

Web Computing Project Solution Report

Online Residence Application System

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Scenario

The goal of this project is to design an online application system for students. The requirements of this project are:

Client side		
	Requirement	Archived
1	Contain detail information of university accommodations.	√
2.	Create a application form to apply university halls	√
3	Write css files in order to render web pages appropriately	√
4	Form validation by using javascript	√
Sever side		
	Requirement	Archived
1	Design a structure of XML file and save it in DTD file	√
2	Able to write applicant's information into XML format and save it on the sever side (the login name should be name of file saved on the sever)	√
3	Allow user to login by interrogating the corresponding XML file	√
4	Allow user to update their information	√
5	Able to transform the XML file into an XHTML form and send it to the user's browser	√

Technology analysis

Client side: XHTML, Javascript and CSS are the four main part of this project to build the client side. The main use of Javascript is to validate the form which user submitted to server. CSS is a technology to render the HTML/XHTML pages in a convenient way. XHTML speaks to browsers well because it's one member of XML family.

Sever side: XML, DTD, servlet and JSP are suggested. There are two techniques of how to programme in sever side, introduced by tutor in this lecture. I have chosen JSP as my solution to this project. The most significant fact is that JSP could combine with HTML easily. It's a bit of annoying with servlet, for me, it's painful to work

with disordered HTML codes. In my experience, the format of HTML code is very easily out of order, especially when developer is writing servlet and trying to introduce HTML code into their JAVA source code. In a controversial way, I saw JSP could combine with HTML codes easily in a reasonable and logical way. Furthermore, no tomcat configuration needed; it is the main difference between JSP and servlet. Therefore, JSP is the backend of my project. In addition, although JSP is still translated to servlet by JVM, the background is actually no different.

Implementation

To build the web site, I try to divide this project into several parts:

JSP pages	Goal
residence.jsp	show the the information of residences
apply.jsp	save the information that user has submitted to server into XML file, will redirect to residence.jsp in 2 seconds.
form.jsp	shows the application form and allow logged-in user update their information.
login.jsp	let user login the service, will redirect to residence.jsp in 2 seconds
logout.jsp	let user log-out the service, will redirect to residence.jsp in 2 seconds
Files	Goal
applicant.dtd	the DTD file which against user-name.xml.
residences.xml	the XML file that stored the information to university halls
user-name.xml (jyuny1.xml)	the XML file that contants the preferences, personal information and so on.

One of the difficulties that web developers will encounter is the passing parameter. Typos always leads minor bugs so that the peace of development of this website can boost. However, to avoid typo problem, in my personal experience, is by using meaningful name of variables and parameters. Sometime it looks stupid but actually it works very well for most time, though, sometimes, redundant Java class still happens. It's wonderful to have an experience to interact with web programming because now I realised that XML technology does have to potential to rule the future internet society.