Chapter 1
Introduction

1.1 Background

Jakarta is the capital city of Indonesia consisting of areas designated for various purposes such as for businesses, schools, universities, and residences. In terms of businesses, statistically that there are more than one thousand big industries in Jakarta based on Indonesian Central Bureau on Statistics [1]. Jakarta as the main economic center not only home to the Jakarta residents, but also attracts people from outside Jakarta. Not only does the employment opportunity impact the growth of population in Jakarta, but so does the education sector. Most of the people in Jakarta are in the productive age category. In fact, this category which consists of students and workers represents more than fifty percent of the population in Jakarta [2].
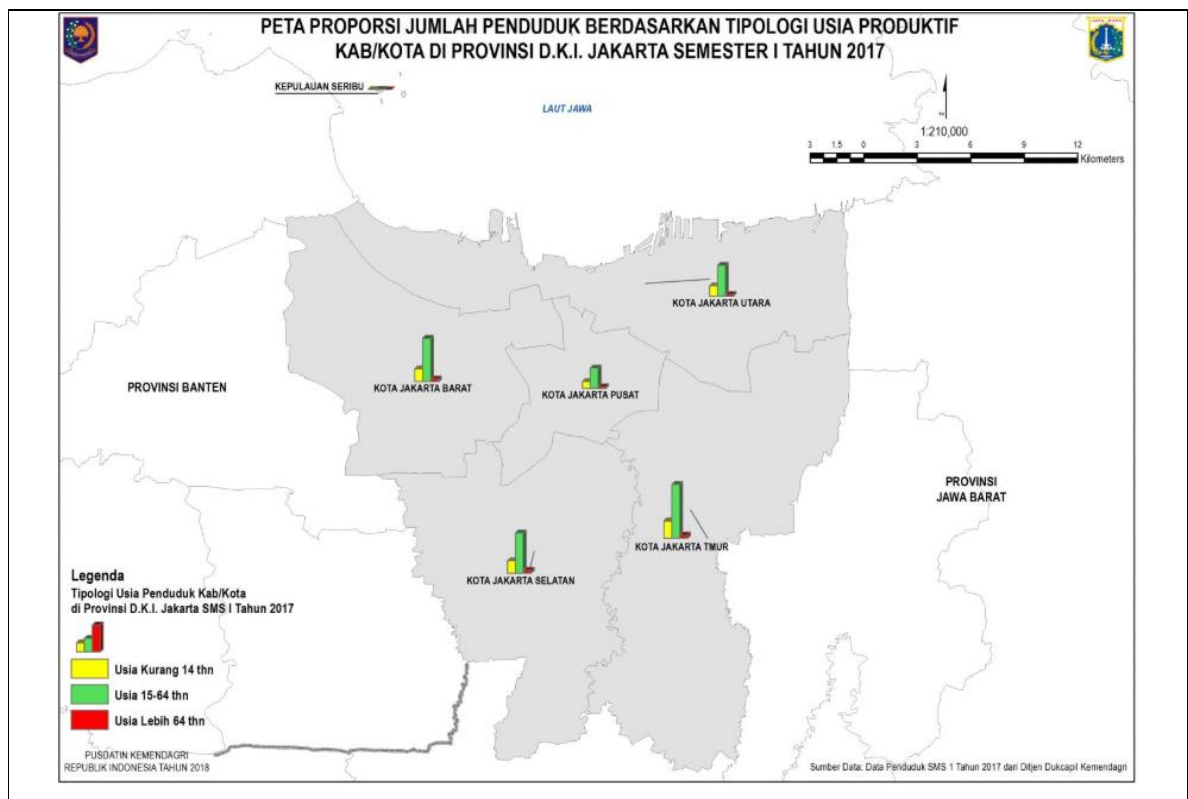

Figure 1.1 The Amount of Population based on Age in Jakarta [2]

