FIT5059
Advanced programming for database applications

Unit Guide

Semester 1, 2012

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.

Last updated: 22 Feb 2012

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FIT5059 Advanced programming for database applications - Semester 1, 2012

This unit is designed for students who wish to extend their programming abilities in developing relatively large database applications. An integrated system of significant size will be developed using the current industry standard software. Topics covered include the principal aspects of database development and applications, advanced queries, customising forms and professional reporting, business graphics, importing and exporting data, internet applications, debugging and error-handling security and system documentation

Mode of Delivery

Caulfield (Day)

Contact Hours

2 hrs lectures/wk, 2 hrs laboratory/wk

Workload

Students will be expected to spend a total of 12 hours per week during semester on this unit:

- Lectures: 2 hours per week
- Tutorials/Lab Sessions: 2 hours per week per tutorial
- and up to an additional 8 hours in some weeks for completing lab and project work, private study and revision.

Unit Relationships

Prohibitions

BUS5410, BUS4410

Prerequisites

(FIT9004 or FIT9017) and (FIT9003 or FIT9019)
Knowledge of relational database principles, including SQL.

Chief Examiner

Associate Professor David Taniar

Campus Lecturer

Caulfield

A/Prof David Taniar

Tutors

Caulfield

Winy (Geng Zhao)

Jason (Kefeng Xuan)

Haidar Al-Khalidi

Academic Overview

Outcomes

At the completion of this unit students will be able to:

- create a database system for practical application utilising forms, reports and graphics;
- understand the principal aspects of setting up a complete database application system;
- write complex queries using database query language;
- experience group work in building a complex database application system;
- produce a database system of professional quality.

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): 60%; In-semester assessment: 40%

Assessment Task	Value	Due Date
Class Test	10%	Monday 23 April 2012
Assignment	30%	Friday 18 May 2012
Examination 1	60%	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:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Solutions to tutes, labs and assignments

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

Please check with your lecturer before purchasing any Required Resources. Prescribed texts are available for you to borrow in the library, and prescribed software is available in student labs.

You will need access to:

- Oracle Developer Suite (Form Builder)
- Oracle SQLPlus*

These are freely available to download from the following web addresses:

1. Oracle Database 10g Release 2 (10.2.0.4.0) Enterprise/Standard Edition
http://www.oracle.com/technetwork/database/10204-winx64-vista-win2k8-082253.html

2. Oracle Developer Suite 10g (10.1.2.0.2)
http://www.oracle.com/technology/software/products/ids/index.html

Unit Schedule

Week	Activities	Assessment
0	Before You Start, install required software (Please visit Study Guide 0 for software installation)	No formal assessment or activities are undertaken in week 0
1	Topic 1 - SQL	
2	Topic 2 - Data Block Forms	
3	Topic 2 - Data Block Forms	
4	Topic 2 - Data Block Forms	
5	Topic 3 - Basic PL/SQL Programming	
6	Topic 3 - Advanced PL/SQL Programming	
7	Topic 4 - Custom Form (Basic)	
8	Topic 4 - Custom Form (Multiple Form)	Assessment Task 1: Class Test on Monday 23 April 2012
9	Topic 4 - Custom Forms (Tab Forms)	
10	Topic 4 - Custom Forms (Stacked Forms)	
11	Topic 5 - Integrated Applications	Assessment Task 2: Assignment due Friday 18 May 2012
12	Topic 5 - Integrated Applications	
	SWOT VAC	No formal assessment is undertaken in SWOT VAC
	Examination period	LINK to Assessment Policy: http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html

*Unit Schedule details will be maintained and communicated to you via your MUSO (Blackboard or Moodle) learning system.

Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles
(http://www.infotech.monash.edu.au/resources/staff/edgov/policies/assessment-examinations/unit-assessment-hu

Assessment Tasks

Participation

- **Assessment task 1**

  Title:
  Class Test
  Description:
  Class Test
  Weighting:
  10%
  Criteria for assessment:
  1. Understanding of SQL and PL/SQL
  2. Use of data block forms and custom forms
  Due date:
  Monday 23 April 2012

- **Assessment task 2**

  Title:
  Assignment
  Description:
  Oracle Form Builder
  Weighting:
  30%
  Criteria for assessment:
  1. Completeness of each sub-system.
  2. Correctness of each the sub-system.
  3. Testing results.
  4. Technical requirements of the system specified in the assignment specification.
  Due date:
  Friday 18 May 2012

Examinations

- **Examination 1**

  Weighting:
  60%
  Length:
  3 hours
  Type (open/closed book):
  Closed book

Electronic devices allowed in the exam:
None

Assignment submission

It is a University requirement
(http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html) for
students to submit an assignment coversheet for each assessment item. Faculty Assignment
coversheets can be found at http://www.infotech.monash.edu.au/resources/student/forms/. Please check
with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the
online assignment submission, hand-in a hard copy, or use an online quiz).

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the VLE site for
this unit, which you can access via links in the my.monash portal.

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.

Other Information

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.
- Codes of Practice for Teaching and Learning
  (http://www.policy.monash.edu.au/policy-bank/academic/education/conduct/suppdocs/code-of-practice-tea

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. For Sunway see http://www.monash.edu.my/Student-services, and for South Africa see http://www.monash.ac.za/current/

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. At Sunway, visit the Library and Learning Commons at http://www.lib.monash.edu.my/. At South Africa visit http://www.lib.monash.ac.za/.

Academic support services may be available for students who have a disability or medical condition. Registration with the Disability Liaison Unit is required. Further information is available as follows:

- Website: http://monash.edu/equity-diversity/disability/index.html;
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus
- Telephone: 03 9905 5704, or contact the Student Advisor, Student Commuity Services at 03 55146018 at Sunway

Reading list

Morrison, J. and Morrison, M. (2005). Guide to Oracle 10g, Fifth edition,Cengage Learning, ISBN: 0619216298

Oracle Form Development for Database Applications, by Taniar & Lim, Publisher: Rinton Press, USA, ISBN 1-58949-055-X