

1 EXECUTIVE SUMMARY

Printing has become one of the most major steps in today's production. Be it students, lecturer, businessman, shop owners, they all require the use of printing services. As one of the prominent printing service provider in Seksyen 7, Shah Alam, our client receives many printing jobs in a day. However, due to the lack of a standardized system to help manage the inflow and outflow of those orders, our client sometimes finds it difficult to keep track of which order comes first, complicating things further.

Thus, the system is created to manage the flow of orders for our clients. The system's name, Business Ordering System (E-BOS), will be able to accept printing job from our client's customers online, eliminating the need for the customers to physically come to our client's shop. With online ordering, the system will also be able to keep track of the orders chronologically. Once a job has been done, the system will notify the customer via email, alerting them that their job is now available for pickup.

With the implementation of the system, the client can efficiently manage the orders of their customers, and the details of their customers, preventing any printing job to be missed or lost in production.

2 INTRODUCTION

2.1 PROBLEM STATEMENT

Upon meeting our client, they expressed that one of the major problems that they are facing is the hard to manage ordering system which is done manually. Due to the number of orders that they receive from their customers, Sometimes it is hard to keep track with the order of jobs coming through the counter, causing several printing jobs to be misses since it is hard to keep track with each different order.

The next problem is that, by ordering through the counter, it is a hassle for the customers of our client. They must come to the shop and wait for our client to respond to them over the counter which might take their precious time and as we all know, time is precious in the business world. Our client can also use that time to finish other printing services that they currently have.

2.2 METHODOLOGY

For the methodology of our project, we gather the problems faced by our client when it comes to managing the orders that they receive from their customers. We discussed with our client on what is the best way to improve the way their orders are being handled and come up with a solution where orders are being made online. The target demographics for the system is the current customers that our client have and potentially new customers.

2.3 LIMITATIONS

Due the online nature of our system, our client need to have a constant internet connection and a server in order to store the customers data and the orders that they have made.

3 NEW PRODUCT DEVELOPMENT

3.1 DEFINITION

A product is items or services that serves the needs of a customer and they are the main reasons a business entity is built upon. New product is introduced to capture new demands as well as to satisfy current unmet requirements in the existing market.

New product development is the process of entering new product into the market and it involves the steps to design and create something new (mostly new product) that will be offered to customers to solve their problems as well as to satisfy their needs. The process of developing new product can involve the work of inventing or innovating something new and improving existing products.

Most business entities regardless of the size will make effort in contributing to the new product development. The development of new products is crucial for all business entities (especially technological business) and if the business does not contribute to this business phenomenon, it is likely that the business is not able to sustain in the market.

3.2 CLASSIFICATION OF NPD

There are several classifications of new product which is New-to-the-world products, new product lines, addition to existing product lines, improvements and revisions to existing products, lower priced products and repositioned products. This project only involves a certain classification of new product development namely addition to existing product lines and improvement and revision to existing products.

The addition to existing product lines involves the company to introduce additional product or services into the existing production lines within a certain category. Companies can create new product lines based on their currently established product

lines and the also can create subsets to the current product lines. For example, this project introduces a new way for the business to conduct their business. Currently, they are managing their business manually by using papers and whiteboard in order to record their ordering flow and customer needs to queue at the shop in order to use their service. However, with the introduction of this product, the business can now manage their business flow and user can request their service automatically by using an online system that help them keeps track their business.

Furthermore, the improvement and revision to existing product classification involves the business introducing variations to its business core. Most products or services have a multidimensional view. This means that the same product or services can be used in multiple different kinds of ways. Some companies target their products or services to different market segments by making adjustments to how they operate their business. For example, the new product that this project is developing will help the business to accommodate the needs of their other customers such as the students instead of only targeting other Small Medium Enterprise (SME). This could be done by allowing the students to use their printing services through the system and this will make their process of printing easier and smoother. The customer does not need to attend the shop to request their service and they can fetch their printed product when it is finished as the system will tell the customer when it is finished. With the addition to this new business style, the number of new customer will most likely to increase as it has not been implemented by other printing business yet.

3.3 NEW PRODUCT DEVELOPMENT PROCESS

3.3.1 RESEARCH & DEVELOPMENT

The research and development process (R & D) refers to organised effort that are directed towards discovering new knowledge, product or processes. New products are often categorized by its high rate of failure and this may be due to the lack of knowledge or preliminary data. Therefore, research and development are crucial for new product development. The research and development process that this project uses are the idea generation, idea screening and market surveying.