According to the statistics issued in 2015 by the Indonesian Central Biro on Statistics, there are 320 universities and over 950 thousand students in Jakarta [3]. Furthermore, the population in Jakarta keep increasing because of urbanization. Below is a graph that shows number of people coming to Jakarta based on Jakarta government report [4]:
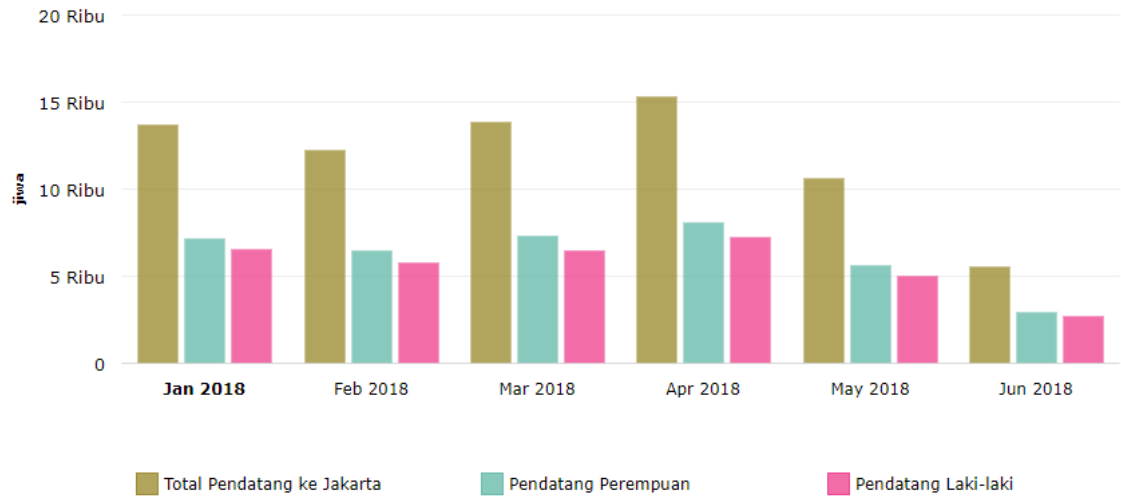
Penduduk masuk ke DKI Jakarta Tahun 2018
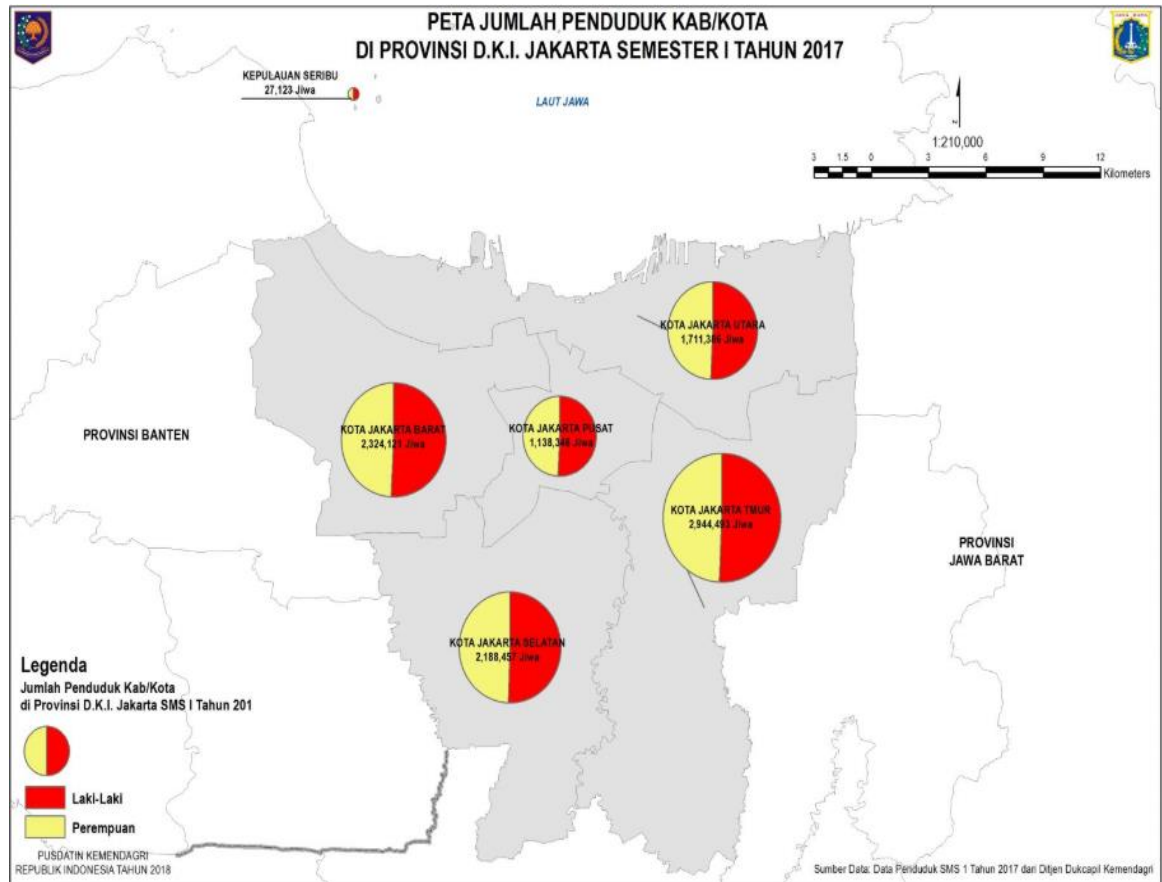
Figure 1.2 The Number of Urbanization in Jakarta [4]

