

- ELC3522 English for Technical Writing
- Assignment 1
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AirB - Project Proposal

AirB Inc.

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Executive Summary

AirB aims at introducing a brand new dining paradigm through providing a food-sharing platform for communities. Offered on Android, iOS and website, AirB is convenient for people to seek for home-made food almost anytime and anywhere. The cutting-edge technologies will ensure the smooth performance, and the clean interface will guarantee superb user experiences. Comprehensive and detailed business plan has been proposed herein and will be strictly followed.

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1 Introduction

Resource sharing has been a popular operational model as the Internet technologies advance. It not only reduces the waste of idle resources but also provides more options for users in their daily lives. For example, Uber employs the vehicle-sharing model to match drivers with riders so that the empty seats in vehicles can be utilized when people drive vehicles. At the same time, riders can also enjoy riding services not limited to taxis and buses. Airbnb also matches households with guests in a similar manner. It comes to our attention that such model has not emerged in the dining industry, and we hereby propose implementing a dish-sharing platform - AirB - to match home chefs with guests to achieve similar outcomes.

We conducted a survey collecting the common difficulties that people face when seeking for dining options. It shows that tenants living alone do not often cook due to the high time cost and the potential food waste, even though they are able to cook unique dishes that are comparably delicious to those offered at restaurants. In addition, residents may also find local restaurants monotonous and wish to try new dishes. AirB resolves the previous two problems simultaneously and can also offer perfect opportunities for socialization and culture exchanges. To be specific, AirB will provide a platform for households cooking meals to post their menus online to attract both local residents and travellers to visit them. Local residents may also utilize our platform to find meals not offered at restaurants.

AirB will be user-friendly and safe. It allows users to search nearby dinner table and make a booking in just a few clicks. All detailed description and user comments are listed out to provide users with guaranteed superb meal quality. Food safety will be ensured, and strict policies will be implemented as reinforcements. All registering chefs and users will go through a screening process to protect the users of AirB from possible threats.

2 Goals and Objectives

To make AirB a useful application that is convenient for sharing and seeking food, we will strive to accomplish the following goals and objectives.

Goal 1: Provide accessible ways for home chefs to share meals to potential guests online

- Develop interfaces on mobile app and website for publishing available dishes
- Design and implement a *computer vision* algorithm that can automatically identify nutrition and meal category to save time for publishing dishes
- Provide reference recipes of popular dishes to home chefs on mobile app and website

Goal 2: Construct interfaces for diners to find meals and enjoy them

- Develop a search engine available on mobile app and website for diners to search dishes by location or category
- Build an AI-based *recommendation system* to provide nearby personalized dishes suggestions for diners
- Support online payment via authentic third-party tools
- Provide a rating system to let the diners rate the home chefs
- Connect most-used social media platforms for sharing high-quality dishes

3 Product Overview

AirB is a platform facilitating food sharing. With this platform, you can find available home-made dishes nearby at any time in your neighbourhood without worrying about the expensive meals at restaurants. If you enjoy cooking, it will be a convenient place for you to upload your pictures and attract your friends. Once there, you can share, edit, and comment on the dishes on your preference.

With AirB, you can:

- Share your food pictures, descriptions, prices, and available times etc.,
- Search nearby home chefs, and dishes,
- Participate in cooking contests and local ranking,
- Receive personalized recommendations for local food while travelling,
- Share your newly invented recipes or techniques,
- Propose a gathering by sending invitations,
- Get directions and deliveries (via other apps), and
- Pay using online payment tools.

4 Specifications

AirB will be available on three platforms:

- An iOS mobile application,
- An Android mobile application, and
- A website.

User experiences and features will be consistent across three platforms. The functions include meals searching and exploring, payment and rating, recipe sharing and local ranking. They are depicted in the following user behaviour flow diagram. Users can connect to their social media accounts to share status with their friends.

