

Web Scripting for Application Building

Module guide

2012/2013

Module Title: Web Scripting for Application Building

Module Code: BB2006

Level: 5

Module availability: BUMP level 5 – this module is available to students who take Information Technology for Business (ITB) at level4

Lecturer

Name	Room	Email	WWW
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The module is delivered through weekly two hour lectures and labs during Semester One.

Aims And Objectives

The way that computer applications are created, distributed and used has changed dramatically since the popularisation of the World Wide Web. The module is designed to introduce students to building Web and server-side applications that run using a combination of browser, server-side scripting and database technology.

In the lectures we will explore the basic architecture of a server side application, involving the server side language PHP. Students will learn the 3-tier approach to application layering, using presentation, application and database logic to build effective, robust and maintainable applications.

In the laboratory students will gain practical, hands-on experience of building web applications using a web server and a server-side programming language. Students will structure their work using semantic HTML, CSS and templates in PHP to emphasise the importance and advantages of using web standards.

Learning Outcomes

By the end of the module students should be able to

- Architect and implement a server side based web application
- Design and construct appropriate Web based interfaces including forms
- Write server side code to interact with users and databases appropriately
- Understand how web based applications can function effectively

Approach to teaching and learning

The course will consist of weekly lectures, tutorials and computer laboratory sessions.

Assessment

Students will be assessed by means of one piece of submitted work (40%), and one exam (60%).

The individual piece of submitted work is a logbook containing evidence of completion of the lab exercises along with the major web application students design in the second half of the semester for a small scenario involving PHP scripting and a database.

Required reading and other Resources

Because of the nature of the subject, students will have to study a variety of information sources from the web, the library and lecture notes (available from the module website which is available independently or through Studyspace).

A week by week breakdown of materials and notes will be at

<http://www.barryavery.com/blog/teaching>

Required text

Rasmus Lerdorf and Kevin Tatroe. Programming PHP. O'Reilly, second edition, 2006. ISBN 0596006810.

Additional texts

Musciano C. & Kennedy B., HTML & XHTML: The Definitive Guide, O'Reilly Media, Inc.; 6th edition, ISBN-10: 0596527322

Eric A. Meyer. Cascading Style Sheets The Definitive Guide. O'Reilly, second edition, 2004. ISBN 0-596-00525-3.

Shelley Powers. Learning JavaScript. O'Reilly, 2006. ISBN 0-596-52746-2.

David Sklar. Learning PHP 5. O'Reilly, first edition, 2004. ISBN 0596005601.

Other texts

There are a wide variety of trade and other books (books typically aimed at IS professionals, which typically don't have exercises) on building applications in PHP with databases. Many of these are in the library and are available for additional reading.

E-books

The Learning Resource Centre website has a number of ebooks available - the most relevant are available through the Safari service, which allows access to a number of O'Reilly texts electronically (many PHP and SQL books can be found there).



Teaching Programme

A complete breakdown of the taught subject areas is on the module web site under Web Scripting, from

<http://www.barryavery.com/blog/teaching>

Week 1	Server side scripting introductory concepts simple generation of XHTML from PHP
Week 2	XHTML forms and PHP. Revisiting HTTP
Week 3	Core data types and control structures
Week 4	Predefined objects arrays and functions
Week 5	Web applications development layer 1 — Presentation logic. Using functions for XHTML templating
Week 6	Layer 2 — Application logic. Deducing where business application logic should be placed
Week 7	Layer 3 — Database logic. Using mySQL with PHP
Week 8/9	Building Secure sites and authentication
Week 10	PHP class mechanism
Week 12	Revisiting applications using classes and the MVC design pattern
Week 13	Class based application development