Mobile Applications (Winter 2023) Course Outline

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Course Information

- **Course Number:** COMP 2601A
- **Term:** Winter 2023
- **Title:** Mobile Applications
- **Institution:** Carleton University, School of Computer Science
- **Instructor:** Anil Somayaji (https://people.scs.carleton.ca/~soma) (anilsomayaji at cunet.carleton.ca): online by appointment

- **Teaching Assistants:**
  - Amir Aghasharif (amiraghasharif at cmail.carleton.ca): TBD
- **Class:** Wed. and Fri. 14:35-16:25 (Jan. 11 to Apr. 12) via Zoom (see Brightspace for link)
- **Course Website**: https://homeostasis.scs.carleton.ca/wiki/index.php/Mobile_Applications_(Winter_2023)

Official Course Description

Development of applications for mobile environments taking advantage of gesture-based input and using location and presence services. Topics include introduction to low-level network services and mobile platforms, description of architectural patterns, principles of mobile development and interaction styles for network service usage.

Includes: Experiential Learning Activity

Prerequisite(s): COMP 1601

Learning Outcomes

Through this course you will learn to create more advanced Android applications, employing gestures, concurrency, networking, and various system resources. We will also learn how Android applications are secured using digital signatures and permissions. By the end of this course you will have all the tools needed to create featureful Kotlin-based Android applications that are ready to be published in an app store.

Grading

The marking scheme for this course are:

- 10% for class & online participation
- 20% for tutorials
- 20% for progress reports, biweekly
- 50% project
  - 10% proposal
  - 10% presentation/demo
  - 30% report

I also calculate grades using alternative marking schemes at the end of the semester, assigning the highest grade for each student from any of the marking schemes. Thus your final grade may be higher than might be suggested by strict following of the above scheme.

Communication and Lectures

The course website page listed above is the canonical source of information on this course. Please refer to it

for updates. When significant changes are made to this document it will be either announced in lecture and/or posted in the course discussion forum.

Assignments should be submitted via Brightspace (https://brightspace.carleton.ca), and all your grades will appear there. Course discussions will be on Microsoft Teams (https://teams.microsoft.com). You should have received a code that will let you join the right team via Brightspace when you log in using your MyCarletonOne credentials.

Class will take place via Zoom. Connection information will be posted to Brightspace and Teams.

Participation

The class participation grade is based on interactions during class and on Teams, such as questions asked and answered. You do not need to participate in every class to get full marks for this; the grade is based on the quality and quantity of your interactions.

Progress reports

Throughout this course you will be working on an Android application as a term project. You should turn in progress reports at least every two weeks (and ideally every week) that describes your progress and the challenges you faced. Note that some of your work may be dead ends; you should still report these in your progress reports because it will show how you've been spending your time and how you've been learning Android and related technologies.

Term Project

Your grade in this course will be primarily based on developing an application (game or other) in Android. You'll need to propose what you plan to do, report on your progress, give an oral presentation on what you did, and document your work in a final report.

While you may collaborate with others on what you build, your submissions should be independent and should document what you did. You may discuss work done jointly or by others, but that work should be clearly delineated. You will be graded on the basis of what you accomplished, not what your collaborators did.

Collaboration

Collaboration on all work is allowed. Collaboration, however, should be clearly acknowledged. You will be graded on the work you did, not the work of others you collaborate with.

Course Notes/Multimedia

Video from lecture portion of class will be available via Brightspace (through the class Zoom portal) within a day after lectures are delivered. The class wiki will contain code and notes given in class.

Required Textbooks

There is no required textbook. Instead, we will make use of a number of online resources.

Course Software

In this course we will be using Google's Android Studio (https://developer.android.com/studio) (version 2022.1.1) for development. Any platform that can support Android Studio will be sufficient for completing the work for this course.

While we will discuss how to deploy apps to devices, you do not need a device Android to complete this course (simulators will be sufficient).

Undergraduate Academic Advisor

The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP; or by email at scs.ug.advisor@cunet.carleton.ca. The undergraduate advisors can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisors will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and Writing Tutorial Services.

University Policies & Resources

For information about Carleton's academic year, including registration and withdrawal dates, see Carleton's The Academic Year (https://calendar.carleton.ca/academicyear/).

Pregnancy, Religious, or other Obligation

For pregnancy, religious, or other equity-related obligations please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit Equity Services (https://carleton.ca/womensstudies/resources-and-links/equity-services/).

Academic Accommodations for Students with Disabilities

Academic Accommodations for Students with Disabilities If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. For more details, visit the Paul Menton Centre website (http://carleton.ca/pmc).

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit Sexual Assault Support Services (https://carleton.ca/sexual-violence-support).

Accommodation for Student Activities

Accommodation for Student Activities. Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see the policy (https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf).

Student Academic Integrity Policy

Student Academic Integrity Policy. Every student should be familiar with the Carleton University student academic integrity policy. A student found in violation of academic integrity standards may be awarded penalties which range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. Examples of punishable offences include: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found here (https://carleton.ca/registrar/academic-integrity/).

Plagiarism

As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offences will be reviewed by the office of the Dean of Science. Standard pentaly guidelines can be found here (https://science.carleton.ca/academic-integrity/).

Unauthorized Co-operation or Collaboration

Senate policy states that "to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis".

Please see above for the specific collaboration policy for this course.

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