



MONASH University

FIT5151
Object-oriented business application development

Unit guide

Semester 1, 2009

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FIT5151 Object-oriented business application development - Semester 1, 2009

Unit leader :

Grace Rumantir

Lecturer(s) :

Caulfield

- Grace Rumantir

Gippsland

- Madhu Chetty

Introduction

Welcome to FIT5151 IT in Organizations for semester 1, 2009. This 6 point unit is one of the four units in the Business Application Development Professional Track of the Masters in Business Information Systems degree programs in the Faculty of IT. The unit has been designed to help you acquire the fundamental skills in software developments in the object-oriented environment for business applications. Java, as the most popular programming language to-date, will be used to meet this goal.

Unit synopsis

ASCED Code 020399 Information Systems not elsewhere classified

Recap of basic programming concepts. Introduction to object-oriented concepts; objects, classes, methods, comparison with procedural languages. Conditions, variables, arithmetic operations, arithmetic precedence. Inheritance, polymorphism, abstraction, class and object diagrams, object creation, method calling and iteration. Unit testing, regression testing, integration testing, system testing. String handling. Coupling, cohesion, refactoring. Abstract methods, multiple inheritance, interfaces. Commercial application examples, GUI and database applications. Revision.

Learning outcomes

At the completion of this unit, students will:

- Understand and appreciate basic software engineering principles.
- Understand the concepts underpinning the object oriented programming model.
- Be practically conversant with the design, development and testing of object oriented applications.

Workload

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 FIT9003 and FIT9004 or IMS9001 and IMS9003, or equivalent.

Relationships

FIT5151 is a core unit in the Business Application Development Professional Track of the Masters in Business Information Systems degree programs in the Faculty of IT.

Before attempting this unit you must have satisfactorily completed FIT9003 and FIT9004 or IMS9001 and IMS9003, or equivalent.

You may not study this unit and CSE9000 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.adm.monash.edu.au/cheq/evaluations/unit-evaluations/>

Unit staff - contact details

Unit leader

Dr Grace Rumantir
Fax +61 3 8622 8999

Contact hours : Wednesday 2-4pm

Lecturer(s) :

Dr Madhu Chetty

Senior Lecturer

Phone +61 3 990 27148

Dr Grace Rumantir

Fax +61 3 8622 8999

Contact hours : Wednesday 2-4pm

Teaching and learning method

The teaching and learning in the unit is structured in the traditional manner around lectures and laboratory-based workshops. Most of the lecture and tutorial material is strongly supported by the prescribed text for the unit, so it is very important that you get a copy of the text. Each week there is reading set from the text. You will find the unit isn't too difficult if you study consistently through the semester, and keep up with the reading and exercises.

Your learning is also supported by some additional resources on the MUSO-based web site. You will find a forum - which will be actively monitored by staff - that you can use to ask questions or follow up on any issues you have.

Off-Campus students will not be attending any lectures or tutorials. However, they will have access to the lecture slides and tutorials for each week. They will also be provided with additional resources to direct and lead the students through the learning for each week. As and when required, additional handouts or information notes may be provided to the DE students during the semester.

Tutorial allocation

On-campus students should register for workshops/studios using Allocate+.

Please note that workshops/studios begin in week 1.

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	References/Readings	Key dates
1	Introduction to FIT5151 and Java Application Development	Murach's Java SE 6 Chapters 1 and 2	

2	Java Application Development: Java classes and working with data	Murach's Java SE 6 Chapters 2 and 3	
3	Java Application Development: control statements and input data validations	Murach's Java SE 6 Chapters 4 and 5	
4	Object-oriented programming with Java: classes	Murach's Java SE 6 Chapter 6	
5	Object-oriented programming with Java: inheritance	Murach's Java SE 6 Chapter 7	
6	Object-oriented programming with Java: interfaces and closely related classes	Murach's Java SE 6 Chapters 8 and 9	
Mid semester break			
7	Java essential data constructs: arrays, collections and generics	Murach's Java SE 6 Chapters 10 and 11	Lab-based mid-semester test (Caulfield Campus)/Assignment 1 due (Gippsland Campus)
8	Java essential data constructs: dates and strings	Murach's Java SE 6 Chapter 12	
9	Java essential runtime mechanisms: exceptions	Murach's Java SE 6 Chapter 13	
10	GUI Programming with Java: Swing, controls and layout managers	Murach's Java SE 6 Chapters 15 and 16	
11	GUI Programming with Java- Event Handling	Murach's Java SE 6 Chapter 17	
12	Data access programming with Java: text files	Murach's Java SE 6 Chapter 19	Assignment 2 due (Caulfield and Gippsland Campuses)
13	Revision and Exam Preparation		

Unit Resources

Prescribed text(s) and readings

Joel Murach and Andrea Steelman, Murach's Java SE 6, Mike Murach & Associates, Inc., California, 2007. ISBN-13: 978-1-890774-42-4 or ISBN-10: 1-890774-42-1.