This project firstly involves idea generation to search for a new requirement and new holes in the market that have not been exploited yet. Usually, the idea is being generated with or without intent. The method that this project involves for the idea generation is the brainstorming. Brainstorming is a method of generating idea without it being compromised at first sight. This means that all ideas are accepted as they could lead to a new knowledge for exploitation. Each member will contribute ideas for a new product or services. For example, the team for this project decides to brainstorm a solution that will solve problems for a printing company and those solutions involves creating a new business management system.

Secondly, this project implements the idea screening process for the ideas mentioned in the idea generation process. The idea screening process is where each of the ideas generated are thoroughly analysed to determine their worth and the process of choosing new alternatives for certain ideas is done. A new alternative means other plans for an idea if for instance the ideas is not worth it. Every ideas that are considered worth it are brought to the next step for further evaluation. For example, the idea of creating a new business management system for the printing company will be evaluated its worth by listing its advantages and disadvantages.

Lastly, this project also implements a market survey for the chosen ideas to determine their worth in the real market. This process involves the determining the

demands of the market as well as the compatibility of that idea for the business in the current market. For example, the idea is further tested by proposing it to the business owner and getting their feedback on the idea.

3.3.2 PRODUCT DESIGN/FEATURES

E-BOS (Business Ordering System) is an ordering system designed for ease of accounting and business management. The aim of this system is to allow efficient ordering of products from the company, as well as effectively monitor business finances through accounting features.

In the past, there are two ways to make an order from the business, which are:

- Send the artwork to be printed via email.
- Discuss on the artwork personally at the shop.

However, this method proves to be inefficient and problematic. One of the problems is the email method. According to the owner, the business received about a dozen emails per day, which means that it is difficult to keep track of orders that are sent through email. Sometimes, there are orders that were unnoticed due to the sheer number of emails the business received daily. Another problem encountered is based on the personal discussion method. There is no method for clients to know the progress of their artwork, whether it had finished printed or not.

There are also internal problems faced by the business. One of them is lack of accounting to keep track of business finances, such as revenues, expenses, salaries, etc. Another problem is the ordering management, where the business has no method to keep track of ongoing artworks and finished ones.

This system aims to resolve all the problems stated above. Two users will be using this system, which is the business admin and clients.

First off, for the administrator, the system is capable of accounting and ordering management. In-app accounting allows the admin to essentially keep track of the finances of the business, whether it is about the workers' salaries or stock expenses. This means fluid finance management for the business through this app. Ordering management feature is a tool for the business to keep track of the artworks going in and out of the business. Should the business receive a new order, it will be recorded into the application and send to the production team to print out the artwork. Once done, the production team will notify the admin that the order is done, simultaneously indicating at the application that the order is finished.

For the client, the system is simple to use. The system allows the user to create and get notified when the order is finished. To make an order, the client have a choice whether to upload their own artwork or request for an artwork designed from the business. Then the client will have to fill in the details. Once everything is filled, the order is sent to the admin for confirmation, where, after confirmed by the client, the production will begin. Should the order be finished, the admin will change the status of the order from ongoing to finished. Simultaneously, the system will notify the clients that their order is finished and are ready to be picked up at the shop.

3.3.3 CONCEPT TESTING

Concept testing is the early stage of new product design. It involves the process of using quantitative and qualitative methods to evaluate consumer response to a product idea prior to introduction of a product to the market. Furthermore, concept testing also involves showing a preliminary description of the product or service idea to prospective customer to gauge customer interest and need. The main function of concept testing is to choose the most promising alternative from a set of alternatives, to get an initial notion of the commercial prospects of a concept, to find out who is most interested in the concept and to indicate what direction further development work should take.

Concept Testing for the E-BOS

- The purpose of concept test
 - To identify potential market to be in
 - To get potential customers' feedback
- The survey population
 - Small and Medium Enterprise (SME) Graphic design and printing services company
- Appropriate survey format
 - Verbal description

Project: E-BOS

This project is about business information management system. E-BOS is designed for SME to monitor their business flow, sales and indirectly boost their customer relation. The main features of this system is its allow the customer to directly submit their order to the shop to be designed or printed without having to walk-in to the shop. When customer submit the order, the system will notify the admin that there are new order and the admin will make a call to customer to verify the order. Notification to the production team will be issued once the verification approved by admin. Production will start the process and once done, it will notify the customer via email for collection.

