**FIT2029
Web programming**

Unit guide

Semester 1, 2009

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Unit leader :

Dr Raymond Smith

Lecturer(s) :

Gippsland

- Raymond Smith

South Africa

- Gregory Gregoriou

Malaysia

- Eu Gene Siew

Introduction

Welcome to FIT2029 Web Programming for semester 1, 2009. This 6 point unit is a core unit in the Bachelor of IT and Systems degree with majors in Application Development and Networks or Business Systems.

Unit synopsis

Introduction to the principles of commercial e-commerce programming tasks. The unit explores the purposes and approaches in using scripting and markup languages in relation to the client-server paradigm. The role of both server-side and client-side code are examined.

The unit will also build upon student's previous study of database systems. Students will study the use of markup and scripting programming languages to connect to databases via a network.

Learning outcomes

On completion of the unit students will:

- have an understanding of the fundamental principles and breadth of commercial, e-business and e-commerce programming tasks;
- have experience in using their programming skills in a number of different environments such as Linux, Unix or Windows, while being aware that their fundamental programming approaches remain valid;
- have their understanding of and skills in top-down code development enhanced;
- have knowledge of mark-up languages and scripting languages, and skill in creating applications using these;
- understand the client-server paradigm;
- be able to develop and code solutions to typical web-based commercial programming problems using markup and scripting languages, in a client-server paradigm;

- further develop skills in creating suitable and thorough test harnesses;
- have a sound understanding of the fundamental principles of web service strategies.
- be aware of basic security issues when developing and hosting Internet-based applications.

Workload

For on campus students, workload commitments are:

* two-hour lecture and
* two-hour tutorial (or laboratory) (requiring advance preparation)
* a minimum of 2-3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations.
* you will need to allocate up to 5 hours per week in some weeks, for use of a computer, including time for newsgroups/discussion groups.

Off-campus students generally do not attend lecture and tutorial sessions, however, you should plan to spend equivalent time working through the relevant resources and participating in discussion groups each week.

Unit relationships

Prerequisites

Before attempting this unit you must have satisfactorily completed FIT1004 Database and FIT1002 Computing Programming, or equivalents.

Relationships

FIT2029 is a core unit in the Business Systems major and the Applications Development and Networks major of the Bachelor of Information Technology and Systems (BITS).

You may not study this unit and GCO2811, CPE3002, CSE2030, MMS2802 or BUS1042 in your degree.

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/

Improvements to this unit

The section on the introduction to the Perl programming language has been removed and been replaced with an introduction to XML and AJAX. The study of these two new technologies is likely to be more important than the study of another programming language.

Unit staff - contact details

Unit leader

Dr Raymond Smith
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Lecturer(s) :

Mr Gregory Gregoriou
Dr Raymond Smith
Lecturer
Phone +61 3 990 26462
Dr Eu-Gene Siew

Additional communication information

For inquiries of a personal nature then email is the preferred contact method.

More general inquiries should be directed to the appropriate discussion forums, so the reply is available for all students.

Teaching and learning method

All students are provided with comprehensive study guides, detailing the content of the unit topic by topic. Students studying by distributed learning work through this material, independently.

Weekly lectures and laboratories are held for on-campus students. Lecture slides will be available on-line for all students.

The study guides are accompanied by on-line web pages, that provide access to tutorial tasks and solutions, assignment specifications and other supporting resources.

All students will be supported through electronic discussion forums, e-mail and electronic assignment submission. All students must have electronic access to the University's systems.

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	Study guide	Key dates
1	Introduction	1	
2	HTML, CSS and Browser Compatibility	2	
3	Client Side Programming	3	
4	Further JavaScript and Events	4	
5	Good Design	5	
6	Server Side Scripting	6	
Mid semester break			
7	Server Side Scripting using PHP	7	21/04/09 AA1
8	Session Tracking	8	
9	Database Access	9	
10	Security	10	
11	Introduction To Ajax and XML	11	19/05/09 AA2
12	Database access using ODBC	12	
13	Revision	Revision	

Unit Resources

Prescribed text(s) and readings

Chris Bates *Web Programming: Building Internet Applications*, 3rd Edition, Wiley, 2006, ISBN: 0-470-01775-9

Text books are available from the Monash University Book Shops. Availability from other suppliers cannot be assured. The Bookshop orders texts in specifically for this unit. You are advised to purchase your text book early.