Figure 1.3 The Amount of population based on Gender in Jakarta [5]

As stated by the Indonesia Minister of Internal Affairs from the past two years record, there are more than two million people residing in the west of Jakarta, south of Jakarta, and east of Jakarta. whereas there are more than one million people in the center of Jakarta and north of Jakarta. In addition, there are more than twenty thousand people in *Kepulauan Seribu*, making the population in Jakarta reach more than nine million people [5].
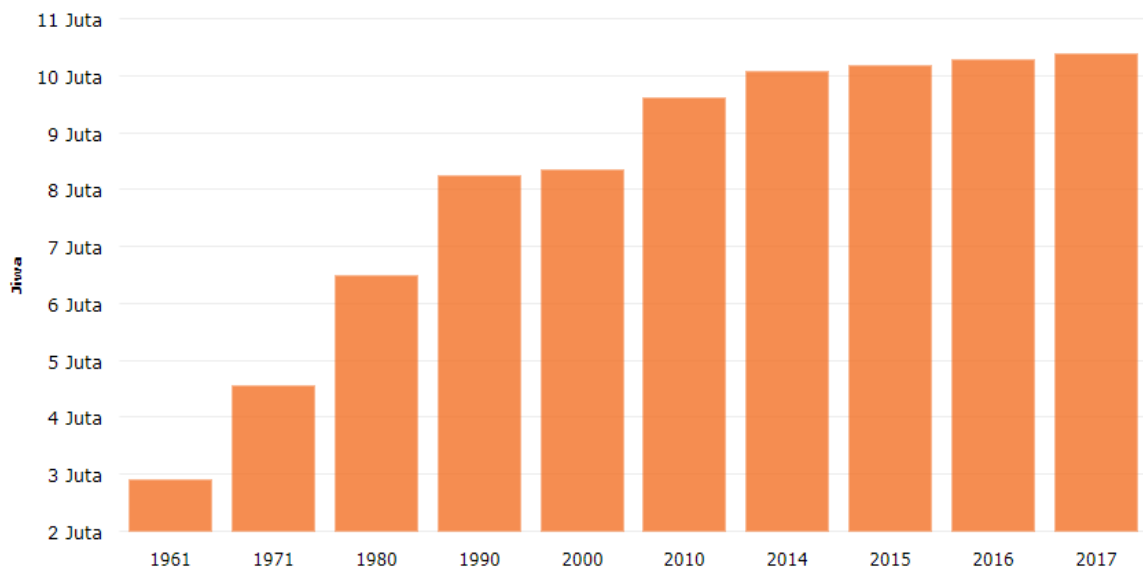
Jumlah Penduduk DKI Jakarta (1961-2017)

Figure 1.4 The Growth Population in Jakarta [6]

According to the Indonesian Central Biro on Statistics, every year the population in Jakarta keeps growing [6] resulting in the needs for housing to increase and make the availability of land become smaller. The cost of land becomes more expensive accordingly as a result of the increase in demand for land. People coming to Jakarta for the purpose of studying or working need residence to live as long as they study or work. There are some alternatives for residences such as staying in hotel, renting a house, or staying in a boarding house. For those who consider efficiency and simplicity as the main factor, staying in a boarding house is the right choice.

Staying in hotels for a long time is expensive, for example staying in a low to middle class hotel for a month can cost around nine million rupiahs. Staying in a rent house is not practical especially for those who are single because the tenant needs to pay electricity bills, the neighborhood dues, and does some chores. Although staying in rented house is cheaper than in a hotel, for many workers and students the cost of staying in this type of residence is still considered expensive. The suitable alternative for workers and students is to stay in a boarding house for the following reasons such as low price, simplicity, and practicality [7]. With this consideration, hence investing in a boarding house business is financially promising.

Running a boarding house business is challenging because of competition in the business hence it needs to be organized professionally rather than traditionally. To improve productivity and increase profits by increasing industrial efficiency and reducing human error. By introducing technology, such as computer hardware and software, tasks previously carried out by humans are now carried out by specialized machines that reduce monotony, safety concerns and variation [8]. With the booming of the digital era nowadays, this technology may be capitalized for running the business. Considering that the new students and workers do not know how to find a boarding house, a right technology needs to be developed to address this issue such as by creating a decent website to provide information for them. From the owner of the boarding house perspectives, the digital based technology needs to be developed to manage the business to help the owner in organizing issues such as tenant database, inventory management as well as statistic on productivity of the rooms. All this information helps the owner in making strategic decision concerning the boarding house business.

