Week 8
This Week

- HTML
- Chmod
- Forms
- PHP
- mySQL
HTML

• HyperText Markup Language
• Used to format contents of web pages.
• ‘Tags’ enclose regions of page.
  – Each beginning tag has an ending tag.
  – In general, close most recently opened first.
• ‘Tags’ may have ‘attributes’.
  – Attributes are like parameters for a tag.

<tag attribute=“value”>
Stuff.
</tag>
chmod

• Used to restrict access to files and directories accessible via the internet.

• Permissions assigned by setting three octal values which correspond to permissions to ‘read’, ‘write’, or ‘execute’.

• User, Group, and World have distinct permissions.
Forms

• Allow input of different forms on a web page.
• ‘Inputs’ include:
  – Checkboxes
  – Radio buttons
  – Text boxes
  – Submit buttons
• Information from forms may be ‘submitted’ and sent to another page for use.
CSS

• CSS: Cascading Style Sheets
• Allows for easier formatting of HTML
• Specifically formats different types of elements
• May be included in separate file or in-lined
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• ‘style’ attributes allow for formatting of tag contents using CSS.
• Examples:
  align: center
  font-size: small
  color: blue
  display: block
CSS

• Can also define formatting in an external .css file which is linked in.

Format

Selector (name of tag)

{

    declarations;

}


PHP

• PHP: PHP Hypertext Preprocessor

• When accessed, dynamically generates a webpage which it then outputs to browser.

## PHP

<table>
<thead>
<tr>
<th>C</th>
<th>PHP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiled</td>
<td>Interpreted</td>
</tr>
<tr>
<td>Strongly-typed</td>
<td>Loosely-typed</td>
</tr>
</tbody>
</table>
mySQL

• SQL – Structured Query Language

• Database software which allows us to store a collection of data as ‘entries’ containing a set of distinct ‘fields’ containing values.

• Databases contains tables, which contain rows, which contain fields.
mySQL

• INSERT
  – Insert a new entry.

• DELETE
  – Remove an existing entry.

• SELECT
  – Select one or more entries.

• UPDATE
  – Update the fields of an existing entry.
WARNING: It is *always* important to ‘escape’ the contents of any string passed by the user which is to be included in a database query.

“INSERT INTO students VALUE (‘<user string>’);”

What could possibly go wrong?
HI, THIS IS YOUR SON'S SCHOOL. WE'RE HAVING SOME COMPUTER TROUBLE.

OH, DEAR - DID HE BREAK SOMETHING?

IN A WAY -

DID YOU REALLY NAME YOUR SON Robert'); DROP TABLE Students; -- ?

OH, YES. LITTLE BOBBY TABLES, WE CALL HIM.

WELL, WE'VE LOST THIS YEAR'S STUDENT RECORDS. I HOPE YOU'RE HAPPY.

AND I HOPE YOU'VE LEARNED TO SANITIZE YOUR DATABASE INPUTS.