# CS4604 Prakash Spring 2014 Project 3, HTML and PHP

By Qianzhou Du, Pranav Natake April 24<sup>th</sup>, 2014

# Project 3 Outline

• 1. A nice web interface to your database. (HTML)

• 2. Connect to database, issue, and get output of the result of query. (PHP)

# Preparatory Steps

- Select one person in your project in whose directory you will create the files for the web interface.
- Create a directory called cs4604 in this person's home directory on cs4604.cs.vt.edu. You can log into this machine using your SLO id. You will be able to create/access this directory from any machine on the rlogin cluster as well.
- Make your home directory world-executable (chmod a+x ~) and the cs4604 directory world-readable (chmod a+r cs4604).
- Place all your scripts and files inside this directory.
- You can access your website at the following URL: http://cs4604.cs.vt.edu/~"selected person"/"start file name".php.

## 1. Introduction to HTML

#### 1. Basic HTML

• Basic requirements (Minimum requirements): http://courses.cs.vt.edu/~cs4604/Spring14/project/template.html

```
<title> ..... </title> <body> ..... </a> ..... </a> ..... </body> </html>
```

• Simple example <a href="http://cs4604.cs.vt.edu/~qiand12/helloworld.html">http://cs4604.cs.vt.edu/~qiand12/helloworld.html</a>

#### 1.1 How to create a hyperlink

• Create a hyperlink:

```
<a href="index.php?title='index'" title = "index"> index </a>
```

- When you click this hyperlink, you will go to "index.php", and send title = 'index' to the new website.
- And you will send title ='index' to "index.php"

#### 1.2 How to deliver the query

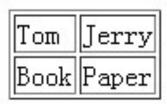
- "action" means that it will send this form's data to "form\_action.php", when you submit this form.
- "method" means how to send this form's data.
- There are some types you can choose.
- For more information, please go to http://www.w3schools.com/html/

#### 1.3 How to output the result of query in a table

How to create a table in html?

- creates a table.
- creates a row in a table.
- creates a grid in a row.
- Run the above code and get:
- Simple example:

http://cs4604.cs.vt.edu/~qiand12/table.html



## 2. Introduction to PHP

#### 2.1 Basic PHP

A simple php example<?php</li>Echo "hello world!";?>

Use "\$" to define a variable.
 \$s = "hello world";

Variable types:

```
String $s="database";
Integer $i=1;
Double $d=6.66;
Boolean $b=false
Array $arr[0] = 1; $arr[1] = 2; .....
```

#### 2.2 How to embed PHP and HTML

How to embed php into html:

```
<html>
<body><?php echo "hello world!"; ?></body>
</html>
```

echo is a print function.

How to embed html into php:

```
<html>
<body><?php
echo ' <b>hello world!</b> ';
?></body>
</html>
```

### 2.3 Loop and control statements

```
• if ... else ...
if(expression) {statement1;} else { statement2; ... }
   While
while(expression) {statement; ...}
• do ... while ...
do {statement; ...} while(expression)
• for
for(expression1; expression2; expression) {statement; ...}
```

#### 1.2 How to deliver the query **(REMINDER)**

- "action" means that it will send this form's data to "form\_action.php", when you submit this form.
- "method" means how to send this form's data.
- There are some types you can choose.
- For more information, please go to <u>http://www.w3schools.com/html/</u>

#### 2.4 How to get the value delivered by "form"

"POST" and "GET" methods:

```
First please recall the "form" in html:
<form action="form_action.php" method = "get">
<input type="text" name="Search">
.....

In "form_action.php", you can use GET method to get the value of "Search" === the input SQL query string
$temp = $_GET['Search'];
```

Also you can use the POST method in the same way:

```
$temp = $_POST['Search'];
```

#### 2.5 How to connect to database server

- Connect to postgresql: pg\_connect("host=? port=? dbname=? user=? Password=?");
- Make sure you do error/exception handling
- E.g. what happens if the connection or query fails?

For example, we can use this to connect our postgresql server:

\$dbconnect = pg\_connect("host=128.173.41.131 port=5432 dbname=your\_database user=your\_username password=your\_password") or die('fail to connect:'.pg\_last\_error());

## 2.6 How to run and get the result of query

• Run query:

```
$query="select ... from ... where ...";
$queryresult = pg_query($query) or die('query failed:'.pg_last_error());
```

• More posgresql functions in PHP:

```
– pg_fetch_array
```

Fetch a row as an array.

```
- pg_free_result($queryresult);
```

Free result memory.

```
- pg_close($dbconn);
```

Close a postgresql connection.

# 2.6 How to run and get the result of query (Contd.)

 You can check the following link to get more functions: <a href="http://us2.php.net/manual/en/ref.pgsql.php">http://us2.php.net/manual/en/ref.pgsql.php</a>

Simple example
 http://cs4604.cs.vt.edu/~qiand12/index.php

## Conclusion

- 1. How to create a simple web page in html?
- 2. How to create a hyperlink and a form in html?
- 3. Basic php information.
- 4. How to get the value delivered by the form?
- 5. How to connect database server?
- 6. How to get the result of query?
- 7. How to output the query in a table (html)?

# Something is not covered

• 1. You may create a nicer web page.

• 2. For each output of query, you need to display each column name (attribute name).

• 3. Please read the project 3 carefully, and get more details.

#### More information about HTML & PHP

 http://www.w3schools.com/html/ DEFAULT.asp

http://www.php.net/

• <a href="http://us2.php.net/manual/en/index.php">http://us2.php.net/manual/en/index.php</a>

 http://devzone.zend.com/4/php-101part-1-down-the-rabbit-hole/

- Ask TA's for help
- All of us will hold the usual office hours.
- Qianzhou's Extra Office hours for Project 3:
  - 11:00 ~ 12:30 May 2<sup>nd</sup> at McBryde 106