MONASH University
Information Technology

FIT3044
Advanced website authoring

Unit Guide

Semester 1, 2010

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FIT3044 Advanced website authoring - Semester 1, 2010

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Introduction

Welcome to FIT3044 Advanced Website Authoring for semester 1, 2010. This is a third level unit within the Bachelor of Information Technology and Systems, Multimedia major - the unit is designed to continue your development of web authoring skills by addressing more advanced techniques. This unit examines the more advanced XML based techniques which are used to author/publish rich media presentations on the web.

Unit synopsis

This unit extends the website authoring concepts taught in FIT1012 by looking at more advanced techniques which are available to web site developers in publishing rich media/multimedia content. The structure of an XML document is investigated and the manner in which such a document can be converted to HTML or other formats. Synchronized Multimedia Integration Language (SMIL), a form of XML, will be investigated as a technique for authoring interactive audiovisual presentations. In addition the unit introduces Macromedia Flash remoting as a client for web services, phps multimedia capabilities and the requirements/standards for web audio/video streaming.

Learning outcomes

At the completion of this unit students will have -
A theoretical and conceptual understanding of:

- the fundamental elements of an XML documents structure and the processes involved in reading and handling such a document;
- the advantages and limitations of XML in comparison to other formats such as HTML, EDI, Flat files etc;
- the role of the XML Schema Definition Language and its relationship to Document Type Definitions (DTDs);
- the role of XML Stylesheet Language (XSL) in document publishing;
- the role of XML in rich media/multimedia presentations through the use of Synchronised Multimedia Integration Language (SMIL);
- the issues involved with audio/video streaming on the web.

Developed attitudes that enable them to:

- adopt a flexible approach towards application development by consideration of the wide range of XML approaches available;
- appreciate the importance of systematic and structured approaches to program development.

Developed the skills to:

- create an XML document and its associated Document Type Definition (DTD);
- create an XSL style sheet and use it to convert XML into HTML or other XML formats;
- use Synchronised Multimedia Integration Language (SMIL) to author interactive audiovisual presentations;
- write Macromedia Flash applications which access web services via Flash remoting;
- use a scripting (php) approach for manipulating images, creating PDFs, and creating Flash content;
- setup and configure a basic web streaming server.

Demonstrated the teamwork skills necessary to:

- work as a member of a project team.

Contact hours

2 hrs lectures/wk, 2 hrs tutorials/wk

Workload

For on campus students, the **weekly** workload commitments are:

- two hours of lectures,
- two hours of laboratory (requiring advance preparation), and
- eight hours of self directed study - this will include reading and computer based activities.

Unit relationships

Prerequisites

FIT1012

Prohibitions

CPE3002, CSE2030, GCO2811, GCO3823, MMS2802

Teaching and learning method

Teaching approach

The unit will be delivered via lectures and laboratories.

Lecture: During the lecture, your lecturer will introduce key theoretical concepts and demonstrate various approaches to web authoring tasks. The time in lectures is quite brief, please ensure you gain the best advantage from this time by:

- Prior to the lecture
    - ♦ downloading and reading the lecture notes,
- During the lecture
    - ♦ annotate a printed set of lecture notes as the lecture proceeds, and
    - ♦ **participate, question, seek clarification**
- After the lecture
    - ♦ read over you notes and make sure you understand the concepts
    - ♦ **seek help** if you are unsure

The labs consist of a set of graded exercises which allow you to put the theory presented in the lecture to work in authoring web site content. The labs will also include issues that you will need to discuss with your fellow classmates and tutors. Before the lab you should carefully read through the lab activities. The teaching staff will presume that you have completed all the posted lab tasks each week and build subsequent activities on this assumption. For this reason it is very important that you complete all the posted tasks (please note you will **not be able to complete them in the allocated 2 hours, these will be completed in your self study 8 hours**). Given the cumulative nature of the learning, it is easy to fall behind if either you do not complete the required work or fail to understand key tasks/concepts. If you are having problems with lab exercises, please ensure you speak to your tutor and gain some assistance.

Timetable information

For information on timetabling for on-campus classes please refer to MUTTS,
http://mutts.monash.edu.au/MUTTS/

Tutorial allocation

On-campus students should register for tutorials/laboratories using the Allocate+ system:
http://allocate.its.monash.edu.au/

Unit Schedule

Week	Date*	Topic	Key dates
1	01/03/10	Fundamentals of XML	
2	08/03/10	Document Type Definitions (DTDs)	
3	15/03/10	XML Namespaces	
4	22/03/10	XML Schemas	
5	29/03/10	Formatting XML for the web with CSS	

Mid semester break			
6	12/04/10	Transforming XML via eXtensible Stylesheet Language (XSL)	
7	19/04/10	XML applications: SMIL, SVG, DocBook, XHTML, WAP and SOAP	Assignment 1 Due
8	26/04/10	Rich Internet Applications (RIAs) - Flex and MXML introduction	
9	03/05/10	Flex and Actionscript	
10	10/05/10	Containers, Events and Components	
11	17/05/10	Flex and Coldfusion	
12	24/05/10	Flex and CSS	Assignment 2 Due
13	31/05/10	Revision	

*Please note that these dates may only apply to Australian campuses of Monash University. Off-shore students need to check the dates with their unit leader.