Recommended text(s) and readings

David Lash *Web Wizard's Guide to PHP*, 1/e, Addison Wesley, 2003 ISBN: 0321121740

Required software and/or hardware

PHP 4.3.10
MySQL 4.0.24
PERL 5.8.4
Xitami Personal Webserver 2.4d11

(For Gippsland students, the above software will be available on GUS)

Communication, participation and feedback   4

Mozilla Firefox
Netscape Navigator 8.0
Microsoft IE

Software may be:

- downloaded from FIT2029 unit website (MUSO)
- purchased at academic price at good software retailers

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 **8** 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:

The FIT2029 web site on MUSO/BlackBoard, where lecture slides, weekly tutorial requirements, assignment specifications, sample solutions and supplementary material will be posted. This web site also contains:

- the Unit Book containing 12 Study Guides (in .pdf format).
- newsgroups / discussion forums
- this Unit Information outlining the administrative information for the unit
- sample examination paper with solutions

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

To pass this unit, 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 44% then a mark of 44-N will be recorded for the unit.

Students must attempt all assignments and the examination

Assignment tasks

- **Assignment Task**

  Title : AA1 Putting it online

  Description :

  This assignment will require printed material to be put online, the material should be re-organised into a web-friendly format applying the principles of good web design. The website will include Javascript navigation menus and some dynamic behaviour. Finally the student will write a short report explaining the design philosophy used on this project. This report should give the reader insight into the design choices you have made.
  Weighting : 15%

  Criteria for assessment :

  Your website will be marked on features such as accessibility, useability and compatibility. Markers will also reward website designs that are simple to use and present the information clearly.

  More detail of tasks and marking criteria will be in the full assignment specification available from the units MUSO website.

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>   **Due date :** 21/04/2009 AA1
- **Assignment Task**

>   **Title :** AA2 Advanced programming

>   **Description :**

>   You are to write a web-based application using HTML and PHP code that accesses database tables using SQL commands in MySQL. The application will validate authorised users maintaining a session using cookies, unique session identification number with a defined expiry time. Unauthorised users will have limited access to the information in read-only mode.

>   All user input must be validated using regular expressions and other techniques, particular attention must be given to protecting your scripts from cross-site scripting attacks.

>   **Weighting :** 25%

>   **Criteria for assessment :**

>   The assignments will be assessed with regard to the following criteria:

>   - Your scripts MUST be compatible with the system specified by your local Unit Advisor
>   - Validation of all input
>   - Simple and easy to use interface
>   - Consistency, easy navigation and good accessibility
>   - Good programming principles
>   - Successful completion of all tasks specified

>   More detail of tasks and marking criteria will be in the full specification available from the units MUSO website

>   **Due date :** 19/05/2009 AA2

Examinations

- **Examination 1**

>   **Weighting :** 60%

>   **Length :** 3 hours

>   **Type (open/closed book) :** Closed book

Assignment submission

All Gippsland student assignments will be submitted by electronic submission to **wfsubmit.its.monash.edu.au.** Malaysia and South African students will submit their assignment as instructed by their local unit advisor(s).

Do not email submissions. The due date is the date by which the submission must be received.

Assignment coversheets

Assignment coversheets should be included with each submission.

The coversheets are available from the "Student assignment coversheets" page on the faculty website.

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 lecturer at your campus at least two days before the due date. You will be asked to forward original medical certificates in cases of illness, and may be asked 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

Assignments received after the due date will be subject to a penalty of 5% for each day an assignment is late, up until the cutoff date. No assignment will be accepted after the cutoff date (usually 1 week after the due date).

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/

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.