

Due Date: April 26<sup>th</sup>, 2010  
(subject to extension to be discussed during Tuesday's class)

## **Program 5: Web Application**

Write a web application using Java Servlets and JSP. Note that using JSP is optional. You may, however, find it more convenient. Your application should write to and read from a database, and display web pages to the user. Your application should be simple yet meaningful.

### **Examples:**

- A registration page where a student can register for a class. Student can delete their registration. You can add your own theme. For example, if you are organizing a weekly club meeting, you can have your 'club members' sign the meeting roster online.
- A weather-tracking web page. Every 'day' you enter current weather conditions. They are recorded in the database along with a timestamp of entry.
- Look-up service. You enter a name of a person that may already be in a database. You are shown a page showing you the stats of the user, if one exists. You may need to provide a way to add people to the service.
- A log in page. You can sign up for a username and a password. Then you can log in to see a protected web resource by using your username and password. Usernames and passwords are stored in the database.
- A message board. You type your username and a message and they get posted to a message board page. Messages and usernames are added to and stored in a database
- Make up your own example and implement it!

Technologies involved:

- Servlets or JSP
- HTML
- SQL

Feel free to use any reasonable resources for help:

- FrontPage, Expression Web, GoLive, DreamWeaver, etc. for HTML
- Chapters 39 and 40 in the book (PDFs of chapters are on VLT) for Servlets, SQL and JSPs
- Web Resources (Google, etc) for all of the above
- Ask me

### **Policies**

- You may work with teams of up to 3 people
- Due Date: April 26<sup>th</sup>, 2010. Late penalty applies after due date (10% off the score)

Due Date: April 26<sup>th</sup>, 2010  
(subject to extension to be discussed during Tuesday's class)

## **Deliverables to VLT:**

- Your application should have 2 to 3 web pages.  
examples of web page are, i.e. add user page, delete user page, display users page, etc
- An SQL file with your SQL table structure.  
I should be able to simply run the file using MySQL's source command to create the needed SQL structure on my machine.
- All the needed HTML, JSP and Java files that are required to run your application.  
You may zip up your entire 'myweb' folder if you wish.
- A single-page paper with a brief write-up of your project. See Paper section below.
- If working with a group, all names are to be specified on the assignment.

## **Bonus1 (2%)**

Your HTML validates properly against W3 standard (<http://validator.w3.org/>)

Validation means that your HTML conforms to an appropriate web standard (there are several). You may use any common one. My personal favorite is XHTML 1.1. There are others like XHTML 1.0 with several sub versions, and a few others. Please specify in your paper if you contend for this bonus, so that I know to test your pages.

## **Paper**

A single-page paper that includes:

- A diagram of your web application.  
This should show me which page leads to which other page. The diagram should include any 'internal' elements, such as servlets, that are not visible to the end user. If i.e. you have a servlet that does internal calculations and then forwards the user to another page to show the results, that servlet should be included even though the user is never explicitly aware of it.
- A paragraph with a brief explanation or rationale behind your web application.

## **Grading**

- 80% - program
- 20% - paper
- 2% - bonus1

## **Things I will be looking for when grading**

- Functionality and ease of use of your web application.  
I will be ignoring the 'prettiness' factor. Originality of the application, however, may add you an extra point or two.
- Reading from and writing to the database. Writing includes Deleting and Modifying database records
- For Bonus, I will verify your HTML against the Validator service

Due Date: April 26<sup>th</sup>, 2010  
(subject to extension to be discussed during Tuesday's class)

## SQL Statements you may find useful

- SQL: CREATE TABLE <http://dev.mysql.com/doc/refman/5.1/en/create-table.html>
- SQL: INSERT INTO TABLE <http://dev.mysql.com/doc/refman/5.1/en/insert.html>
- SQL: UPDATE TABLE <http://dev.mysql.com/doc/refman/5.0/en/update.html>
- SQL: DELETE FROM TABLE: <http://dev.mysql.com/doc/refman/5.0/en/delete.html>
- SQL: SELECT FROM TABLE: <http://dev.mysql.com/doc/refman/5.0/en/select.html>

## Example (also useful for SQL file deliverable)

```
create table weatherservice
```

```
(
    zipcode decimal(5,0) unsigned zerofill not null default 0,
    weathercondition varchar(200) not null default ''
);
```

```
insert into weatherservice values (48101, 'cloudy yet refreshing');
```

```
insert into weatherservice values (48102, 'stormy');
```

```
insert into weatherservice values (48103, 'breezy');
```

```
+-----+-----+
| zipcode | weathercondition |
+-----+-----+
| 48101 | cloudy yet refreshing |
| 48102 | stormy |
| 48103 | breezy |
+-----+-----+
```

```
update weatherservice set weathercondition='bad' where zipcode=48102;
```

```
delete from weatherservice where zipcode=48103;
```

```
select * from weatherservice;
```

```
+-----+-----+
| zipcode | weathercondition |
+-----+-----+
| 48101 | cloudy yet refreshing |
| 48102 | bad |
+-----+-----+
```