FIT5059
Advanced programming for database applications

Unit Guide

Semester 2, 2010

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FIT5059 Advanced programming for database applications - Semester 2, 2010

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Introduction

Welcome to FIT5059 Advanced Programming for Business Applications. This 6 point unit is an elective to all postgraduate degree programs in the Faculty of Information Technology.

The unit has been designed to provide you with practical skills in programming for database applications using forms. It explores many aspects of databases with emphasis on form programming using a main-stream database management system.

Unit synopsis

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

Learning 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.

Contact hours

2 hrs lectures/wk, 2 hrs laboratory/wk

Workload

Workload commitments per week are:

- two-hour lecture and
- two-hour laboratory
- a minimum of 4-5 hours of personal study including programming practice.
- You will need to allocate up to 8 hours per week in some weeks to complete practical work.

Unit relationships

Prerequisites

For MAIT students: FIT9019 and FIT9030 and either FIT9004 or FIT9017
For all other students: FIT9003 and either FIT9004 or FIT9017
Knowledge of relational database principles, including SQL.

Prohibitions

BUS5410, BUS4410

Teaching and learning method

Teaching approach

The unit will be delivered via lectures and laboratories.

Lecture: During the lecture, your lecturer will introduce key theoretical concepts and demonstrate various approaches to database tasks.

Laboratory: During the lab, a set of exercises which allow you to practise database form programming will be given.

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	19/07/10	Topic 1 - SQL	
2	26/07/10	Topic 2 - Data Block Forms	
3	02/08/10	Topic 2 - Data Block Forms	
4	09/08/10	Topic 2 - Data Block Forms	
5	16/08/10	Topic 3 - Basic PL/SQL Programming	
6	23/08/10	Topic 3 - Advanced PL/SQL Programming	
7	30/08/10	Topic 4 - Custom Form (Basic)	Assignment one due on Wednesday 25 August 2010
8	06/09/10	Topic 4 - Custom Form (Multiple Form)	
9	13/09/10	Topic 4 - Custom Forms (Tab Forms)	
10	20/09/10	Topic 4 - Custom Forms (Stacked Forms)	
		Mid semester break	
11	04/10/10	Topic 5 - Integrated Applications	
12	11/10/10	Topic 5 - Integrated Applications	Assignment two due on Wednesday 29 September 2010
13	18/10/10	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

Oracle Form Development for Database Applications, by Taniar & Lim, Publisher: Rinton Press, USA, ISBN 1-58949-055-X. The book is available from the library.

Recommended text(s) and readings

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

Required software and/or hardware

You will need access to:

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

On-campus students may use this software which is installed in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide.

Equipment and consumables required or provided

On-campus students 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 4-5 hours per week for use of a computer.

Study resources

Study resources we will provide for your study are:

- Weekly detailed lecture notes;
- Weekly tutorial or laboratory tasks and exercises with sample solutions provided two weeks later;
- Assignment specifications;
- A sample examination;
- This Unit Guide outlining the administrative information for the unit;
- The unit web site on MUSO/Blackboard, where resources outlined above will be made available.

Assessment

Overview

Examination (3 hours): 60%; In-semester assessment: 40%

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.

The unit is assessed with Assignment one (10%), Assignment two (30%), and a two-hour closed book examination (60%). In addition to meeting the requirements of the Faculty assessment policy detailed above, you must attempt the assignment, the class test, and the examination to pass 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 submission and preparation requirements will be detailed in each assignment specification. 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.

- **Assignment task 1**

  Title:
  > Assignment 1
  Description:
  > The basic of PL/SQL language
  Weighting:
  > 10%
  Criteria for assessment:
  > 1. Syntax of all commands
  > 2. Meeting the problem specification
  > 3. Testing results
  Due date:

Wednesday 25 August 2010

- **Assignment task 2**

  Title:
  Assignment 2
  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:
  Wednesday 29 September 2010

Examination

-
  Weighting:
  60%
  Length:
  3 hours
  Type (open/closed book):
  Closed book
  Electronic devices allowed in the exam:
  None

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

Assignments received after the due date will be subject to a penalty of 10% per day, including weekends. Assignments received later than one week (7 days) after the due date will not normally be accepted.

Return dates

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

Feedback

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

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