A340 - Final Study Guide

Review Test 1 and 2
Review All Quizzes
Review All Labs
Review All Assignments

Unit 1 - Introduction
- The web, what is it? and how does it work?
- What is HTTP, HTTPS?
- What is HTML?
- What is CSS?
- What is a client-side programming? What is JavaScript?
- What is a server-side programming? What is PHP?
- What is the difference between a static and a dynamic web pages?
- Network
- Internet
- Network protocols
- IP address
- IP Packets
- What is CSS?
- What is JavaScript?
- What is PHP?

Unit 2 - HTML
- What is a DOCTYPE?
- What is DOM
- What is a HEAD element in an HTML document? What are the elements within the HEAD element?
  o Title
  o Meta
  o Base
  o Style
  o Link
  o Script

- Ability to identify what a given HTML code does.
- Ability to write HTML code.
- Difference between an ELEMENT and an ATTRIBUTE?
- Difference between a BLOCK vs. INLINE elements.
- Element within a Body element:
  o p, a, ul, li, ol, div, table, form, input, button, iframe, video, embed, etc..

Unit 3 - JavaScript
- Variable,
- Arithmetic operators,
- Assignment operator,
- Input and output, (write, prompt, etc.)
- Arrays (dynamic, static, associative), properties, methods (sort, concat, etc.)
- Loops (while, do-while, for, for-in),
- Conditions,
- Modules (Functions),
- Events and event-handling (onload, onmouseover, etc.)
- Java vs. JavaScript
- What is DOM?
- What is BOM?
- Relationship between DOM & BOM?
- Objects and Methods within BOM?
- Objects and Methods within DOM?
- Ability to identify what a given JavaScript code does.
- Ability to write JavaScript code.

**Unit 4 - CSS**

- Inline vs. vs. External Style Sheets
  - Inline
    - `<p style='font-size:20pt '> this is a test </p>`
  - Embedded
    - `<style> .... </style>`
  - External Style Sheets
    - `<link rel="stylesheet" type="text/css" href="styles.css">`
- What is a Selector?
- What is a Declaration?
- What is an ID selector?
  - `#style1 { text-align:center; }`
  - `<p id="style1"> Hello World </p>`
- What is a CLASS selector?
  - `.center { text-align:center; }
    - `<h1 class="center">Center-aligned heading</h1>`
- What is a ELEMENT selector?
  - `H1 { text-align:center; }
    - `<h1>hello world </h1>`
- Conflicting Styles
  - Font: (font-family, font, size, font-weight, font-style, color)
  - Text: (text-shadow, text-decoration, text-align, , etc.)
  - Margin
  - Padding
  - Borders and Boxes: (Rounded corners, border-radius shadow, Color, box-shadow, background-color)
  - Image (borders, opacity, transition, etc.)
  - Multiple column layout (column-count)
  - Positioning (Absolute, Relative, z-index)
  - Background
  - Box model and flow of elements
  - Pseudo-class selectors and event handling (hover, focus, first-line, active, etc.)
    - `p:hover { color:green;}`
  - overflow (visible, hidden, scroll, auto)
  - Transformation (translate, scale, rotate)

**Unit 5 - PHP**

- Server-side programming language
- What happens if a undeclared variable is referenced?
- Variables and their data-type (integer, float/double, string, Boolean)
- How do we define constants
  - **How do we concatenate strings?**
  - **How do we figure out the data-type of a variable?**
  - What is the purpose of isset(), and unset()?
  - What is the difference between print() and print_r()?
  - What is the purpose of implode() and explode()?
  - What is an associative array, how do we create one, and how do we extract its content?
- What is GET, POST, COOKIE, SESSION?
- What is the difference between GET and POST in regards to forms?
- What is the difference between stateful vs. Stateless Sessions?
- File I/O in PHP (fopen(), fclose(), file_exists(), feof(), fgets(), ftell(), fread(), file(), fwrite(), fread())
- Loops (while, for, foreach)
- Include(), require(), require_once()
- Object modeling (Encapsulation, Inheritance, polymorphism) (Classes, objects, private, public, protected, constructors, destructors, extends)
- Referencing vs. cloning an object.

**Unit 6 - MySQL**
- What is a database?
- Why use a database?
- What is a DBMS?
- What is a data model? (ERD) How is it used?
- Database terminology (table, record, field, cell, storage engine, SQL)
- MySQL (Creating a database, table, user, etc.)
- NO SQL syntax!