MONASH University

FIT3060
Service oriented computing

Unit guide

Semester 1, 2009

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FIT3060 Service oriented computing - Semester 1, 2009

Unit leader :

Janet Fraser

Lecturer(s) :

Caulfield

- Janet Fraser

Tutors(s) :

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- Janet Fraser

Introduction

Welcome to FIT3060 Service Oriented Computing for Semester 1, 2009. 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

ASCED Discipline Group classification: 020103 Programming

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. Resoving 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

Knowledge and Understanding

On completion of the unit, students will:

create and validate XML documents based on XML Schema. map organisational rules into XML Schema definition. be able to retrieve and format XML documents 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 Practical Skills

On completion of this unit, students will possess the skills necessary to design and develop software components, and will be able to design and develop programs that utilize the services and facilities offered by component architectures.

Workload

Unit relationships

Prerequisites

Before attempting this unit you must have satisfactorily completed

(FIT1002 or CSE1202) or equivalent

Relationships

FIT3060 is a core unit in the Internet Systems major of the Bachelor of Information Technology and Systems. It may be taken as an elective in other programs where you have satisfied the prerequisites and course rules permit

It is a prerequisite that before attempting this unit you must have satisfactorily completed

(FIT1002 or CSE1202) or equivalent..

Continuous improvement

Monash is committed to 'Excellence in education' (Monash Directions 2025 - http://www.monash.edu.au/about/monash-directions/directions.html) and strives for the highest possible quality in teaching and learning.

To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. The University's Unit Evaluation policy (http://www.policy.monash.edu/policy-bank/academic/education/quality/unit-evaluation-policy.html) requires that every unit offered is evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to "have their say". The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

Faculties have the option of administering the Unit Evaluation survey online through the my.monash portal or in class. Lecturers will inform students of the method being used for this unit towards the end of the semester.

Student Evaluations

If you wish to view how previous students rated this unit, please go to http://www.monash.edu.au/unit-evaluation-reports/

Unit staff - contact details

Unit leader

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Teaching and learning method

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 theorectical 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 areparticluarly useful in helping student consolidate concepts and practise their problem solving skills.

Tutorial allocation

Students should register for tutorials using Allocate+

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. You will receive feedback on your work and progress in this unit. This may take the form of group feedback, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions (on line and in class) as well as more formal feedback related to assignment marks and grades. You are encouraged to draw on a variety of feedback to enhance your learning.

It is essential that you take action immediately if you realise that you have a problem that is affecting your study. Semesters are short, so we can help you best if you let us know as soon as problems arise. Regardless of whether the problem is related directly to your progress in the unit, if it is likely to interfere with your progress you should discuss it with your lecturer or a Community Service counsellor as soon as possible.

Unit Schedule

Week	Topic	Key dates
1	Introduction to XML, syntax and components	
2	DTD and XML validation	

3	Schema and XML validation	
4	XML Namespaces, XPath	
5	XSLT	
6	XSLT	
Mid semester break		
7	Service oriented architecture and introduction to Web Services	Ass 1 - 20/4/2009
8	WSDL, SOAP, UDDI, BPEL	
9	Consuming Web Services (ASP.NET and PHP)	
10	Consuming Web Services (ASP.NET and PHP)	
11	Creating, deploying and publishing Web Services (ASP.NET & PHP)	
12	Creating, deploying and publishing Web Services (ASP.NET & PHP)	Ass 2 - 29/5/2009
13	Revision	

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 MUSO, where resources outlined above will be made available.

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to http://www.lib.monash.edu.au.

The Educational Library and Media Resources (LMR) is also a very resourceful place to visit at http://www.education.monash.edu.au/library/

Monash University Studies Online (MUSO)

All unit and lecture materials are available through MUSO (Monash University Studies Online). Blackboard is the primary application used to deliver your unit resources. Some units will be piloted in Moodle. If your unit is piloted in Moodle, you will see a link from your Blackboard unit to Moodle (http://moodle.monash.edu.au) and can bookmark this link to access directly. In Moodle, from the Faculty of Information Technology category, click on the link for your unit.

You can access MUSO and Blackboard via the portal: http://my.monash.edu.au

Click on the Study and enrolment tab, then Blackboard under the MUSO learning systems.

In order for your Blackboard unit(s) to function correctly, your computer needs to be correctly configured.

