MONASH University
Information Technology

FIT4039
Android and iOS development

Unit Guide

Semester 1, 2013

Last updated: 13 Mar 2013

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FIT4039 Android and iOS development - Semester 1, 2013

This unit focuses on the design, construction and deployment of mobile applications, with particular focus on Android and iOS platforms. Areas such as mobile data management and networking, MVC design patterns, and mobile GUI design considerations will be explored. The unit will emphasise hands-on, practical experience with actual devices and emulators. Research topics and ideas will also be covered for potential postgraduate students.

Mode of Delivery

Caulfield (Day)

Contact Hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload requirements

Students are expected to spend an average of 12 hours per week on this subject. The breakdown of time is the following:

- 2 hours per week: Topic material coverage (lecture attendance for on-campus students).
- 2 hours per week: Peer group involvement (tutorials or labs for on-campus students).
- 8 hours per week: Private study to review topic materials, explore supplementary subject resources and complete practical work and assignments.

Unit Relationships

Prohibitions

CSE3211, FIT3027

Chief Examiner

Ms Janet Fraser

Campus Lecturer

Caulfield

Matthew Kairys

Consultation hours: Email for appointment

Elliott Wilson

Consultation hours: Email for appointment

Tutors

Caulfield

Matthew Kairys

Consultation hours: Email for appointment.

Elliott Wilson

Consultation hours: Email for appointment.

Academic Overview

Learning Outcomes

At the completion of this unit students will

- recall the history of mobile platforms and the development of software for those platforms;
- describe the MVC design pattern and explain the importance of this design pattern in mobile applications development;
- critically analyse and distinguish between the design considerations for mobile application interface development and traditional interfaces;
- analyse and implement the use of graphic and audio components in the development of mobile applications;
- investigate, design, construct and publish applications for mobile platforms with particular focus on Android and iOS.

Unit Schedule

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0
1	Introduction to Middleware and Revision	
2	MVC Architecture and Mobile Interfaces	
3	Mobile Data Management	
4	Touch Input and Sensors	
5	Web Networking	Assignment 1 due (online)
6	Location & Maps	
7	Audio and Visual Processing	
8	Mobile HTML5 Applications	
9	Application Publishing	
10	Advanced Concepts 1	
11	Advanced Concepts 2	
12	Revision	Assignment 2 due (online)
	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
Assignment 1 - Event Management Application	15%	Week 5 - Friday
Assignment 2 - Advanced Event Mananagement Application	25%	Week 12 - Friday
Examination 1	60%	To be advised

Teaching Approach

- **Lecture and tutorials or problem classes**
  The aim of the lectures is to introduce one or more concepts in a way, and at a pace, that is adequate for students to learn, not to provide students with everything there is to know about those concepts. In this sense, the lecture notes provide a first step towards learning those concepts, a first step that will be complemented by tutes and/or pracs, consultation hours and personal reading and working time.

- **Laboratory-based classes**
  The aim of the prac is to increase the knowledge of students on a particular area covered by the associated unit. In pracs this is achieved by each student (or group of students) practicing on their own the concepts already learned previously.

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:
    Assignment 1 - Event Management Application
    Description:
    Students will create a basic event management application on both Android and iOS
    platforms to demonstrate core concepts in mobile application design. The application
    should demonstrate creating, editing and deleting events in a usable interface. This
    assignment will be extended upon in Assignment 2 to address advanced concepts.
    Weighting:
    15%
    Criteria for assessment:

    - ⬥ This is an individual assignment and is to be entirely your own work.
    - ⬥ The assignment will be marked against criteria of correctness and clarity.
    - ⬥ Further detailed assessment criteria will be available with the assignment
      specification.

    Due date:
    Week 5 - Friday

- **Assessment task 2**

    Title:
    Assignment 2 - Advanced Event Mananagement Application
    Description:
    Students will extend the event management application designed for Assignment 1 to
    apply advanced concepts in mobile application design. Students are able to select either
    Android or iOS platforms they wish to specialise in. Students must select three options
    from a list of basic functionality and two options from a list of advanced functionality listed
    in the assignment specification. Students will be expected to undertake individual
    research into advanced functionality in mobile applications.
    Weighting:
    25%
    Criteria for assessment:

    - ⬥ This is an individual assignment and is to be entirely your own work.
    - ⬥ The assignment will be marked against criteria of correctness and clarity.

♦Further detailed assessment criteria will be available with the assignment specification.

Due date:
Week 12 - Friday

Examinations

- **Examination 1**

Weighting:
60%
Length:
3 hours
Type (open/closed book):
Closed book
Electronic devices allowed in the exam:
None
Remarks:
Postgraduate students will be presented with an additional case study compared to the undergraduate offering of the unit.

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
- Graded assignments with comments
- Interviews

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.

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.

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- Android Development Tools / Eclipse with Android 4.2 SDK (Windows / Mac / Linux)
- Xcode 4.6 or later (Mac)

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

The unit has been redeveloped to have a much greater focus on Android and iOS in both theory and practical assessments.

If you wish to view how previous students rated this unit, please go to https://emuapps.monash.edu.au/unitevaluations/index.jsp

Other

Online references will be advised throughout the semester.