MONASH University
Information Technology

FIT2081
Mobile application development

Unit Guide

Semester 1, 2013

Last updated: 04 Mar 2013

Table of Contents

FIT2081 Mobile application development - Semester 1, 2013

This unit introduces the Java programming language and object-oriented application development in the context of Android application development for smartphones and tablets. The approach is strictly application driven. Students will learn Java language syntax and semantics and object oriented design and coding techniques by analysing a sequence of carefully graded, finished applications. Students will also design and build their own applications.

Mode of Delivery

- Clayton (Day)
- South Africa (Day)

Contact Hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload requirements

Workload commitments per week 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.

Unit Relationships

Prerequisites

FIT1040 or FIT1002 or equivalent

Chief Examiner

Mr Stephen Huxford

Campus Lecturer

Clayton

Stephen Huxford

Consultation hours: To be advised

South Africa

Gregory Gregoriou

Tutors

Clayton

Matthew Browne

Consultation hours: tba lecture 1

Hongli Song

Consultation hours: tba lecture 1

Academic Overview

Learning Outcomes

At the completion of this unit students will have:A knowledge and understanding of:

- core Java concepts through examples of their use in mobile applications;
- core Java syntax through examples of its use in mobile applications;
- core XML concepts and syntax;
- object-oriented design and programming techniques;
- how to write clean, maintainable, error free code;
- best practices for the development platform;
- a real-life Integrated Development Environment (IDE) for mobile application development;
- the mobile application space, its most popular platforms, players and marketplaces and their differences, advantages and disadvantages;
- how the knowledge and understanding already itemised above transfers to application development beyond the mobile space.

Developed the skills to:

- create, test and debug non-trivial, working mobile applications that are maintainable and use the best practices of the development platform;
- upload these to an appropriate marketplace.

Unit Schedule

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0
1	Unit Admin + Introduction to Android + First Application (A Quick Look)	no tutorial
2	Java - Basic + Java - Advanced (inheritance, interfaces, polymorphism, downcasting, threads, collections, anonymous inner classes, listeners...)	tute worth 4% (top 10 tutes count)
3	Hello World + Android Basics and Conventions (including XML)	tute worth 4% (top 10 tutes count)
4	App - Layouts and Views	tute worth 4% (top 10 tutes count)
5	App - Persistent data, Intents, adding GUI components dynamically, Dialogs	tute worth 4% (top 10 tutes count)
6	App - Assets, Menus, Simple animation, Logging with LogCat	tute worth 4% (top 10 tutes count)
7	App - Game, Custom views, Touch/Gestures, Sounds, Threads	tute worth 4% (top 10 tutes count)
8	App - Week 7 App continued	tute worth 4% (top 10 tutes count)
9	App - Game, More touch and animation	tute worth 4% (top 10 tutes count)
10	App - Drawing, SensorManager, Custom dialogs, Multi-touch	tute worth 4% (top 10 tutes count)
11	App - Location services	tute worth 4% (top 10 tutes count)
12	Revision and Exam Preparation	tute worth 4% (top 10 tutes count)
	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 learning system.

Assessment Summary

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

Assessment Task	Value	Due Date
11 Laboratory Assessments	Each of 10 laboratories will be worth 4 marks for a total of 40% of your final mark for the unit	Lab work for the week will be marked in that weeks lab
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.

Assessment Requirements

Assessment Policy

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

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at
http://lib.monash.edu/tutorials/citing/

Assessment Tasks

Participation

- **Assessment task 1**

Title:
11 Laboratory Assessments
Description:
During each lab session students will be required to complete specified coding tasks. This work will be marked in the same laboratory session.

Each laboratory is worth 4% of the final mark. The best 10 of the 11 laboratory marks will constitute the 40% non-exam mark for each student.
Weighting:
Each of 10 laboratories will be worth 4 marks for a total of 40% of your final mark for the unit
Criteria for assessment:
Students will be awarded marks for completing coding tasks according to the principles and styles enumerated in lectures. It is important to understand working code will NOT attract full marks in its own right. Students will be questioned on their code. Marks will only be given for code the student can clearly describe and syntactically and semantically interpret to the satisfaction of the marking tutor.
Due date:
Lab work for the week will be marked in that weeks lab

Examinations

- **Examination 1**

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

Learning resources

Monash Library Unit Reading List
http://readinglists.lib.monash.edu/index.html

Feedback to you

Types of feedback you can expect to receive in this unit are:

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

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.

Resubmission of assignments

Lab work for each week is marked in the Lab for that same week.

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 learning system for this unit, which you can access via links in the my.monash portal.

Required Resources

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

The labs will contain all required resources.

To save the VM and your work you will require at least 16Gb (stick or hard disk)

The VM available in the labs can be used on your own computer.

Alternatively you can set up your own development environment. For this you will require the Java JDK + Eclipse + Android SDK + ADT plug-in.

Prescribed text(s)

Limited copies of prescribed texts are available for you to borrow in the library.

P. Deitel et al. (2013). *Android How to Program*. (1st Edition) Pearson (ISBN: 0-13-299054-7).

Recommended Resources

The following website contains relevant and useful information:

http://developer.android.com

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: www.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 in Coursework Programs; 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.ht
- 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/dates/
- Orientation and Transition; http://intranet.monash.edu.au/infotech/resources/students/orientation/
- Academic and Administrative Complaints and Grievances Policy; http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy.h
- Code of Practice for Teaching and Learning; http://www.policy.monash.edu.au/policy-bank/academic/education/conduct/suppdocs/code-of-practice-teac

Graduate Attributes Policy

http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.ht

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 http://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/.

Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to 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/.

Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

Website: http://www.monash.edu/equity-diversity/disability/index.htmlTelephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Commuity Services at 03 55146018 at SunwayEmail: dlu@monash.eduDrop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus

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 the Student Evaluation of Teaching and Units (SETU) survey. 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, see:

www.monash.edu.au/about/monash-directions and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

This is the initial delivery 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