

# CIS4301 Notes: Frontend Design

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March 31, 2014

## 1 An example website

MADden

## 2 CISE Website

This CISE Page describes how to set up a personal website

## 3 In class demo

During class, Christian demonstrated how to set up a personal website on the CISE servers. I followed along in an ssh session while using tee to pipe stdout into a log file in hopes that I could include it here. Unfortunately, tee also captured the ansi control codes for every key press, resulting in a huge text file that was mostly unreadable. I managed to strip out the escape sequences using a selection of hapazardly thrown together regexes and probably lost some useful text in the process. What follows are the salvaged remains of my ssh log in hope that it may still be of some use:

```
Welcome to Ubuntu 12.04.4 LTS (GNU/Linux 3.2.0-51-generic x86_64)
```

```
* Documentation:  https://help.ubuntu.com/  
Authorized users and uses only.
```

```
This is a bastion server, not a general computational facility.  
Use this for small/limited jobs as needed. For more intensive  
computations/compiles, please use this to connect to appropriate  
resources inside the CISE department.
```

```
Please email consult@cise.ufl.edu with any questions or if you  
need assistance locating more appropriate computing resources.
```

```
http://cise.ufl.edu/help
```

```

Last login: Wed Mar 26 09:48:07 2014 from 10.137.42.51
thunder:3% mkdir public_html
thunder:4% echo $SHELL
/usr/local/bin/tcsh
thunder:5% echo 'this is how to set up your personal CISE webspace'
this is how to set up your personal CISE webspace
thunder:6% chmod 755 public_html/
thunder:7% cd public_html/
thunder:8% touch index.html
thunder:9% echo 'find at www.cise.ufl.edu/~my_username'
find at www.cise.ufl.edu/~my_username
thunder:10% chmod 644 index.html
thunder:11% which bash
/bin/bash
thunder:12% echo 'why is my shell tcsh???'
why is my shell tcsh???
thunder:13% mkdir cis4301sp14
thunder:14% chmod 755 cis4301sp14/
thunder:15% cd cis4301sp14/
thunder:16% touch README
thunder:17% touch hello.txt
thunder:18% vim README
thunder:20% chmod +644 README
thunder:21% pwd
/cise/homes/rcorrent/public_html/cis4301sp14
thunder:22% chmod 664 hello.txt
thunder:23% echo '664 allows group write permission'
664 allows group write permission
thunder:24% groups
stdnt
thunder:26% mv hello.txt hello.txt
echo 'hello .txt not interpreted as html ... change the extension'
hello.txt not interpreted as html ... change the extension
thunder:27% mv hello.txt hello.html
thunder:28% cat hello.html
<html>
  <head>
  </head>

  <body>
    <p>This is my hello.txt website</p>
  </body>
</html>
thunder:29% ls -l hello.html

```

```

-rw-rw-r--+ 1 rcorrent stdnt 106 Mar 26 10:06 hello.html
thunder:30% ls
hello.html  README
thunder:31% pwd
/cise/homes/rcorrent/public_html/cis4301sp14
thunder:32% 'r      echo 'lets create a  n index'
lets create an index
thunder:33% cp hello.html index.html
thunder:34% ls -lh
total 4.5K
-rw-rw-r--+ 1 rcorrent stdnt 106 Mar 26 10:06 hello.html
-rw-----+ 1 rcorrent stdnt 106 Mar 26 10:09 index.html
-rw-r--r--+ 1 rcorrent stdnt  25 Mar 26 09:57 README
thunder:35% echo 'note that permissions not preserved by cp'
note that permissions not preserved by cp
thunder:36% chmod 664 index.html
thunder:37% echo 'lets try php'
lets try php
thunder:38% cp index.html index.php
thunder:43% cat index.php
#!/usr/local/bin/php

<html>
  <head>
    <title>Our First PHP Test File</title>
  </head>
  <body>
    <?php
      print( "Hello World<br />");
    ?>
  </body>
</html>
thunder:44% cat htaccess
AddHandler cgi-script.php
DirectoryIndex index.html index.php
thunder:46% chmod 644 htaccess
thunder:47% ls -l
total 8
-rw-rw-r--+ 1 rcorrent stdnt 106 Mar 26 10:06 hello.html
-rw-r--r--+ 1 rcorrent stdnt  63 Mar 26 10:17 htaccess
-rw-rw-r--+ 1 rcorrent stdnt 106 Mar 26 10:09 index.html
-rw-----+ 1 rcorrent stdnt 198 Mar 26 10:16 index.php
-rw-r--r--+ 1 rcorrent stdnt  25 Mar 26 09:57 README
thunder:48% chmod 711 index.php
index.html  index.php

```

```

thunder:48% chmod 711 index.php
thunder:49% ls -l
total 8
-rw-rw-r--+ 1 rcorrent stdnt 106 Mar 26 10:06 hello.html
-rw-r--r--+ 1 rcorrent stdnt 63 Mar 26 10:17 htaccess
-rw-rw-r--+ 1 rcorrent stdnt 106 Mar 26 10:09 index.html
-rwx--x--x+ 1 rcorrent stdnt 198 Mar 26 10:16 index.php*
-rw-r--r--+ 1 rcorrent stdnt 25 Mar 26 09:57 README
thunder:50% cat htaccess
AddHandler cgi-script .php
DirectoryIndex index.html index.php
thunder:51% echo 'note that htaccess specifies the html index first'
note that htaccess specifies the html index first
thunder:52% echo 'this makes it the default'
this makes it the default
thunder:53%

```

### 3.1 PHP

Follow this link for a CISE page on PHP: [cise PHP help](#)

### 3.2 Permissions

How to read a permission code:

user: RWX group: RWX world: RWX Typically expressed in octal.

For example, 644 is RW for user and R for group and world.

644 = 110 100 100 = RW R R

## 4 More on PHP

### 4.1 An example website source code

MADden: queries over twitter

### 4.2 JSON

Listing 1: JSON example

```

1 {
2   "host" : "",
3   "db"   : "madlibdb",
4   "port" : "5432",
5   "pwd"  : "",
6   "user" : "john",

```

```
7  "table" : "tweets"
8  }
```

JSON types:

- Dictionary
- Atomic value
- List/Array

Listing 2: arrays in JSON

```
1  [1, 2, 3]
2  ["one", "two", "three"]
```

Listing 3: using JSON arrays in javascript

```
1  var a = [1, 2, 3];
```

#### 4.2.1 using JSON

see index.php

- name attribute is important
- html form attributes allow user to submit information and see a response.

### 4.3 looking at MADden

See function `make_db_string` in `util.php`

Also see `query4`

#### 4.3.1 useful php functions

PHP does variable substitution in double quoted strings (similar to e.g. Bash) For example:

`"the value of myvar = $myvar"`

- `json_decode` extracts information from a json file for use in php.
- `pg_connect` can be used to interface with postgres
- `error_log` useful for debugging
- `pg_query` can run a postgres query
- `pg_fetch_array_query` read query result as array