reflect.Method;

@WebServlet(name = "BaseController")
public class BaseController extends HttpServlet {
    @Override
    public void service(ServletRequest request, ServletResponse response) throws
ServletException, IOException {

        // localhost:8080/shop/user?method=login&
        // 接收参数method，对method进行判断
        String methodStr = request.getParameter("method");
        // 使用反射的方式
        Class clazz = this.getClass();
        try {
            // 通过反射方式获取方法
            Method method = clazz.getMethod(methodStr, HttpServletRequest.class,
HttpServletResponse.class);
            // 调用方法
            method.invoke(this,request,response);

        } catch (NoSuchMethodException | IllegalAccessException |
InvocationTargetException e) {
            // 没有找到方法
            response.getWriter().write("访问资源不存在...");
            e.printStackTrace();
        }
    }
}
```

- CartController01.java

```java
package com.qf.shop.controller;
```

```java
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.lang.reflect.InvocationTargetException;
import java.lang.reflect.Method;
@WebServlet(name = "CartController01",value = "/cart01")
public class CartController01 extends BaseController {

    public void login(HttpServletRequest request, HttpServletResponse response) throws
IOException {
        response.getWriter().write("cart01中的login被调用啦...");
    }

    public void register(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("cart01中的register被调用啦...");
    }

    public void active(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("cart01中的active被调用啦...");
    }
}
```

第四版 子类方法返回字符串

- CartController01.java

```java
package com.qf.shop.controller;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.lang.reflect.InvocationTargetException;
import java.lang.reflect.Method;
@WebServlet(name = "CartController01",value = "/cart01")
public class CartController01 extends BaseController {

    public String login(HttpServletRequest request, HttpServletResponse response)
throws IOException, ServletException {
        response.getWriter().write("cart01中的login被调用啦...");
        // request.getRequestDispatcher("").forward(request,response);
        return "forward:/login.jsp";
    }

    public String register(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("cart01中的register被调用啦...");
        // response.sendRedirect("");
        return "redirect:/shop/register.jsp";
    }
```

```java
    public String active(HttpServletRequest request, HttpServletResponse response)
throws IOException {
        response.getWriter().write("cart01中的active被调用啦...");
        return "我就是看看...";
    }

    public void show(HttpServletRequest request, HttpServletResponse response) throws
IOException {
        response.getWriter().write("show:我也来看看");
    }
}
```

- BaseController.java

```java
package com.qf.shop.controller;

import javax.servlet.ServletException;
import javax.servlet.ServletRequest;
import javax.servlet.ServletResponse;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.lang.reflect.InvocationTargetException;
import java.lang.reflect.Method;

@WebServlet(name = "BaseController")
public class BaseController extends HttpServlet {
    @Override
    public void service(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

        // localhost:8080/shop/user?method=login&
        // 接收参数method，对method进行判断
        String methodStr = request.getParameter("method");
        // 使用反射的方式
        Class clazz = this.getClass();
        try {
            // 通过反射方式获取方法
            Method method = clazz.getMethod(methodStr, HttpServletRequest.class,
HttpServletResponse.class);
            // 调用方法
            Object result = method.invoke(this,request,response);
            System.out.println(result);
            // 判断result是否为空   是否以forward或者redirect开头
            if (result != null){
                String str = (String) result;
                // 是否以forward或者redirect开头
                if (str.startsWith("forward")){
                    String path = str.substring(str.indexOf(":")+1);
                    request.getRequestDispatcher(path).forward(request,response);
                }else if (str.startsWith("redirect")){
                    String path = str.substring(str.indexOf(":")+1);
                    response.sendRedirect(path);
                }else{
                    response.getWriter().write(str);
```

```
            }
        }

    } catch (NoSuchMethodException | IllegalAccessException |
InvocationTargetException e) {
            // 没有找到方法
            response.getWriter().write("访问资源不存在...");
            e.printStackTrace();
        }
    }
}
```

第五版 处理字符串异常情况

```java
package com.qf.shop.controller;

import com.qf.shop.entity.Constants;

import javax.servlet.ServletException;
import javax.servlet.ServletRequest;
import javax.servlet.ServletResponse;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.lang.reflect.InvocationTargetException;
import java.lang.reflect.Method;

@WebServlet(name = "BaseController")
public class BaseController extends HttpServlet {
    @Override
    public void service(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

        // localhost:8080/shop/user?method=login&
        // 接收参数method，对method进行判断
        String methodStr = request.getParameter(Constants.METHOD);

        // 如果methodStr是null，就直接调到index.jsp页面
        if (methodStr == null || methodStr.equals("")){
            methodStr = Constants.INDEX;
        }

        // 使用反射的方式
        Class clazz = this.getClass();
        try {
            // 通过反射方式获取方法
            Method method = clazz.getMethod(methodStr, HttpServletRequest.class,
HttpServletResponse.class);
            // 调用方法
            Object result = method.invoke(this,request,response);
            System.out.println(result);
            // 判断result是否为空   是否以forward或者redirect开头
            if (result != null){
                String str = (String) result;
                // 是否以forward或者redirect开头
```

```java
                if (str.startsWith(Constants.FORWARD)){
                    String path = str.substring(str.indexOf(":")+1);
                    request.getRequestDispatcher(path).forward(request,response);
                }else if (str.startsWith(Constants.REDIRECT)){
                    String path = str.substring(str.indexOf(":")+1);
                    response.sendRedirect(path);
                }else{
                    response.getWriter().write(str);
                }
            }

        } catch (NoSuchMethodException | IllegalAccessException |
InvocationTargetException e) {
            // 没有找到方法
            response.getWriter().write("访问资源不存在...");
            e.printStackTrace();
        }
    }

    /**
     * 如果用户没有明确到哪个页面就调到主页
     * @param request
     * @param response
     * @return
     */
    public String index(HttpServletRequest request, HttpServletResponse response){
        return Constants.FORWARD + ":/index.jsp";
    }
}
```