MONASH University
Information Technology

FIT3060
Service oriented computing

Unit Guide

Semester 1, 2011

Last updated: 01 Mar 2011

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FIT3060 Service oriented computing - Semester 1, 2011

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.

Mode of Delivery

South Africa (Day)

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

Chief Examiner

Janet Fraser

Campus Lecturer

South Africa

Gregory Gregoriou

Learning Objectives

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.

Graduate Attributes

Monash prepares its graduates to be:

1. responsible and effective global citizens who:

a. engage in an internationalised world
b. exhibit cross-cultural competence
c. demonstrate ethical values

critical and creative scholars who:

a. produce innovative solutions to problems
b. apply research skills to a range of challenges
c. communicate perceptively and effectively

Assessment Summary

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

Assessment Task	Value	Due Date
XML/XSLT/Schema	25%	15 April 2011
Web Service	25%	27 May 2011
Examination 1	50%	To be advised

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.

Feedback

Our feedback to You

Types of feedback you can expect to receive in this unit are:

- Graded assignments with comments

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through SETU, Student Evaluation of Teacher and Unit. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, and on student evaluations, see:
http://www.monash.edu.au/about/monash-directions/directions.html
http://www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this unit

If you wish to view how previous students rated this unit, please go to
https://emuapps.monash.edu.au/unitevaluations/index.jsp

Required Resources

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

Information about how to get access to these will be provided.

Unit Schedule

Week	Date*	Activities	Assessment
0	21/02/11		No formal assessment or activities are undertaken in week 0
1	28/02/11	Introduction to XML, syntax and components	
2	07/03/11	DTD and XML validation	
3	14/03/11	Schema and XML validation	
4	21/03/11	XML Namespaces, XPath	
5	28/03/11	XSLT	
6	04/04/11	XSLT	

7	11/04/11	Service oriented architecture and introduction to Web Services	Assignment 1 due 15 April 2011
8	18/04/11	WSDL, SOAP, UDDI, BPEL	
		Mid semester break	
9	02/05/11	Consuming Web Services (ASP.NET and PHP)	
10	09/05/11	Consuming Web Services (ASP.NET and PHP)	
11	16/05/11	Creating, deploying and publishing Web Services (ASP.NET & PHP)	
12	23/05/11	Creating, deploying and publishing Web Services (ASP.NET & PHP)	Assignment 2 due 27 May 2011
	30/05/11	SWOT VAC	No formal assessment is undertaken SWOT VAC

*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.

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

Assessment Tasks

Participation

- **Assessment 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%
    Criteria for assessment:

    - Creation of HTML documents from XML/XSLT documents
    - Extraction of correct data from XML via XSLT constructs
    - Appropriate use of CSS

◆ Dynamic properties of the solution (no hard-coding of values)
◆ Use of simple and complex Schema types as appropriate

Due date:
15 April 2011
Remarks:
Assignments must be submitted electronically to the FIT3060 student server

- **Assessment 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%
Criteria for assessment:

◆ Retrieve and display the appropriate data as specified by the user
◆ Ease of use and style of the solution
◆ Ease of use and clarity of user manual
◆ Usefulness of any extra functionality implemented as per discussion with lecturer

Due date:
27 May 2011
Remarks:
Assignments must be submitted electronically to the FIT3060 student server.

Examinations

- **Examination 1**

Weighting:
50%
Length:
3 hours
Type (open/closed book):
Closed book
Electronic devices allowed in the exam:
None

Assignment submission

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.

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process:
http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html.

Returning assignments

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

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:
http://policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Plagiarism
  (http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-policy.html)
- Assessment
  (http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-po
- Special Consideration
  (http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.h
- Grading Scale
  (http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html)
- Discipline: Student Policy
  (http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html)
- Academic Calendar and Semesters (http://www.monash.edu.au/students/key-dates/);
- Orientation and Transition (http://www.infotech.monash.edu.au/resources/student/orientation/);
  and
- Academic and Administrative Complaints and Grievances Policy
  (http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy.

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at www.monash.edu.au/students The Monash University Library provides a range of services and resources that enable you to save time and be more effective in your learning and research. Go to http://www.lib.monash.edu.au or the library tab in my.monash portal for more information. Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis

- Website: http://adm.monash.edu/sss/equity-diversity/disability-liaison/index.html;
- Telephone: 03 9905 5704 to book an appointment with a DLO;
- Email: dlu@monash.edu

- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus.

Other Information

Contained in weekly lecture notes.