- Activity Diagram

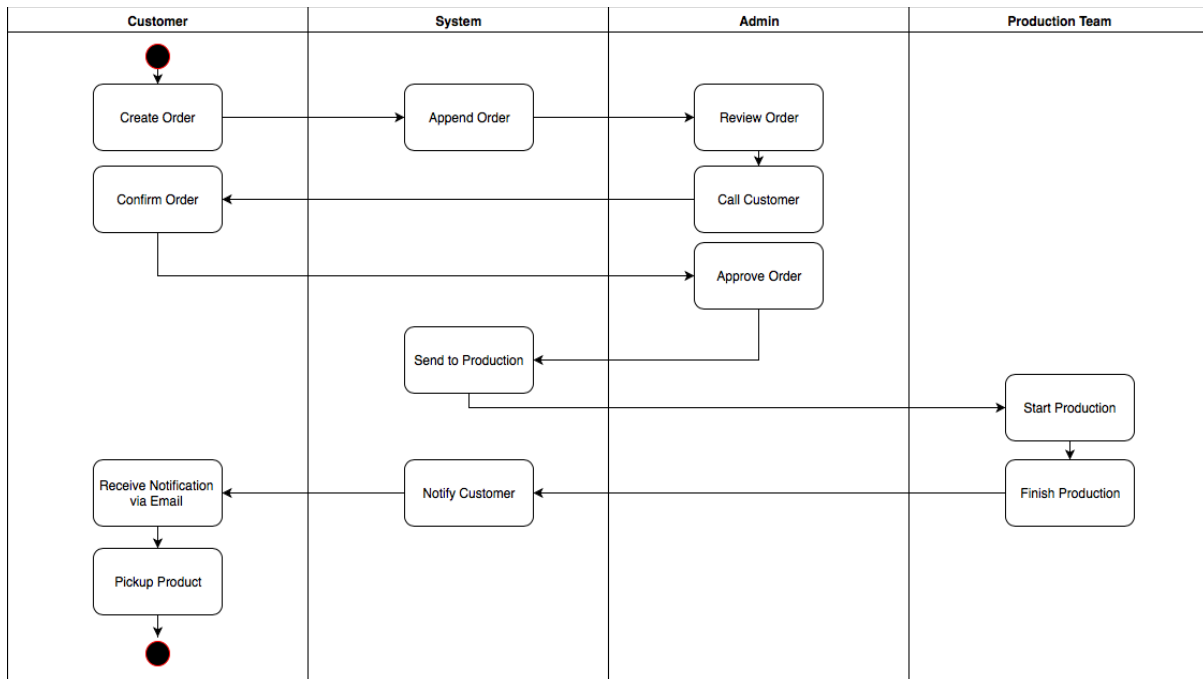


Figure 3.1 Activity Diagram of E-BOS

3.3.4 PROTOTYPE

3.3.4.1 ADMIN VIEW

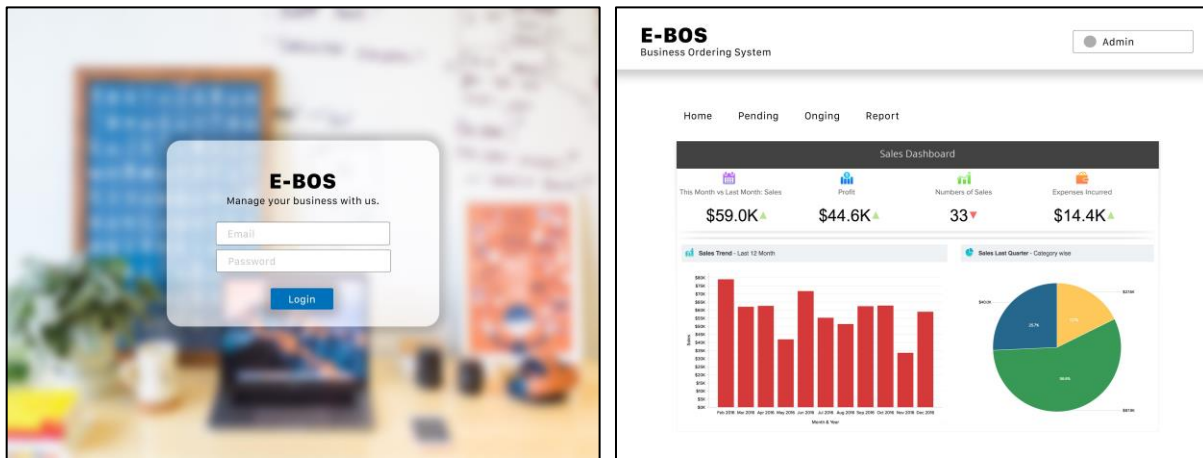


Figure 3.2 Admin view

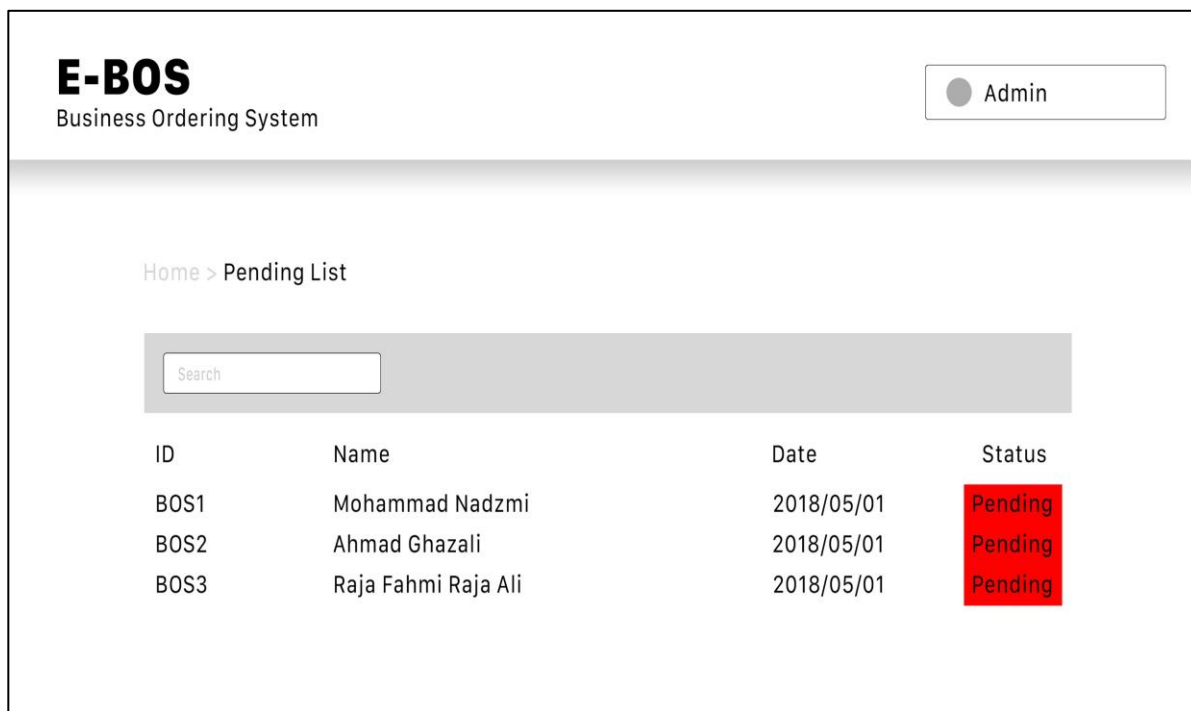


Figure 3.3 Login page

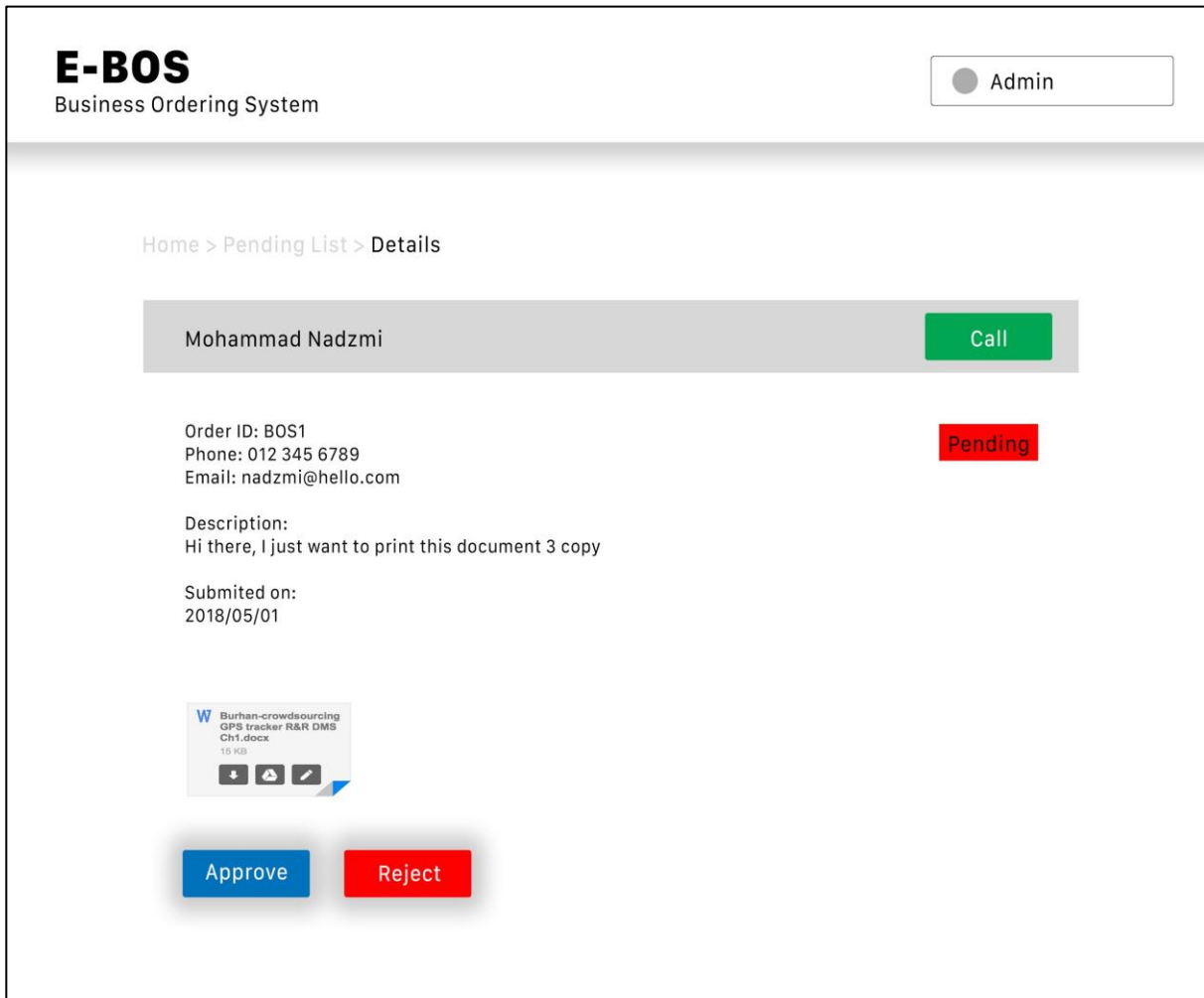


Figure 3.4 Dashboard page

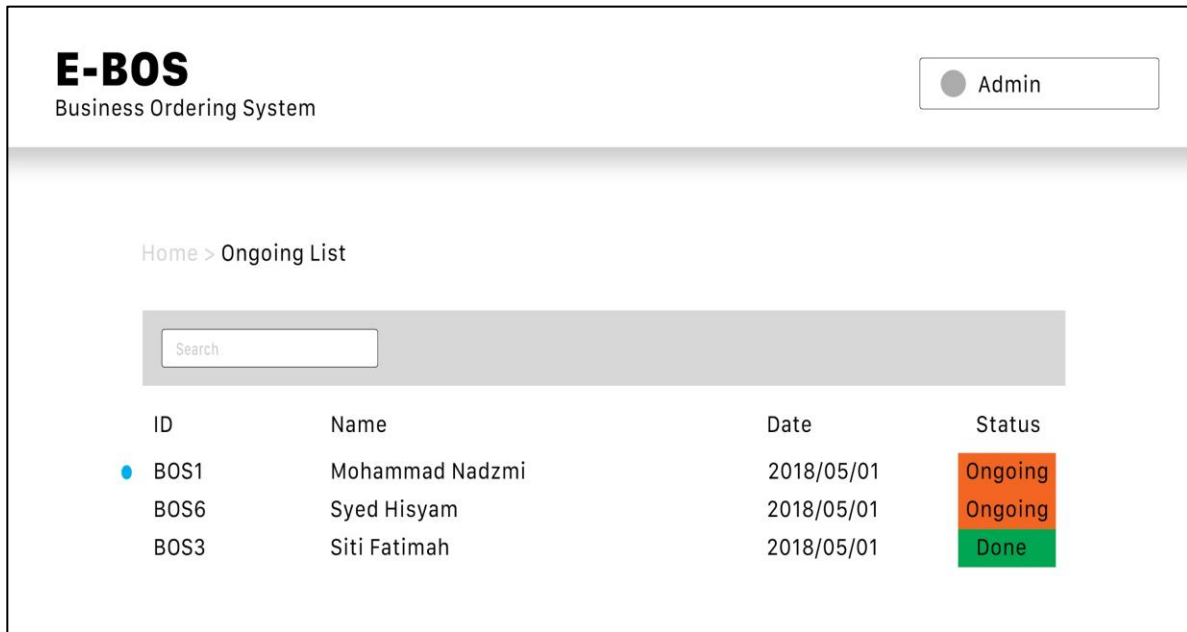


Figure 3.5 Pending list page

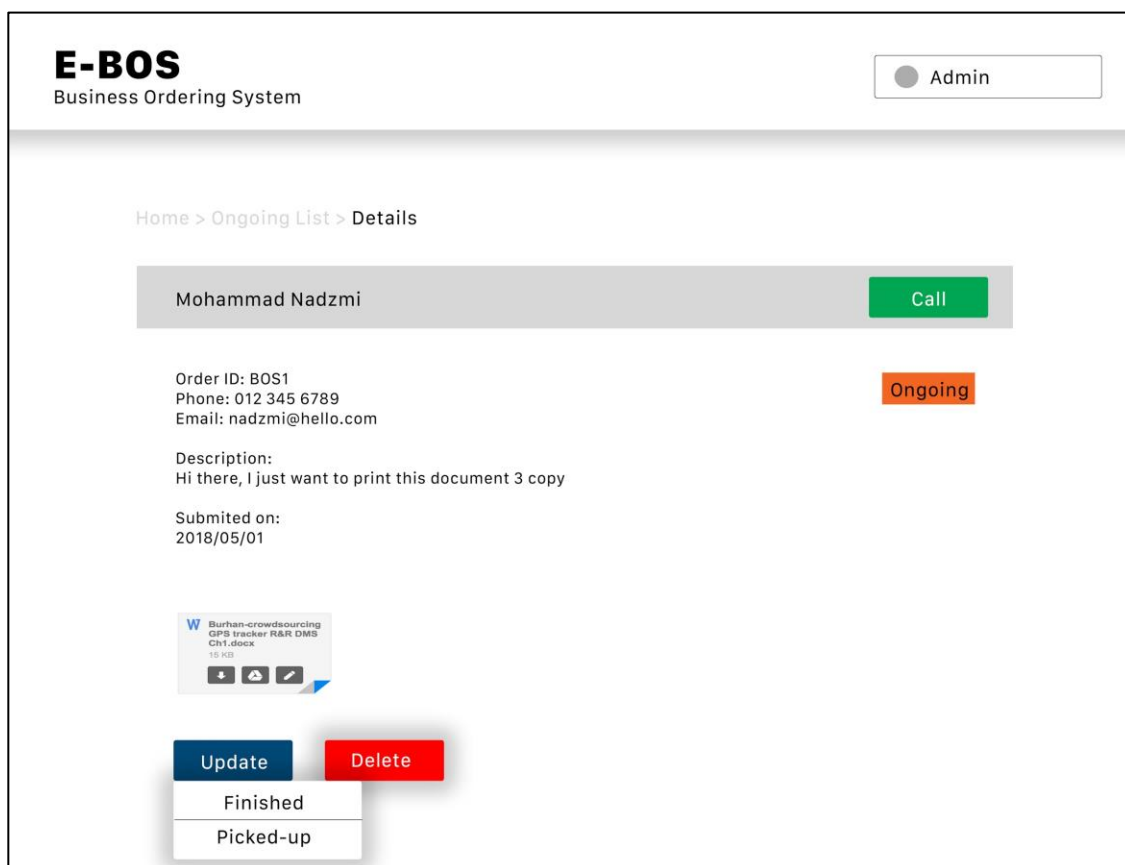


Figure 3.6 Update status page

3.3.4.2 CLIENT VIEW

E-BOS
Business Ordering System

Login

Submit a request

Name*

Name

Description*

Description

Phone Number*

Phone Number

Email*

Email

Attachment

Add file or drag it here

**We will contact you as soon as possible to verify it

Submit

Figure 3.7 Submit new order page

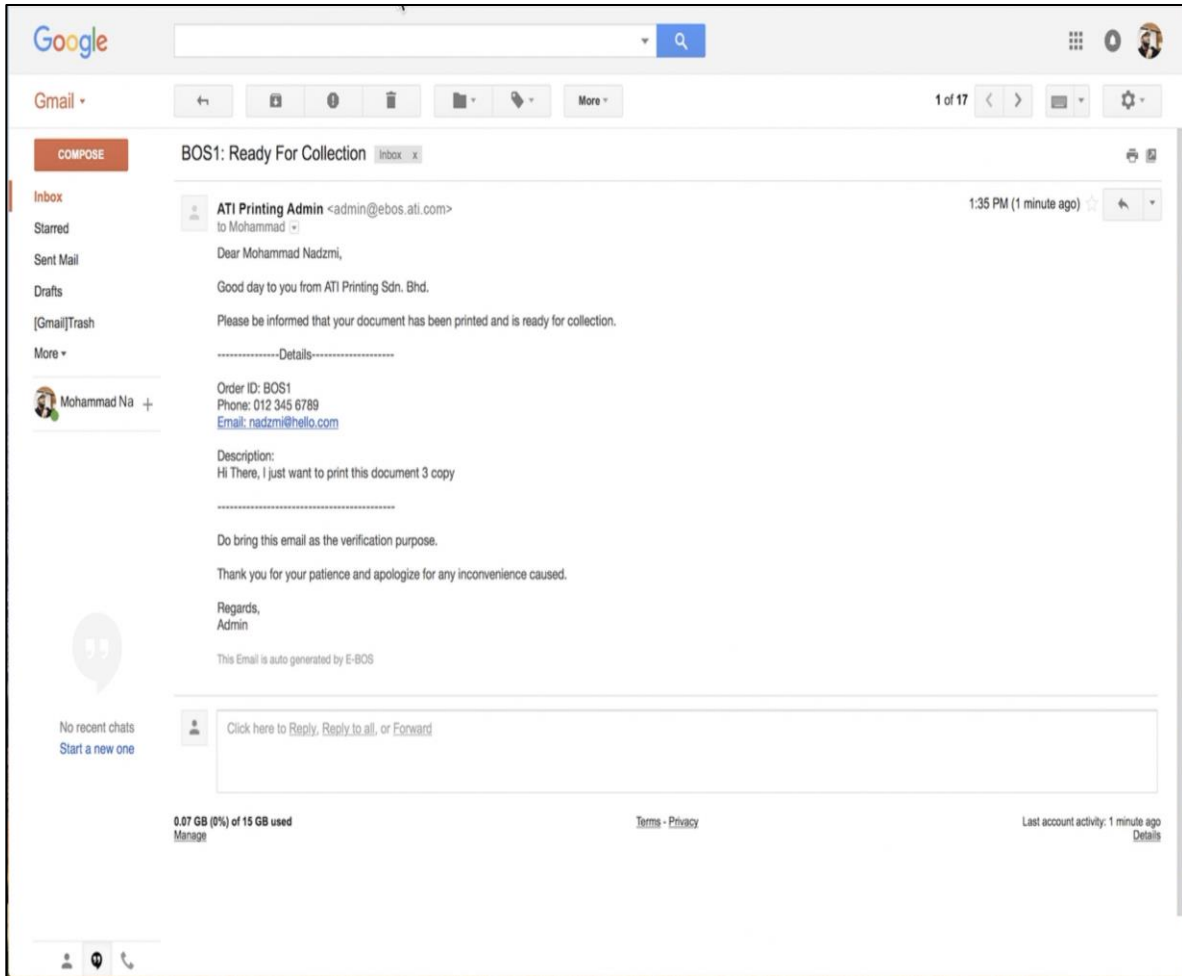


