

IS480 Project Proposal

GeneSIS

21st March 2016

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- (Not found yet¹)

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Organization

Department

- Not found yet

¹ To be assigned by course coordinator
IS480 - IS Application Project

Idea Overview

Team GeneSIS is working on building an Android application for our Final Year Project (IS480). This application would serve as a hub for various F&B companies. Through the use of our application, we aim to help these F&B companies broaden their market exposure and consumer base.

SHARED PLATFORM - We aim to bring various merchants together on one application and help them grow by cross-exposing customer bases.

AUTOMATION - Our application aims to reduce the need for physical cashiers and tap into the F&B takeaway market through the function of virtual ordering and payment.

REAL-TIME ANALYTICS – We provide data analytics to help F&B companies understand customers and their company better.

1.1 Motivation:

Labor shortage is a serious issue that many F&B outlets are facing. Because of this, it impedes the growth of businesses, creating inefficiencies and unproductivity. This results in a stagnant customer base and lower profit margins. Through our Android application, we hope to help F&B reduce overhead costs and expand their customer base, with the end goal of improving both customer and merchants' F&B experience.

1.2 Proposed application:

Our application would host a collective of various restaurants. For each company within our application, we will have 2 separate interfaces for consumers and suppliers, each with a different set of functionalities.

1. Consumer
 - a. Order
 - b. Payment → Nets, Masters, Visa
 - c. Receipt
 - i. Estimated collection time
 - ii. Show notifications
 - d. Outlet search
 - e. Search menu (throughout all different restaurants)
 - f. View supplier details (location, ratings, feedback)
 - g. View menu (menu description, price)
 - h. Feedback & ratings
 - i. Seating capacity (real time) → using sensors
2. Supplier
 - a. Track orders
 - i. Number of orders queue
 - ii. Using this queue, estimate the time taken to prepare (show estimated collection time on customer's receipt)
 - b. Admin rights
 - i. Add/update/remove menu
 - ii. Update menu availability
 - iii. Prices
 - c. Analytics
 - i. Per day transactions
 - ii. Profits

1.3 Value proposition:

On the customer's end, the app can potentially:

- Decrease the waiting time
- Eliminate the need for queuing
- Provide the option of advanced ordering

On the company's end, the app can potentially:

- Reduce the workload of
- Improved productivity of staff
- Regulate order flow

- Aid the company in understanding consumer behavior through analytics

Overall, overhead costs can ultimately be reduced, enabling the company to maximize profits.

1.4 Factors for Success and Failure:

a. App Development On Android

The reason we chose Android market over others is due to their strong market presence (59.65%²). With a larger proportion of users, conduct of user testing would be easier. In addition, our app is an organic idea, which is not present in the current mobile application market. Hence we would need a large consumer base in order to realize the effectiveness of the app as quickly as possible.

One challenge that we might face is the learning curve in developing Android apps. Other than the programming language used, the implementation and databases are new to us and we will need time to learn and master. Time and effort is something we definitely have to prioritize for this project.

Another advantage of our inception being on Android is the property of it being open source. This means that updating of our application in the future along with any Android software updates will be simpler, in comparison to app development on other devices.

b. Partnership

In order for our Android application to be successful, our App needs to be utilized by various F&B companies. The value of our app is directly proportional to the number of companies we are able to secure partnership with.

On the other hand, the App has basic functions (ease of online ordering and payment, customer analytics) that customers and merchants can make use of even if there is a small merchant base. This gives our app intrinsic value, which is independent of external factors.

c. App Development Tools

Some of the new tools that we will be using are, Firebase, SQLite, and Android Studio.

Firebase will be used in developing the backend portion of the application, including data storage, user authentication, static hosting.

The database engine that we will be employing is SQLite.

Android Studio is the official integrated development environment for app development in the Android market.

We might be using additional tools along the way. For the time being, the above stated are the primary tools that we will be using in the development of our application.

² Netmarketshare, *Mobile/Tablet Operating System Market Share*, <https://www.netmarketshare.com/operating-system-market-share.aspx?qprid=8&qpcustomd=1> (accessed February 2016)