For example:

- Blackboard supported browser
- Supported Java runtime environment

For more information, please visit: http://www.monash.edu.au/muso/support/students/downloadables-student.html

You can contact the MUSO Support by phone : (+61 3) 9903 1268

For further contact information including operational hours, please visit:
http://www.monash.edu.au/muso/support/students/contact.html

Further information can be obtained from the MUSO support site:
http://www.monash.edu.au/muso/support/index.html

Assessment

Unit assessment policy

The unit is assessed with two assignments and a two hour closed book examination. To pass the unit you must:

- obtain 40% for the assignments overall
- obtain 40% for the examination
- obtain 50% for the unit overall

If a student does not achieve 40% or more in the unit examination or the assignment component, then a mark of no greater then 44-N will be recorded.

Assignment tasks

- ## Assignment Task

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 : 20%

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 : 20/4/2009

- ## Assignment Task

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 : 30%

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 : 20/5/2009

Examinations

- **Examination 1**

  Weighting : 50%

  Length : 3 hours

  Type (open/closed book) : Closed book

Assignment submission

All assignments will be submitted by electronic submission to the student server accompanied by an electronic assignment cover sheet. Do not email submissions. The due date is the date by which the submission must be received/the date by which the the submission is to be submitted.

Assignment coversheets

Electronic assignment coversheets will be provided via Blackboard

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. 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 seldom regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Requests for extensions must be made to the unit leader at least two days before the due date. You will be asked to forward original medical certificates in cases of illness, and may beasked to provide other forms of documentation where necessary. A copy of the email or other written communication of an extension must be attached to the assignment submission.

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.

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at http://www.policy.monash.edu/policy-bank/academic/education/assessment/

We will aim to have assignment results made available to you within two weeks after assignment receipt.

Plagiarism, cheating and collusion

Plagiarism and cheating are regarded as very serious offences. In cases where cheating has been confirmed, students have been severely penalised, from losing all marks for an assignment, to facing disciplinary action at the Faculty level. While we would wish that all our students adhere to sound ethical conduct and honesty, I will ask you to acquaint yourself with Student Rights and Responsibilities (http://www.infotech.monash.edu.au/about/committees-groups/facboard/policies/studrights.html) and the Faculty regulations that apply to students detected cheating as these will be applied in all detected cases.

In this University, cheating means seeking to obtain an unfair advantage in any examination or any other written or practical work to be submitted or completed by a student for assessment. It includes the use, or attempted use, of any means to gain an unfair advantage for any assessable work in the unit, where the means is contrary to the instructions for such work.

When you submit an individual assessment item, such as a program, a report, an essay, assignment or other piece of work, under your name you are understood to be stating that this is your own work. If a submission is identical with, or similar to, someone else's work, an assumption of cheating may arise. If you are planning on working with another student, it is acceptable to undertake research together, and discuss problems, but it is not acceptable to jointly develop or share solutions unless this is specified by your lecturer.

Intentionally providing students with your solutions to assignments is classified as "assisting to cheat" and students who do this may be subject to disciplinary action. You should take reasonable care that your solution is not accidentally or deliberately obtained by other students. For example, do not leave copies of your work in progress on the hard drives of shared computers, and do not show your work to other students. If you believe this may have happened, please be sure to contact your lecturer as soon as possible.

Cheating also includes taking into an examination any material contrary to the regulations, including any bilingual dictionary, whether or not with the intention of using it to obtain an advantage.

Plagiarism involves the false representation of another person's ideas, or findings, as your own by either copying material or paraphrasing without citing sources. It is both professional and ethical to reference clearly the ideas and information that you have used from another writer. If the source is not identified, then you have plagiarised work of the other author. Plagiarism is a form of dishonesty that is insulting to the reader and grossly unfair to your student colleagues.

Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register. The register is to serve as a record of counselling about the nature of plagiarism, not as a record of allegations; and no provision of appeals in relation to the register is necessary or applicable.

Non-discriminatory language

The Faculty of Information Technology is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your communications and written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check for this and to ensure your work and communications

are non-discriminatory in all respects.

Students with disabilities

Students with disabilities that may disadvantage them in assessment should seek advice from one of the following before completing assessment tasks and examinations:

- Faculty of Information Technology Student Service staff, and / or
- your Unit Coordinator, or
- Disabilities Liaison Unit

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Information and forms for Special Consideration and deferred assessment applications are available at http://www.monash.edu.au/exams/special-consideration.html. Contact the Faculty's Student Services staff at your campus for further information and advice.