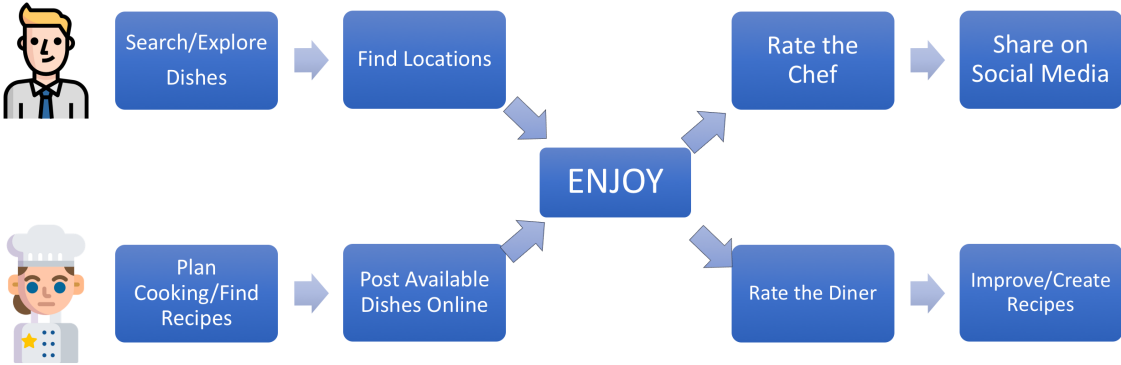


Figure 1: The user behaviour flow diagram of AirB.

5 Implementation

We will conduct marketing studies throughout the development of this project. After that, software development and promotions will be performed in parallel. We elicit the details of these processes below.

5.1 Marketing Studies

The marketing studies target at the potential users of AirB: the diners and the chefs. We will conduct interviews with pedestrians in Hong Kong to understand their specific expectations for AirB starting from April 2, 2018. If AirB is successful in Hong Kong, we will start conducting marketing studies further in China, Southeastern Asia, Europe and North America.

5.2 Software Development

Developing AirB undergoes three main phases. In the first phase, a prototype with core functionalities will be implemented and tested internally for feedback. The prototype is expected to be finished within the first two months of the project launch day. We will refine the algorithms and system hierarchy for efficiency and effectiveness, based on the feedback from our technical personals.

In the second phase, incorporating all the suggestions received in the first phase, we will enrich the functionalities of our system to meet additional user requirements, such as the user interface and the interaction mechanism. This phase aims to implement a fully functional software that can be directly deployed on our high-performance servers for the initial release. It is also critical in this phase to adjust our initial user requirements according to the findings of the marketing studies. Maintainability of the software must be ensured. Tasks for the second phase shall be completed within the first eight months of the project launch day.

In the third phase, our team will focus on resolving errors reported after the deployment, which is expected to last indefinitely. Minor adjustments to the user interface and the interaction mechanism will be conducted. Significant refinements on the underlying software architecture or core algorithm implementation shall be intensively discussed before execution.

5.3 Marketing

Online marketing will commence within two weeks before the project release day, scheduled on June 1, 2019. It includes promotion on social media and posting advertisements on major billboards in areas with heavy traffic such as the Cross Harbour Tunnel. AirB Inc. has close business ties with Facebook and Google, and we have signed a contract on our promotion plans.

6 Roadmap

The roadmap of the AirB development is presented in Table 1. Our project starts in April 2018. The whole development process contains three main phases. Before project launch, marketing research will be conducted. During the development process, we will adopt waterfall development model in software engineering. After AirB releases, the project enters maintenance stage and meanwhile our marketing team will carry out promotion activities. The primary development and promotion cycle of this project is expected to complete by the end of 2019.

Stage	Action	Deliverables	Ending Time	Person in Charge
Before Project Launch				
1	Interview with HK pedestrians	Marketing Studies Report	Jun. 2018	Oliver
2	Further studies in greater areas	Regional Studies Report	Dec. 2018	Oliver
Develop Process				
3	Develop first prototype	A prototype with core functionalities	Nov. 2018	Jerry & Derek
4	Initial release	A fully functional software on our server	May. 2019	Jerry & Derek
5	Maintanance	Updated versions	N/A	Jerry & Derek
Marketing				
6	Advertisement	Contract with business partners	Dec. 2019	Andy
7	Local Gourmet Festivals	Activities and social media deliverables	Dec. 2019	Andy

Table 1: Project Roadmap

7 Risk Management

7.1 Delay of Software Development

Many situations may cause the delay of software development, such as the absence of key personnel, underestimated project scope, and the changes in the product specification. Well defining the project scope and requirements at the early stage is critical to the project's success. A complete and systematic development plan allows the software team to have better performance, so that fewer problems will occur and a lower chance of project delay can be achieved. Multiple project managers are needed to ensure the availability of the key staff member and minimize the impact on the project.

7.2 Similar Apps are Launched in the Market

Applications similar to AirB might be launched in the market. Their arrival will affect the profit and number of users of AirB. To release the product as soon as possible and catch more attention from the potential users, AirB will be developed using an evolutionary development model which accelerates the development. The initial release may only include core functionalities. However, more features will be added to AirB later.

