

ICT376 Mobile Applications Development

Assignment 2/Project (worth 35%)

Final Submission Due: Will be displayed in LMS

Description:

Assignment 2 is a self-initiated group project. Students need to form groups of 2 to 4 (ideally 3), discuss within the group ideas of an Android Mobile App, which they need to implement and demonstrate by the end of the study period. You can consult with your tutor at different stages of the development (brainstorming, design and implementation) to make sure that you are on the right track.

Below is the timeline with the various milestones:

Task	Deadline	Note
Form groups (2-4 students)	End of Week 2	If you can't find a group, let your tutor know by the end of Session 1. Your Tutor will then assign you to a group
Project description and team charter (see details below)	First day of Week 3	You must submit the project description and team charter via LMS. Make sure you discuss your project with your tutor during the first 4 weeks prior to the submission.
Demonstrate progress to your tutor	Around week 10	This is optional but highly recommended so that you can get early feedback prior to the final submission
Final project submission	Last week	See submission details below
Presentation and demo of the software	Last week	See details below.

Murdoch Internal and External students are required to submit a copy into LMS in the Assignment/Project submission area.

- All the team members must submit.
- Once marking is completed, feedback will be uploaded to LMS and / or emailed to students if necessary.

What do you need to submit?

Group Activity

- Group Declaration Sheet - each student in the group should write down her/his overall contribution to the project and well as the percentage of her/his contribution. The form should be signed by all the group members. A template is provided (GroupDeclarationSheet.doc)
- Individual accounting – this is an inventory of all artifacts created as part of the project. It should also list all work done during the course of the project and the name of the group member who did it. A template is provided (Individual accounting.xls)
- Documentation of the project (must be in .pdf format) – (a) A summary describing the project, (b) Design including the class diagram, and (3) instructions on how to use the software. (4) Sample input-output screenshots to demonstrate all major operations asked. You may want to add other information you think are important,
- The program source code of the project that compiles under AndroidStudio

Individual submission

- Group activity (as described above)
- Self and Peer Evaluation form: each student is required to submit this form. In this form, the assesses her/himself as well as her / his peers in the group. A template of the form is provided (SelfAndPeerAssessment.doc).

How to submit

- zip up the entire folder. Make sure that you have included all needed files. Do not include temporary files or files not relevant to the assignment.
- Name the zip file with the unit code, Assignment number, your name, student number:
ICT376_Asg2_JoBlogs_12345678.zip

If required, you must demonstrate (in person) the capability of your program. If you are asked to do this, you will need to arrange for it to be demonstrated. The project will not be marked without this demonstration taking place.

Late submissions will incur up to **10% penalty** for each day's delay unless a prior extension (due to accident, illness, etc) is obtained (via email) – see study guide. Please do not submit late. Talk (or email for externals) to your tutor and unit coordinator first during class when you have to demonstrate progress on the project if you are encountering problems.

Project Topic

Self-selected project (written entirely for Android mobile devices) approved by your tutor. Students work in groups of up to 4 people. Depiction of harm or injury to any human or animal is not permitted. You need to also show the storyboard(s) for the project.

- Your project must be approved by your tutor.
- Minimum requirements of the project is described below (see section Marking guide).
- You cannot reuse work from other units in this unit.
- When working in groups, accounting for individual work must be done. In particular, you need to keep an inventory of your individual work. This includes what media you have created, what coding you have done. Accounting for coding needs to include the following:

File name	Function name	Lines of code	Comment lines	Purpose ¹ of function	Used/called by filename:functionName

The actual code must show comments relating to purpose of the code, authorship and modification times.

Working as a group: The table above is provided in a spreadsheet (*Individual accounting.xls*). There will be a separate declaration sheet (*GroupDeclarationSheet.rtf*) which you sign showing how percentage of the work was done by you.

For group work, there is a separate “Self and peer assessment form” (*SelfAndPeerAssesment.rtf*) that you should fill in and submit. This is done individually.

Marking guide:

To be eligible for a P grade (minimum requirements), the project must

- Be an approved project implemented in Android Studio for Android mobile devices.
- Have a user interface with at least two Activities (please refer to the lecture notes of the meaning of Activity)
- Use Fragments
- Have Interactivity, i.e. users can interact with the application via a user interface (UI)
- Have a database implemented using SQLite
- Model at least one feature specific to mobile devices. This includes but not limited to location features, maps, cameras, sensors, and so on.
- Implement and document an Automated UI testing plan.
- Written documentation for both the design and the implementation.
- Create a promotional video highlighting the interesting aspects of your program.
- Internal students must present the project (and show the application running) in the last lab session. Each group will have approximately 15mins presentation (10 mins for the presentation which also includes the demo of the app + 5mins for questions).

You may want to exceed the minimum criteria for higher grades.

