**Exam 2 Review**

**Chapter 6. JavaScript: Client-Side Scripting, pp. 230-282**

* **Intro to JavaScript and Client-Side Scripting**
	+ **JavaScript**
	+ **JavaScript vs. Java applets vs. Browser plug-in vs VBScript**
	+ **ECMAScript standard**
* **HTTP request vs. AJAX (Asynchronous JavaScript and XML) asynchronous data requests**
* **JavaScript and XML HttpRequest Object**
* **JavaScript Design Principles:**
	+ **Software Layers:**
		- **Presentation layer**
		- **Business logic layer**
		- **Data layer**
	+ **JavaScript Software Layers**
		- **Presentation Layer (HTML, CSS)**
		- **Validation Layer (JavaScript)**
		- **Asynchronous Layer (JavaScript)**
		- **Framework (JavaScript, jQuery, etc)**
* **Users without JavaScript**
	+ **Web crawler**
	+ **Browser plug-in**
	+ **Text-based client**
	+ **Visually disabled client**
* **<NoScript> tag**
* **Where Does JavaScript Go?**
	+ **Inline JavaScript, Examples**
	+ **Embedded JavaScript, Examples**
	+ **External JavaScript, Examples**
	+ **Advanced Inclusion of JavaScript**
* **JavaScript Language Syntax**
	+ **Variables**
		- **Dynamically typed**
	+ **Keywords**
	+ **Operators**
		- **Assignment**
		- **Conditional**
		- **Logical**
		- **Loops**
	+ **Functions**
	+ **Arrays**
	+ **JavaScript Objects**
		- **Properties, Methods, Constructors: new**
		- **JavaScript Objects**
			* **Array object**
			* **Date object**
			* **Math object**
			* **String object**
			* **Window object**
			* **document (DOM - Document Object Model) object**
			* **Element Node object**
	+ **JavaScript Events**
		- **Events and Event Types**
			* **Mouse Events**
			* **Keyboard Events**
			* **Form Events**
			* **Frame Events**
		- **Event Listeners Event Handlers**
		- **Event objects**
	+ **Forms**
		- **Validating Forms: Empty Field Validation, Number Validation**

**Chapter 8. Web Server and Application Servers**

* **Types of Servers**
* **Enterprise Data Integration**
* **Enterprise Application Integration**
* **CGI**
* **HTTP RFC**
* **Apache Web Server Configuration**
	+ **Client and Server Error Codes**
* **PHP Date() function reset**

**Chapter 7. Web Media**

**7.5 Audio and Video**

* **Video container formats (file formats)**
* **Audio format and Support**

**Chapter 8. Intro to Server-Side Development with PHP**

* **Intro to Server-Side Development**
* **Server-Side Script Resources**
	+ **Data storage**
	+ **DBMS (database management system)**
	+ **Web service**
* **Comparison Server-Side Technologies**
	+ **ASP**
	+ **ASP.NET**
	+ **JSP**
	+ **Node,js**
	+ **Perl**
	+ **PHP**
	+ **Python**
	+ **Ruby on Rails**
* **A Web Server’s Responsibility**
	+ **Apache and Linux:**
		- **Daemon, Process**
		- **Apache Module, Handlers**
	+ **Apache and PHP**
		- **PHP as an Apache module or as a CGI library**
		- **mod\_php5 module – SAPI (Server Application Programming Interface)**
		- **Apache running modes**
			* **Multi-process (preforked)**
			* **Mult-thread (worker)**
	+ **Windows/IIS**
	+ **PHP Internals**
		- **PHP core**
		- **Extension layers**
		- **Zend Engine (VM)**
* **Installing Apache, PHP, and MySQL for Local Development**
	+ **http.conf**
	+ **localhost == 127.0.0.1**
* **Quick Tour of PHP**
	+ **PHP tags**
	+ **PHP comments**
	+ **Variables, Data types, and Constants**
	+ **Writing to Output**
		- **echo()**
		- **printf()**
	+ **Program Control**
		- **if … else**
		- **switch … case**
		- **while and do … while**
		- **for**
	+ **Include Files**
		- **Server-side include (SSI)**
		- **Include**
		- **Include\_once**
* **Functions**
	+ **Function Syntax**
	+ **Calling a Function**
	+ **Parameters: default values, by reference**
	+ **Variable scopes: function scope, global scope, super global**

**Chapter 9. PHP Arrays and Superglobals**

* **Arrays**
* **Introduction**
	+ **Data structure: vector, hash table, dictionary, list collections**
	+ **Arrays: keys and values**
* **Defining and Accessing Arrays**
* **Multidimensional Arrays**
* **Iterating through and Array**
* **Adding and Deleting Elements**
* **Array Sorting**
* **More Array Operations**
* **Superglobal Arrays**
	+ **$GLOABLS**
	+ **$\_COOKIES**
	+ **$\_ENV**
	+ **$\_FILES**
	+ **$\_GET**
	+ **$\_POST**
	+ **$\_REQUEST**
	+ **$\_SESSION**
	+ **$\_SERVER**
* **Accessing Form array data**
* **Using Query Strings in Hyperlinks**
* **Sanitizing Query Strings**
* **$\_SERVER array**
	+ **Server Information Keys**
	+ **Request Header Information keys**
* **$\_File array**
	+ **HTML Required for File Uploads**
	+ **Handling the File Upload in PHP**
	+ **Checking for Errors**
	+ **File Size Restrictions**
	+ **Limiting the Type of File Upload**
	+ **Moving the File**
* **Reading/Writing Files**
	+ **Stream Access**
	+ **In-Memory File Access**

**Chapter 10. PHP Classes and Objects**

* **Object-Oriented Overview**
* **Terminology**
	+ **Classes and Objects**
	+ **Properties (data members), Methods (behavior functions)**
	+ **Instances**
* **The UML (Unified Modeling Language)**
* **Difference between Server and Desktop Objects**
	+ **PHP objects, memory storage for running, Life time**
* **Classes and Objects in PHP**
	+ **Defining Classes**
		- **Keywords**
		- **Visibility/Accessibility: public, private, protected**
	+ **Instantiating Objects**
	+ **Properties**
	+ **Methods**
	+ **Constructors**
	+ **Static Members**
	+ **Class Constants**