



MONASH University
Information Technology

FIT3060
Service oriented computing

Unit Guide

Semester 1, 2010

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

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FIT3060 Service oriented computing - Semester 1, 2010

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Introduction

Welcome to FIT3060 Service Oriented Computing for Semester 1, 2010. This 6 point unit is a 3rd year core unit in the Internet Systems Major of the Bachelor of Information Technology and Services. The unit has been designed to provide you with a broad understanding of XML and Web Services and the interoperability they provide to web applications.

Unit synopsis

This unit investigates some of the latest developments in the field of web applications. Known as Web Services, they make use of a number of standards to allow business to business (B2B) systems over the World Wide Web. Resolving these problems comes under the broad title of interoperability. A number of technologies and standards allow Web services to be employed. These include XML for description of Web services, SOAP as the protocol to send messages, WSDL to describe the operations offered by a Web Service, BPEL to co-ordinate a number of Web Services in complex synchronous and/or asynchronous interactions, and UDDI as registry to allow discovery and publication of Web Services.

Learning outcomes

At the completion of this unit students will:

- create and validate XML documents based on XML Schema;
- map organisational rules into XML Schema definition;
- be able to retrieve XML document using XSLT;
- understand the different architectures provided by different component technologies and their evolution towards service oriented computing;
- be able to create and deploy web services as an example of service oriented computing application;
- know the technologies and standards that enable web technologies including XML, SOAP, WSDL and UDDI;
- understand the issues of choreographing a number of web services into a business process
- possess the skills necessary to design and develop software components;
- be able to design and develop programs that utilise the services and facilities offered by component architectures.

Contact hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload

For on campus students, workload commitments are:

- two-hour lecture and
- two-hour tutorial
- a minimum of 2-3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations.

Unit relationships

Prerequisites

FIT1002 or CSE1202

Teaching and learning method

Teaching approach

This unit will be delivered via one - 2 hour lecture and one - 2 hour tutorial per week. Lectures may go through specific examples, give demonstrations and present information that contains theoretical concepts. In tutorials students will complete practical exercises which will aid in their understanding of the content and their ability to complete assignment work. The tutorials are particularly useful in helping students consolidate concepts and practise their problem solving skills.

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	Introduction to XML, syntax and components	
2	08/03/10	DTD and XML validation	
3	15/03/10	Schema and XML validation	
4	22/03/10	XML Namespaces, XPath	
5	29/03/10	XSLT	
Mid semester break			
6	12/04/10	XSLT	
7	19/04/10	Service oriented architecture and introduction to Web Services	Ass 1 - 23/4/2009
8	26/04/10	WSDL, SOAP, UDDI, BPEL	
9	03/05/10	Consuming Web Services (ASP.NET and PHP)	
10	10/05/10	Consuming Web Services (ASP.NET and PHP)	
11	17/05/10	Creating, deploying and publishing Web Services (ASP.NET & PHP)	
12	24/05/10	Creating, deploying and publishing Web Services (ASP.NET & PHP)	Ass 2 - 28/5/2009
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

Recommended text(s) and readings

Contained in weekly lecture notes

Required software and/or hardware

- Web browser
- FTP client
- Word processing software
- Text editor

Equipment and consumables required or provided

Students studying off-campus are required to have the minimum system configuration specified by the Faculty as a condition of accepting admission, and regular Internet access. On-campus students, and those studying at supported study locations 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 **4** hours per week for use of a computer, including time for newsgroups/discussion groups.

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 tutorial or laboratory tasks and exercises with sample solutions provided one to two weeks later;
- Assignment specification
- A sample examination
- Discussion group
- 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

Examination (3 hours): 50%; In-semester assessment: 50%

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.

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:

XML/XSLT/Schema

Description:

The creation of XSLT scripts that enable the specified XML data to be retrieved from the provided XML documents and displayed as per the assignment specification.

The creation of a Schema document which will validate the provided XML file against the specified business rules.

Weighting:

25%

Due date:

23/4/2009

Remarks:

Assignments must be submitted electronically to the FIT3060 student server

- **Assignment task 2**

Title:

Web Service

Description:

Implementation of a personalised news search application which will invoke and interact with several real-world web services.

Creation of a user manual which details the use of the application

Weighting:

25%

Due date:

28/5/2009

Remarks:

Assignments must be submitted electronically to the FIT3060 student server

Examination

- **Weighting:** 50%

Length: 3 hours

Type (open/closed book): Closed book

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

Late assignments are generally not accepted for correction, and zero marks are awarded accordingly. 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) would have to be supplied. Where a doctor's certificate is supplied, then an extension may be allowed for time specified on the doctor's certificate.

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