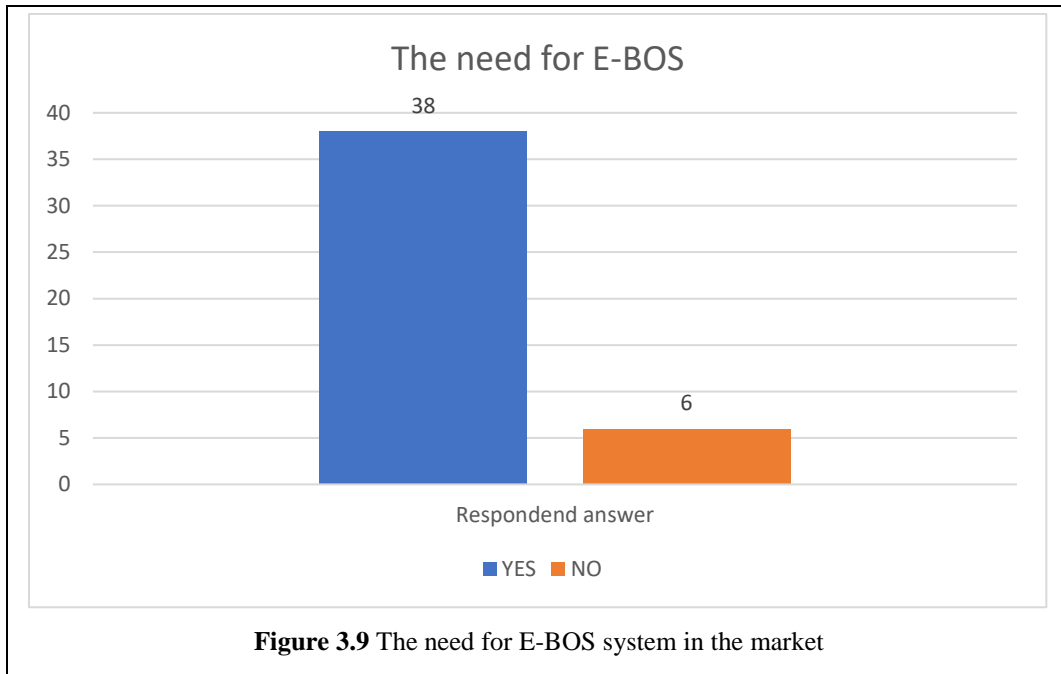
Figure 3.8 Notification via email

3.3.5 TEST MARKETING

To test the eligibility of the new product development idea, this project did several market testings. The market testing is one of the crucial part of new product development as it will lead to a conclusion whether the product is fit for the market. It is a tool used by companies to provide insight into the probable market success of a new product or effectiveness of a marketing campaign. There are many ways to conduct a market testing and one of it is surveying and proposing the idea to the intended customer.

For example, this project proposes the idea of creating a business management software to the owner of ATI Advertising SDN. BHD. company and it gets a positive feedback from them with some suggestion to improve our ideas