Unit 1 Module 0: Introduction

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CNM STEMulus Center
Web Development with PHP

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Outline

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About Me

I have been in IT for about 15 years. Highlights of my career include:

- Systems Administrator (2002 – 2004)
- MS/PhD student at Missouri University of Science & Technology (2006 – 2011)
- Java Enterprise Developer (2011 – 2013)
- Freelance Programmer (2006 – Present)
- Poker & Backgammon Player (1995 – Present)

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Anything else you'd like to know? Just ask the instructor. . .

Organization

Quote of the Day

If I plan to learn, I must learn to plan.

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Organization

Quote of the Day

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Take thorough notes throughout the class. Computer Science by its nature is a very cumulative subject and topics will depend on and relate to one another. Divide your notes into the following sections:

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Organization

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- Knowledge Base
- Lexicon
- Vitæ

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Knowledge Base

The knowledge base section will house all the technical topics presented in class. This includes but is not limited to:

- HTML Tags
- PHP Functions
- JavaScript Functions
- Code Samples

The knowledge base will build over time and will serve as a valuable reference both during the class and after graduation.

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Lexicon & Vitæ

The lexicon section will serve as a glossary for all the terms we learn in this class. As the class progresses, we will learn the vocabulary of computer science, which is important to understanding the underlying concepts and in effectively communicating with other developers.

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The vitæ section will contain a collection of people who have made important contributions to computer science and web design. Knowing these people is significant to knowing how web design and progressed and why different choices were made by these people.

Directory Organization

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Definition

scalability *is the ability of a system, network, or process to handle a growing amount of work in a capable manner or its ability to be enlarged to accommodate that growth. [1]*

Good organization fuels scalability. Lay a foundation upon which future development can commence.

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Directory Organization

Each project should contain one or more directories. Each directory should contain files that fill a similar role in the project.

Directory Name	Suggested Contents
images	Image files
lib	Supporting PHP code
etc	Configuration files
js	JavaScript files
css	CSS files

Table 1: Suggested Directory Names & Contents

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Directory Organization

Table 1 contains common directory names and what files one would expect to find in each directory. As files start to number in the hundreds and in the thousands (even the hundreds of thousands), directory organization is critical.

These directory names are common names, but by no means the only possible names. Let the project dictate the need for directory names. Above all, make sure the directory organization of the project enhances scalability.

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SCP & SSH
git

Software

Every software developer needs the proper tools in their tool kit. Among these are:

- Text Editor: program to create & edit source code
- Web Server: dæmon to interpret & serve PHP code
- File Transfer Client: program to copy files to & from the web server
- `git`: Program to synchronize source code among team members
- Graphviz: Program to create flow charts and diagrams

In this class, we will be using all these tools.

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xAMP

Definition

*The **AMP stack** refers to the **A**pache web server, **m**ySQL database server, and **P**HP being used in combination to create a complete web platform.*

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*A **platform** is a set of hardware and/or software on which software program(s) can run.*

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The *x* in the *x*AMP platform denotes which operating system the AMP stack is running. Specifically, *L* is Linux, *M* is Mac, and *W* is Windows. So, AMP running on Linux is LAMP.

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SSH is a mnemonic for **S**ecure **SH**ell. SCP is SSH's file transfer subsystem. SSH is used very commonly in real world deployments and all commands and file transfers conducted are fully encrypted & secure. To use SSH, one needs:

- Username
- Password and/or SSH key
- Server to Connect to

SSH keys, while requiring more effort to setup, are recommended over passwords because they are more secure and can be used to authenticate to multiple systems.

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git

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*A **software configuration management system** is a system that tracks and controls changes to software and facilitates collaboration among team members.*

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git

`git` is a software configuration management system.

Definition

A **software configuration management system** *is a system that tracks and controls changes to software and facilitates collaboration among team members.*

`git` will be covered in great detail later this week. For now, we will install and test `git` and sign up for GitHub.

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Works Cited

📄 Wikipedia.
Scalability.
http://en.wikipedia.org/wiki/Scalability.