# Department of Computing
# Hong Kong Polytechnic University

## Comp 4342 Mobile Computing

## Term Project

## Due Time: 23:59 pm, November 22, 2022

**What to do?**

In this assignment, you are required to do a group project. Students need to freely form groups of 2-5 each. Within a group, each student is expected to play certain role and is responsible of certain parts of the assignment. The following is the specification of the assignment and how it will be assessed.

Design and implement a mobile computing application using Android platform or any other mobile platforms. You can decide your own applications. The following is just a list of examples:

- Mobile access to Internet information and services – for examples: accessing healthcare information (information about diseases, hospitals, etc); booking airline tickets and hotel rooms; finding transportation information, etc.
- Mobile business – for examples: employers using mobile device to access company's emails, job schedules, and meeting minutes; downloading customers' information (e.g., patient's record), updating the information on devices and then later synchronizing it with the servers, etc.
- Mobile shopping – for examples, searching for products in an e-shop, obtaining good list, and making a purchase.
- Mobile social networks – for examples, using mobile devices to chat with friends and share photos, etc.

Please see appendix a list of projects by students of previous years.

Your project should have BOTH *client side* and *server side* programming. At the client side, you need to develop an application that provides

- the user interface,
- the client-side application logic,
- the access to mobile device's storage for information saving and retrieving.

At the server side, you need to develop a program for

- interacting with the mobile clients,
- executing the application logic,
- managing the application database.

You are expected to demonstrate the functions of your application on a real mobile device, if you only run your application on the Android Emulator, you will get partial credits for the project demonstration.

The above are the basic requirements. You can add more features, such as mobility management, location based services, context-awareness, and security mechanism, etc.

**What to submit?**

You need to submit the following documents before the due. Late submission will result the marks to be deducted 20% per day.

1. Project outline
   - Form a group with 2 to 5 members for the project and register on the Blackboard system;
   - Prepare a project outline, including the group member information, the project title and the project abstract. Please use the attached template for the project outline;
   - Register all the group members on the Blackboard system and submit the project outline to the Blackboard before 23:59pm, Oct 4, 2022 (Week 6).

2. Project report
   - The report provides the detailed design of the mobile application:
     - The system structure, the components of the system and their functionalities, class diagrams, database tables, programming languages and tools used, testing strategies and results, and user manual;
     - It should also include a section describing the role each member played in the group and a peer review on each member's contribution (in percentage) to the project. Note that team members may receive separate grades.
   - The softcopy of the project report together with the source code and installation guide for deployment should be submitted to the Blackboard system before 23:59pm, Nov 22, 2022 (Week 13).

**What to demonstrate?**

Each group will present and demonstrate the project at the end of the semester. The demonstration shall include:

- Presentation of the project overview
- Demonstration of the project
  - No runtime error
  - Successfully execute the application's functionalities and ease of use
- The Q&A section

The time slot will be arranged for each group to present and demonstrate the project at the end of the semester.

**How to assess your project?**

Regarding grading criteria, your work will be graded according to the following criteria:

1. Project outline (5 marks)
2. Project functionality and implementation (50 marks)
   - Application design
     - Reasonable application logic
     - Simple or sophisticated functions
     - Thin client or smart client architecture
     - Client side design, e.g., GUI design, local storage, etc
     - Server side design, e.g., server-client interaction, database/files, etc
     - Others (mobility support, location-based, security, etc)
   - All source codes need to be successfully compiled and have no runtime error
3. Project report (25 marks)
   - The report provides the detailed design of the mobile application
   - A package of source code and installation guide for deployment
4. Project demonstration (20 marks)
   - Present the project overview clearly
   - Execute the application with no runtime error
   - Successfully demonstrate the application's functionalities and ease of use on a real mobile device
   - Manage the Q&A section smoothly

# Comp4342 Mobile Computing

## Project Outline

| **Group Member Information** | |
|---|---|
| **Name** | **Student ID** |
| | |
| | |
| | |
| | |
| **Project Title:** | |
| **Project Abstract:** | |

# Comp4342 Mobile Computing

## Term Project Marking Sheet

| **Group No:** | | |
|---|---|---|
| **Members and contributions:** | | |
| **Name** | **Student ID** | **Contributions** |
| | | |
| | | |
| | | |
| | | |

| **Check List:** | |
|---|---|
| • Project outline (5 marks) | |
| • Project functionality and implementation (50 marks):<br>- Reasonable application logic<br>- Functionalities<br>- Software architecture<br>- Client side design<br>- Server side design<br>- Others (mobility support, location-based, security, etc) | |
| • Project report (25 marks):<br>- Description of the application logic and functionalities<br>- Project details<br>- User manual<br>- A package of source code and installation guide<br>- Both hardcopy and softcopy of the report | |
| • Project demonstration (20 marks):<br>- Presentation of the project overview<br>- Execution of the program without any runtime error<br>- Demonstration of the application's functionalities<br>- Q&A | |
| Total (/100) | |

**Appendix: Past projects**

| Project Title |
|---|
| Mobile access to internet information and services |
| Mobile ticket booking system |
| Mobile games |
| Mobile news reader |
| Mobile book shopping |
| Mobile on-line survey |
| Mobile music portal |
| Mobile shopping |
| Mobile personal Internet banking |
| Mobile car park booking |
| Mobile food hunter system |
| ePolyU library on mobile phone |
| Mobile vehicle rental system |
| Finding transportation information system using mobile devices |
| Mobile hotel room reservation system |
| Mobile instant messaging system |
| Mobile surveyor |
| Mobile auction |
| Mobile health care system |
| Mobile lottery |
| Mobile document managing system |
| Mobile coupon collection system |
| Mobile kalaok system |