UCCD3223 Mobile Application Development

Group Assignment

# Topic

Smartphones have transformed the way we live in the past 10-15 years. Not least thanks to the variety of mobile applications, amongst other key enabling technologies, that can truly improve our productivity, and allowing us to conveniently have access to information 24/7, on the go. Artificial Intelligence (AI) is the latest technological development that is capturing people’s imagination at the moment. It is capable of adding much sophistication to the previous generation of applications. For example, OpenAI’s ChatGPT, Google’s Gemini etc, allow sophisticated chatbot services to be developed and customised that further improve the quality of responses from previous chatbots. Hence with this development comes opportunities for innovation, as AI platforms can increasingly be integrated to help spawn new types of mobile applications. Not only that, existing mobile applications may also need to be tweaked and updated to remain current.

With that in mind, the task for you in this group assignment is to propose and design a mobile application (for any platform, using any programming language) for a target audience of your choice. Your application can be for utility, education, entertainment, lifestyle or other purposes. Treat it as an opportunity to bring out the creative side of you, and come up with an idea or project, to be pitched to potential private investors, government officials or whoever you think can help progress your idea to the next stage or to fruition. However, it needs to be current, and different from other mobile applications available in the market in whatever small or niche way! Remember that as students from ICT discipline, you can put things together quickly via software application development, with the help of existing system components and services available at your fingertips. It is entirely feasible to develop an impressive prototype in the form of mobile application as proof of concept!

Creativity and novelty of this group assignment will be taken into considerations. Even if the application is not entirely novel, just make sure that it at least is a useful one! Bear in mind that the motivation behind developing an application can be manifold. Not everyone can come up with ground-breaking idea that is impactful or transformative. Some try to improve on existing applications because they believe they can do things better. Some are motivated by rewards or recognition from developing a successful application suitable for the mass market which can be lucrative. But whatever it is, ultimately the application needs to be purposeful. Application need not be a huge success to justify its value. If your application can get some people to use it, and continue to keep using it, it means that your application is accepted by those users. It may not appeal to everyone, but most things around do not appeal to everyone anyway. Some just appeal to people more than others. The key is to suitably position your application in the market, however niche that is.

The minimum requirements for your app are:

1. Includes a splash screen with animations when launching into your app.
2. Stores, updates AND retrieves data from storage on mobile device.
3. Connects to AT LEAST an external end point for services, e.g. web service via REST API or dedicated SDK.

Additional information:

You should aim for the application to be publishable on its own. So please stay away from e-commerce, e.g. retail, food ordering etc, kind of application, which requires a business entity to be associated to it before it makes sense to have it published. Also avoid the likes of fitness applications (for seamless experience they are often tied to wearable devices from manufacturers), and expenses or personal financial management apps (as there are many design and templates around that can lead to your work being discounted as lack of originality).

**Assessment:**

Your group is expected to achieve the bare minimum requirements as listed above for this assignment, otherwise your assignment can only at most be graded a C. Your group is welcome to add additional functionalities and/or features, as long as they work and are meaningful. Extra marks will be given to groups that have their app submitted or published on Google Play Store and/or Huawei AppGallery.

**Deliverables:**

This assignment has two deliverables:

1. A written proposal for your group’s idea on the mobile application to develop.
2. A working mobile application that can demonstrate your idea and concept.

**Submission Rules:**

1. Submitted report must use the respective cover page as provided
2. Submit a soft copy via Google Form before the submission date and time
3. After the stated deadline it is strictly regarded as LATE SUBMISSION
4. 10 marks will be deducted for Late Submission every 24 hours after the submission deadline

**Group Size:** 4 persons

Note: Plagiarism is strictly prohibited. Penalty will be imposed on those who plagiarise

**Part 1:**

Register your proposed idea, together with group details, in this spreadsheet:

<https://docs.google.com/spreadsheets/d/1oYYKPXOzVmUEsMXB3B14Pd-VOajVthCW8hvOhqDr6so/edit?usp=sharing>

Write a simple proposal to introduce the idea and concept of your proposed mobile application. The report should ideally also indicate how the application would achieve the minimum requirements. In addition, include research on applications in the market that might be similar to the one you are proposing.

The report must be within 4-10 pages, any pages falling outside of the range will NOT be assessed.

**Marking scheme:**

1. Creativity/novelty/usefulness of concept (40%)
2. Completeness of idea (30%)
3. Overall design – mainly UI (20%)
4. Neat documentation layout (10%)

**Total Marks:** 100% (contributes 10% to final)

**Due Date:** Week 5 Thursday (13 March 2025) before 5:00 PM

**Part 2:**

Complete the proposed application. Write a short report to document the developed application, including features or functionalities that you did not manage to implement in time. Team members are advised to check in individual contributions of source code in this Group Assignment to GitHub. Lastly, please provide sample screenshots of your application in the report.

Keep the main report under 10 pages, with relevant source code of your application to be attached as Appendix at the end of the report.

**Marking scheme:**

1. Program completeness with implemented functionalities (30%)
2. Actual design and creativity (10%)
3. Potential for civil or commercial use (5%)
4. Tidiness of source code (5%)
5. *\**Documentation – with clear labels of the roles of each member, and/or which section (including source code, with version control using GitHub) is contributed by which member (20%)
6. *\**Presentation: up to 10 minutes to group present and demonstrate your mobile application (15%). During Q&A you will also be assessed individually on your technical contributions to this group assignment, through your understanding of the design and implementation of the developed application (15%)

*\*marks to be given based on each individual*

[Extra marks for application submitted/published]

**Total Marks:** 100% (contributes 20% to final)

**Due Date:** Week 12 Tuesday (29 April 2025) before 5:00 PM

**Presentation Date:** Week 13 (during Practical and/or Lecture session)

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**Faculty of Information and Communication Technology**



**UCCD3223 Mobile Applications Development**

**(February 2025 Trimester)**

**Group Assignment 1**

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| **Name** | **Student ID** | **Course** | **Practical Group** | **Group ID** | **Group Name** | **Tutor** |
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| **Marking scheme** | **Marks** | **Remarks** |
| Creativity/novelty of concept | **X 4** |  |
| Completeness of idea | **X 3** |  |
| Overall design | **X 2** |  |
| Neat documentation layout | **X 1** |  |
| **TOTAL** | **/100** |  |

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**Group Assignment 2**

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| --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Student ID** | **Course** | **Practical Group** | **Group ID** | **Group Name** | **Total** |
|  |  |  |  |  |  | **/100** |
|  |  |  |  |  |  | **/100** |
|  |  |  |  |  |  | **/100** |
|  |  |  |  |  |  | **/100** |

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| --- | --- | --- |
| **Marking scheme** | **Marks** | **Remarks** |
| Program completeness & functionality | **X 3** |  |
| Actual design and creativity | **X 1** |  |
| Potential for civil or commercial use | **X 0.5** |  |
| Tidiness of source code | **X 0.5** |  |
| **SUB-TOTAL** | **/50** |  |

**Individual marking scheme for Documentation, Presentation and Q&A**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Documentation** | **Presentation** | **Q&A** | **Sub-Total** |
|  | **x 2** | **x 1.5** | **x 1.5** | **/50** |
|  | **x 2** | **x 1.5** | **x 1.5** | **/50** |
|  | **x 2** | **x 1.5** | **x 1.5** | **/50** |
|  | **x 2** | **x 1.5** | **x 1.5** | **/50** |