such as embedding accounting system. By proposal, the idea can be improved because there are a lot of input for the idea from the inside and outside of the organization.

Other than ATI Advertising SDN. BHD., a survey has been conducted to support the idea and they targets the printing business owner as well as their employees. The result of the survey is shown in Figure 3.9:



Based on bar chart shown in Figure 3.9, the y-axis represents the number of respondents and the x-axis represents their answer for the need of E-BOS system. Based on the chart, it is shown that most of the respondents agree and need the E-BOS system because 38 agrees and only 6 out of 44 respondents disagree with the need of E-BOS system in their business.

4 CONCLUSION

E-BOS is an electronic business ordering system that allows customers to not only make online orders easily but also notifies them that their order is ready for collections. Not only that, this system also provides various tools to efficiently monitors their finances in addition to ordering management. Our main target market is printing and graphic design businesses but could be tweaked to meet other SMEs.

Our main purpose of developing this system is to solve the ordering problem faced by current printing and graphic design businesses.

5 REFERENCES

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6 APPENDICES



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TEKNOLOGI
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SURVEY ANALYSIS

THE NEED FOR E-BOS SYSTEM

Dear Respondent,

We are students from Faculty of Computer and Mathematical Sciences, UiTM Shah Alam currently pursuing a degree program in Bachelor of Computer Science (Hons.). We feel very grateful for your willingness to be one of the respondents for this survey. The purpose of this survey is to fulfil our academic syllabus. All the information is strictly confidential.

SECTION A: DEMOGRAPHIC PROFILE

Please (/) in the appropriate box

1. Do you own a business?

YES

NO

2. Gender

MALE

FEMALE

3. Race

MALAY

INDIAN

CHINESE

OTHERS

4. Age

Below 25 years old

25 – 30 years old

31 – 35 years old

Above 36 years old

SECTION B: BRAND

Circle an appropriate answer

STATEMENT		AGREE	AVERAGE	DISAGREE
1	Considering the brand, the overall quality of the software is excellent.	1	2	3
2	Considering the brand, I have doubts about the quality of the software based on its usability.	1	2	3
3	I believe the software is reliable based on the brand.	1	2	3

SECTION C: PRICE

Circle an appropriate answer

STATEMENT		AGREE	AVERAGE	DISAGREE
1	I believe the software is worth it based on the price.	1	2	3
2	Based on the price, the software is acceptable.	1	2	3

SECTION D: WILLINGNESS TO BUY

Circle an appropriate answer

STATEMENT		AGREE	AVERAGE	DISAGREE
1	Considering the brand and price, I think the software is excellent.	1	2	3
2	Based on my perception, I am willing to invest in this software.	1	2	3
3	Considering the usability and the price, I would invest in this product later.	1	2	3

SECTION E: OVERALL

Circle an appropriate answer

STATEMENT		YES	NO
1	Overall, I think my business need this kind of software.	1	2

This survey is used to gain insight and guidance to improve the quality of education. All the information and opinion are greatly appreciated. Thank you.