COP4813/5819 Internet Programming
Spring 2017
Assignment 5
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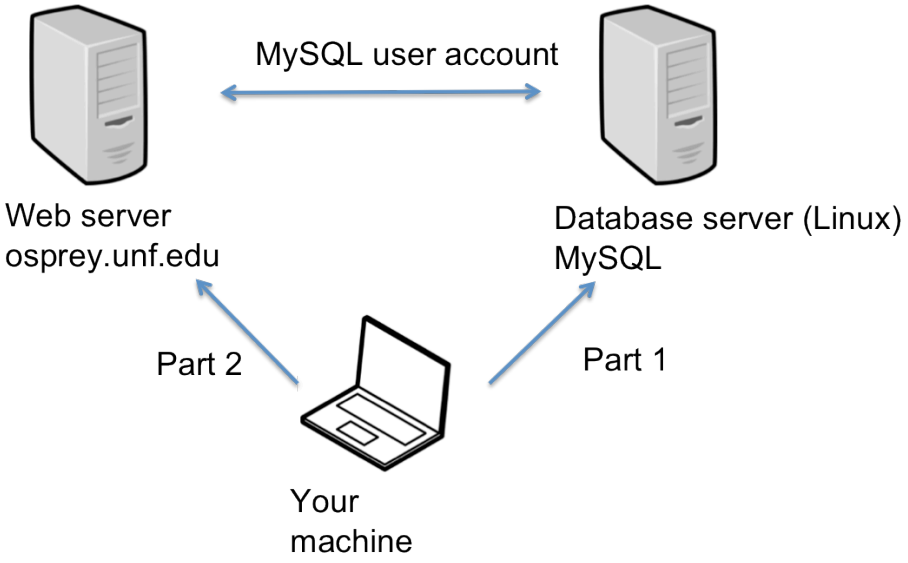
Due: April 14 (Friday), End of Day
Total points: 30

In this assignment you will create a web system using the three-tired architecture with PHP server-side scripts and MySQL databases. The following figure shows the architecture: the web server (osprey.unf.edu) running PHP scripts and a Linux-based database server running MySQL. To create the system, first you need to remote login (using SSH) to the Linux server to setup necessary accounts and databases (Part 1). Once the accounts and the database are established, you will write PHP scripts to provide a web interface for the user to interact with the database (Part 2).



Part 1. MySQL

Remote login to the Linux server

A virtual database server is created for each student for this assignment. First, log in to the server using SSH (putty if you use Windows or terminal on Mac) to log in. Your log in ID is your n-number and the password is the **last five digits of your n-number** followed by "**Spr2017#**". For example, if your n-number is n00001234, your password is 01234Spr2017#.

To remote login to the linux server, type the command in terminal (Mac) or putty (Windows)

```
ssh your_n_number@CopDataSvr.ccec.unf.edu
```

And then type in the password as mentioned above when prompted.

Once you log in, change the password to your n-number by typing the command:

```
passwd
```

To download the software putty: http://www.putty.org/

Create MySQL databases and user accounts

The MySQL server is pre-installed with a default account. To log into the MySQL shell: run

```
mysql -u your_n_number –p
```

Type in your password (xxxxxSpr2017#, where xxxxx is the last five digits in your n-number) when it prompts to you.

Next, create a database named **urls**, which consists of a table named **urltable**. The table **urltable** contains two fields. The first field, **URL**, shows an actual url; for example, http://www.unf.edu. The second field, **description**, shows a description of the url; for example, University of North Florida for http://www.unf.edu.

The following commands help you create tables using the pre-built database. First, look at the pre-built databases:

```
mysql> SHOW DATABASES;
```

Because of security, you are not allowed to create databases. Therefore, you have to use a pre-built database to build your tables. Select one of the pre-built databases displayed on the screen. For example, if a pre-built database is called using **your_n_number**:

```
mysql> USE your_n_number;
mysql> CREATE TABLE urltable (URL char(50), description char(100));
mysql> SHOW TABLES;
mysql> INSERT INTO urltable VALUES (“http://www.unf.edu”, “University of North Florida”);
mysql> SELECT * FROM urltable;
```

At this point you should see a table with two columns (URL and description) showing the data entry about UNF official website.

Part 2. Create a website that uses PHP to interact with the MySQL database. You will use the MySQL user account and the host name (CopDataSvr.ccec.unf.edu) of the virtual server to connect to the MySQL server.

Your website should provide the following functions:

1. Allow the user to insert a new entry (url and its description) to the table.
2. Update an existing entry: if the user inserts an entry with the existing url, update the description by appending the new description to the existing one.
3. Keyword search: accept a keyword from the user and create a table to show the search results (urls and descriptions, in which the keyword is contained). Display the entries in alphabetical ascending order based on the url. If the user typed * as the keyword, you should display all the entries in the table.

To test your PHP script, **you need to upload it to the web server (osprey.unf.edu)**.

Submission

Upload the files to your personal web space on osprey.unf.edu. Create an index page at the following url (xxx represent the last 3 digits of your N-number):

http://www.unf.edu/~your_n_number/ip/xxx_hw5.html

Submit the above link and your PHP scripts/codes on Canvas.