Unit Resources

Prescribed text(s) and readings

Carey, P., *New Perspectives on XML, Second Edition - Comprehensive*, 2nd Edition, Thomson - Course Technology, 2006, ISBN 1-4188-6064-6

Recommended text(s) and readings

Details available from the Unit website

Required software and/or hardware

The software required will be available in the university on-campus labs. Some items of software will be available from MUSO for student download.

The unit will make extensive use of the oXygen XML Editor:

- http://www.oxygenxml.com/

and Adobe Flex 3 available from:

- http://www.adobe.com/products/flex/

Equipment and consumables required or provided

Students may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate up to **8** hours per week for use of a computer.

Study resources

Study resources we will provide for your study are:

- Weekly detailed lecture notes outlining the learning objectives, discussion of the content, required readings and exercises;
- Weekly laboratory tasks and exercises with sample solutions provided two weeks later;
- Assignment specifications and sample solutions;
- A sample examination and suggested solution
- Access to past examination papers;
- Discussion groups;
- This Unit Guide outlining the administrative information for the unit;
- The unit web site on Moodle, where resources outlined above will be made available.

Assessment

Overview

Practical and theory Examinations (3 and 1 hours) : 60%; In-semester assessment: 40%

Faculty assessment policy

To pass a unit which includes an examination as part of the assessment a student must obtain:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 50% then a mark of no greater than 49-N will be recorded for the unit.

To be eligible to sit for the examination at the end of the semester you must attend 80% of your tutorials. If you are absent for more than two tutorials you must supply a medical certificate or other appropriate documentation otherwise you will be excluded from the examination. If you are finding problems with this requirement please ensure you speak to your chief examiner as early as possible.

To pass this unit you must obtain:

1. 40% or more in the unit's examination component
   and
2. 40% or more in the unit's **total non-examination** assessment
   and
3. an overall unit mark of 50% or more

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 50% then a mark of no greater than 49-N will be recorded for the unit.

Assignment tasks

Assignment coversheets

Assignment coversheets are available via "Student Forms" on the Faculty website:
http://www.infotech.monash.edu.au/resources/student/forms/
You MUST submit a completed coversheet with all assignments, ensuring that the plagiarism declaration section is signed.

Assignment submission and return procedures, and assessment criteria will be specified with each assignment.

- **Assignment task 1**

  Title:
  Assignment 1 Creation and Manipulation of Static XML documents
  Description:
  Weighting:
  20%
  Due date:
  Thursday 22nd April 2010

- **Assignment task 2**

  Title:
  Assignment 2 Database-linked website using Adobe FLEX
  Description:
  Weighting:
  20%
  Due date:
  Thursday 27th May 2010

Examinations

- **Examination 1**

  Weighting: 20%
  Length: 1 hour
  Type (open/closed book): Closed book
  Remarks:

  Theory examination

- **Examination 2**

  Weighting: 40%
  Length: 3 hours
  Type (open/closed book): Open book
  Remarks:

  Practical Examination

See Appendix for End of semester special consideration / deferred exams process.

Due dates and extensions

Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are not regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Students requesting an extension for any assessment during semester (eg. Assignments, tests or presentations) are required to submit a Special Consideration application form (in-semester exam/assessment task), along with original copies of supporting documentation, directly to their lecturer within two working days before the assessment submission deadline. Lecturers will provide specific

outcomes directly to students via email within 2 working days. The lecturer reserves the right to refuse late applications.

A copy of the email or other written communication of an extension must be attached to the assignment submission.

Refer to the Faculty Special consideration webpage or further details and to access application forms: http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html

Late assignment

Assignments received after the due date will be subject to a penalty of 5% per day including weekends. Assignments received later than one week (seven days) after the due date will not normally be accepted.

The only exception to this is in the case of illness or other serious cause. In any such cases, proper third party documentation (e.g. a doctor's certificate) will have to be supplied.

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Appendix

Please visit the following URL: http://www.infotech.monash.edu.au/units/appendix.html for further information about:

- Continuous improvement
- Unit evaluations
- Communication, participation and feedback
- Library access
- Monash University Studies Online (MUSO)
- Plagiarism, cheating and collusion
- Register of counselling about plagiarism
- Non-discriminatory language
- Students with disability
- End of semester special consideration / deferred exams