Keep things small enough so that you can “polish” it and everything you submit is working well. If you are unsure, discuss your ideas with your tutor and/or unit coordinator.

Do not add new features in the last week.

Once the minimum requirements have been met, the project will be marked using the following marks breakdown:

Description	Marks
Overall appeal and polish	15
Automated UI testing and test plan	15
Usability of the interface	15
Features specific to mobile apps	15
Coding	25

¹ Taken from the comments in the code.

Documentation + presentation	15
Total	100

You must provide a version, which will compile on Android Studio.

The version you provide, must compile and run as provided. If any tinkering to cater for missing/misplaced files is needed to get it to build, a **25% penalty** will be applied. The penalty should really be higher but I have decided not to apply a larger penalty. Consider what it means when you, as a software developer deliver a solution to your client and when the client tries to run your program, it would not run because something is missing. Telling the client that the program ran fine on your computer is probably not going to make the client happy.

For group work, there is a **25% penalty** for not providing the accounting for individual work or not providing the completed and signed group declaration sheet.

Notes:

- Higher grades are obtained with more detailed modelling (object behaviour, visuals – graphics, well written and tested code) and a polished product.

Check List²:

- Ask if unsure of anything.
- Do not get too ambitions. Keep the project small enough so that it can be finished by the end of the study period. Discuss with your tutor.
- Project meets the minimum criteria and is submitted as indicated at the top.
- Breakdown (for group work) sheet is completed. (*GroupDeclarationSheet.rtf*)
- Group work: Individual accounting sheet is completed can be submitted with the rest of the project. (*Individual accounting.xls*)
- Self and Peer assessment sheet is completed and submitted individually. (*SelfAndPeerAssesment.rtf*)
- Resubmit an updated version of the team charter. A version was submitted in LMS during the semester.

Plagiarism and misconduct

You will be only marked on the work that you have created yourself. This means that you have designed and implemented the solution yourself.

If you use any other pieces of codes from the Internet or any other sources, make sure you cite it appropriately in your documentation.

If unsure

- ask your tutor, lecturer or unit coordinator. There is no penalty for asking – it is appreciated. Academic staff are here to assist and guide you.
- Cite appropriately whatever you take from other sources.

² A number of these sheets are used for group work.

What to include in the Project Description and Team Charter (due date: As specified in LMS)

Project description

Submit a report of two pages maximum, which describes your project. The report should include

- (1) Title of the project
- (2) Your team number
- (3) The names, emails, and student IDs of the team members.
- (4) A paragraph that describes the application you want to develop.
- (5) A description and sketch of the user interface(s).
- (6) A description of the interactions that are going to be implemented
- (7) What database are you going to implement.
- (8) The additional features, specific to mobile devices, that you would like to implement.

Please read carefully the minimal requirements for the project which are available on LMS (in Group Project area).

Team Charter

Prepare and submit the team charter. As a minimum, the team charter would have:

1. Names of team members and contact details.
2. How the team members will communicate with each other while working on the project (skype, face-to-face, etc.)
3. Expectation of each team member.
4. Constraints on each team member (work days and times, other units, family, etc.).
5. Conflict resolution procedure - detailed process as to how team members would resolve disputes or team conflicts. Note that Disagreements are healthy. Innovations arise when different points of view are taken into account. Disagreements become unhealthy when the team cannot move forward. So pre-arranged procedures are needed to move forward and make progress.

Individual marks for the project will be based on contribution. The project will have its own mark based on its own merit. The individual marks will be allocated based on the fraction of the load completed by the individual. So, if a team member completed their work load, they will get the full project mark. If the team member did less than their fair load, the team member's mark will be reduced by that amount. No one gets higher than the project mark. The document that will determine the individual's mark is the last page of the unit outline. This is the group declaration sheet.

There would be penalties applied to the final mark for not providing the signed Team Charter, group declaration sheet, Individual accounting spreadsheet, and the self and peer assessment.

Frequently Asked Questions

The most important thing you can do if you are unsure is to ask. There are no penalties for asking, only rewards at the end.

Q: I was wondering whether each member of the group has to submit a .zip file with the complete assignment, the only difference being the self and peer assessment.

A: No, only one person submits the zip and all the documents except the SelfAndPeerAssesment file which is submitted individually in each person's area in LMS.

Q: Also would like to confirm that late penalties will not apply until after the weekend.

A: I don't count weekends and public holidays, so penalties wouldn't apply until after the weekend. So submitting on Monday is one day late.

Q: Do I need to implement an Android Project or an iOS project?

A: Since the big part of the unit is about Android, you need to implement an Android project. This will help you practice very well what we see in the class, which in turn is beneficial for the exam.

Q: Do I need to implement a cross platform app?

A: No. The app should be written entirely using Android.