7.3 Wrong user and functional requirements

AirB is a completely new product in the market. The requirement analysis process might be tough since no existing example can be referenced. In order to avoid the leading revision of core functionalities of AirB, a prototype will be developed in the early stage. We will interview users about the core features, user interface, and the specification of the prototype, so as to confirm the major features of the app in the initial stage.

8 Budget

8.1 Budget Summary

The budget summary table is depicted in Table 3. A comprehensive budget breakdown is attached in the appendix.

Category	Item	Budget
Promotion	Advertisement	HKD 20,000/mo
Human resources	Salary	HKD 25,000/mo × 34 = 850,000/mo
Utility rental fees	Servers	HKD 1,000/mo
	Office	HKD 20,000/mo
	Software license fee	HKD 500 × 30 = 15,000

Table 2: Budget Summary

8.2 Cost Justification

Each person in AirB Inc. will earn the same rate per month so as to stimulate the entire team to spend effort. The advertisement includes online promotion and charges for billboard posting on at the Cross Harbor Tunnel. Our project will be deployed on high-performance servers, which costs HKD 1,000 per month. Technical software providing debugging features and simulation functionalities will facilitate the development, and we need 30 licenses to be able to use the full software features.

9 Project Team

9.1 AirB Inc.

Founded in 2017, AirB Inc. is an innovative start-up company striving for resolving real-life problems with cutting-edge technologies. Its founders, Andy, Derek, Oliver and Jerry, are all young visionaries with professional expertise. AirB Inc. believes that a supportive and collaborative environment is the key to productivity and success. All recruited staff not only possess expert knowledge, but also demonstrate teamwork and leadership abilities which are essential for building and maintaining a collaborative environment. Since its foundation, AirB Inc. has built business partnerships with many leading companies such as Google, Facebook and Microsoft, and expects to migrate its headquarter in Hong Kong to San Jose, California, the heart of Silicon Valley, in 2022.

9.2 Core Members

- Andy Chen

Andy Chan holds an MBA from the Wharton School at the University of Pennsylvania in 2010. Having witnessed the impact the information age brings to our daily lives, Andy strives to implement effective business solutions in IT companies to meet their demanding management needs. He has worked in many IT companies as a senior manager and will oversee the entire development process.

- Derek Ma

Derek holds a PhD degree in computer science from Harvard University in 2009. His research focus is human-computer interaction and he proposed the revolutionary unconscious interaction method in his PhD thesis, which was immediately adopted by the industry to enhance user experiences. He has worked as the chief interface designer at Google and Amazon for eight years. Impressed and intrigued by this project, he joined AirB Inc. and will lead the design research group of AirB.

- Oliver Ouyang

Sensitive to data and trends, Oliver is a senior data analyst with a master's degree in statistics from Columbia University. His expertise ranges from analyzing high volume data to mining potential association among customer transactions. He will lead the data analysis team of AirB Inc. to study the user transaction data to provide machine learning models to simulate user behaviour.

- Jerry Zhou

Jerry graduated from Stanford University and has solid experiences in software project development in Google, Facebook and Microsoft. He has won many prizes in internationally recognized competitions such as Google Code Jam and the ACM International Collegiate Programming Contest. He is currently the chief developer in AirB Inc. and directs a team of 10 skilful programmers to implement AirB.

9.3 Auxiliary Staff

AirB Inc. also hires 30 full-time auxiliary staff for the software development, marketing, management and system maintenance. All employees are selected from a pool of 200 applicants with superb academic credentials and enthusiasm in their work.

10 Project Expectation

We expect that 80% of the population in areas where AirB is available can use it as one of their dining options. AirB Inc. will also expand accordingly to meet the increasing demand for AirB. We also wish to establish long-term partnerships with other companies that we share common interests with, such as Airbnb and Facebook. It is beneficial to us all that we can collaborate to provide services that can complement each other to attract more users for financial gains.

Appendix

Category	Item	Budget
Promotion	Internet advertisement	HKD 6,000/mo
	Billboard posting	HKD 12,000/mo
	Flyers	HKD 2,000/mo
	Total	HKD 20,000/mo
Human resources	Core member salaries	HKD 40,000/mo × 4 = HKD 160,000/mo
	Designer salaries	HKD 25,000/mo × 4 = HKD100,000/mo
	Programmer salaries	HKD 30,000/mo × 20 = HKD 600,000/mo
	Janitor salaries	HKD 15,000/mo × 5 = HKD 75,000/mo
	Total	HKD 935,000/mo
Utility rental fees	Servers	HKD 1,000/mo
	Offices	HKD 20,000/mo
	Software license fee	HKD 500 × 30 = 15,000
	Total	HKD 15,000 + HKD 21,000/mo

Table 3: Budget breakdown