The unit closely follows the structure and contents of this prescribed textbook. It is a must have textbook for the unit as you are to use it for some tutorial exercises and examinable elaborations of the topics covered in the lectures.

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

Online books:

- Sun Microsystems, *The Java™ Tutorials*, <http://java.sun.com/docs/books/tutorial/> Downloadable: <http://java.sun.com/docs/books/tutorial/information/download.html>

- Bruce Eckel, *Thinking in Java*, 3th edition, Prentice Hall, 2005. Downloadable:
<http://mindview.net/Books/TIJ4>

Textbooks:

- Harvey Deitel and Paul Deitel, *Java How to Program*, 7th edition, Prentice Hall, 2007
- Lewis J., DePasquale P., and Chase J., *JAVA Foundations.*, Pearson Education, 2008, ISBN 0-321-48678-1
- Malik D.S., *Java Programming - From Analysis to Design.*, Thomson Learning 2006, ISBN 0619216085
- Robertson LA, *Simple Program Design*, 5th ed., Thomson/Nelson, 2007, ISBN 017010704-3
- Sharon Zakhor, et al., *The Java Tutorial: A Short on the Basics*, 4th edition, Sun Microsystems, 2008

Required software and/or hardware

You will need access to:

- Java SE 6 (download from www.sun.com)
- TextPad(download from www.textpad.com)
- Firefox or Internet Explorer

DE students should have access to the following ntegrated Development Environments :

Jcreator - jcreator LE v4.0 is a powerful IDE (Integrated Development Environment) for Java and is strongly recommended. It can be downloaded from the Web Site:

<http://www.jcreator.com/>

You should download the freeware version. You have no need for the fuller facilities provided in JcreatorPro, and would have to pay for it as well.

If you wish, you may use other IDEs such as BlueJ, Eclipse but support through newsgroup will not be provided for using IDEs other than JCreator.

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 **n** 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:

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 specifications and sample solutions;

- A sample examination and suggested solution
- Discussion groups;
- 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

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 44% then a mark of 44-N will be recorded for the unit.

Assignment tasks

- **Assignment Task**

Title : Assignment 1 for Gippsland Campus students only

Description :

This assignment requires you to demonstrate your understanding of basic software development in the object-oriented environment. The emphasis is on basic object-oriented paradigm and basic programming constructs.

Weighting : 20%

Criteria for assessment :

Due date : Wednesday, 22 April 2009, 17.00pm (Week 7)

- **Assignment Task**

Title : Lab-based Mid-semester Test for Caulfield Campus students only

Description :

This open book test for on-campus students will replace the traditional assignment 1. It will be conducted in the tutorial sessions the students are allocated in. The test will cover basic software development in the object-oriented environment. The emphasis is on basic object-oriented paradigm and basic programming constructs.

Weighting : 20%

Criteria for assessment :

Due date : Week 7 tutorial sessions

- **Assignment Task**

Title : Assignment 2 for all students

Description :

This assignment requires you to demonstrate your skill in developing a complete Java based business application.

Weighting : 20%

Criteria for assessment :

Due date : Sunday, 31 May 2009 11.55pm (Week 12)

Examinations

• Examination 1

Weighting : 60%

Length : 3 hours

Type (open/closed book) : Closed book

Assignment submission

All assignments will be submitted by electronic submission to MUSO by the submission date.

Assignment coversheets

Electronic coversheets are to be submitted with your assignment. These can be obtained from the Assignments page of the MUSO unit web site.

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.

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

If you believe that your assignment will be delayed because of circumstances beyond your control such as illness you should apply for an extension before the due date. Medical certificates or certification supporting your application may be required. Assignments submitted after the due date may incur a penalty for lateness. An assignment submitted more than seven days after the due date may be given a score of zero. If you anticipate being late then discuss the situation with your unit lecturer as early as possible; your unit lecturer will decide how many marks you will be penalised for each day your assignment is late, and whether or not any extension is warranted.

Assignments received after the due date will normally be subject to a penalty of 5% per day, including weekends. Assignments received later than one week (seven days) after the due date will not normally be accepted. In some

cases, this period may be shorter if there is a need to release sample solutions.

This policy is strict because comments or guidance will be given on assignments as they are returned, and sample solutions may also be published and distributed, after assignment marking or with the returned assignment.

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 the University Plagiarism policy and procedure (<http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html>) which applies to students detected plagiarising.

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.