Some applications available on the internet only provides information concerning the availability of the boarding house, the information on rent cost and other information. However, the application does not have integration feature with the internal system of boarding house. Which means, the system cannot update automatically if the room is still available or not. In fact, this system will make the information of a boarding house more accurate. Furthermore, the existing applications that are available on the internet are generally used as a place for finding boarding houses. These websites only provide the owner of a boarding house to give information on the website and then the potential tenant can see that information displayed on the website. However, these website lacks of facility of internal system of boarding houses where each of the owner of a boarding houses can manage their tenants, fixed assets, payment, complaint from tenants, make an announcement, check their productivity based on the room type. Besides that, the tenants can also make a complaint to the owner and upload the payment receipt for each month.

1.2 Research Problem

1. Need some screening for the applicant

There are lot of people in a boarding house, who have various background in terms of type of work they do and the type of education that may impact their behavior. Apart from that, screening process is also necessary for more serious condition in Jakarta because as stated by Indonesian Central Biro on Statistics, in 2017 there are more than thirty thousand criminal activities in Jakarta [9]. To ensure that the environment in the boarding house is safe and peaceful for the tenants, and also to make sure all tenants will pay the fees regularly, will not do any damage to the property some screening need to be conducted before they can be allowed to stay in the boarding house.

2. Boarding house is managed in non-computerized bases

Boarding house is generally managed in non-computerized bases, in this method of managing the boarding house usually involves paper-based documentation. Consequently, the data is not well organized especially when the business involves a lot of rooms. Furthermore, the data and the records may be lost or are subject to fire and flooding. Due to such condition, the development of digital based recording is necessary.

1.3 Research Objective

With the concerns that are mentioned above, the objectives of this thesis are to provide an application related to back-office administration that can be used in managing the boarding house as a practice of technology-based business process. This application consists of tenant and screening process management, inventory and payment management, announcement to all tenants, productivity of the room types, as well as the profile of the boarding house. With this business process modernization, allows the business process more reliable, secure, and all the data generated from the process can be used for further analysis and decision making.

1.4 Research Scope

The discussion will be limited to discussing about the owner side of the boarding house which is the back-office of the application used for managing the boarding house business.

A team of two developers consisting of Michael and the author will work on the project. Each individual has different scopes and tasks in the application to be developed. The author's scopes relate to handling the back-end side of the website application, which is the owner side of the system. These are the modules that will be developed by the author's:

- **User Account and Role management**
  The management of accounts from different roles in the system are provided to differentiate the purpose of each account, the account will have two roles consist of customer and owner.

- **Boarding House Profile**
  The module allows the owner to see their own profile of boarding house and also update their information and specification of the boarding house.

- **Screening Process**
  The owner can filter the applicant whether it will be accepted or rejected. The owner can make questions to the applicant of their activity or habit. For example, the owner ask is the applicant is a smoker or not and then the answer can be used as decision making for the owner.

- **Complaint**
  The complaint module allows the owner to see the complaint from each tenant in the boarding house. For example, when the bathroom in a room of tenant is broken, the owner can give a mark in this module as an information that the owner already notices the complaint to the tenant.

- **Announcement**
  This module allows the owner of a boarding house to state an announcement to all tenants in a boarding house. For example, when the internet is broken the owner can send an announcement to all tenants to inform them.

- **Tenant Data Management**
  The management of tenant is to control the tenant in the boarding house. The owner can see the list of the tenants that are active or inactive, update the data of tenant, and deactivate tenant.

- **Inventory Management of the Room**
  The management of item inside the room of the boarding house, allows the owner to view and control the existing item such as a bed, a cupboard, a table, a chair, wall, shower, and toilet based on the date of purchase, price, where was the item bought, and brand.

- **Payment Management**
  The management of payment allow the owner to see the tenant payment information whether the tenant already paid the monthly fee or not. The owner can also see the picture of the transfer receipt from the tenant. After that, the owner can verify the payment for approval.

- **Productivity**
  The productivity module is for the admin to see the average room of how long the room is occupied or not per year based on room type. This module will allow the owner to know why the specific room type is more salable than the other and how to improve the other room type.

1.5 Aims and Benefit

The aims of the thesis are:

- Design and develop web base application for tenant management such as tenant screening process, tenant management, announcement, payment management, and complaint management
- Design and develop web base application to manage the back-office administration (boarding house profile, inventory management, percentage report for occupied based on room types and dashboard)

The benefits of the thesis are:

- Managing a boarding house will be easier especially when there are many tenants
- The data of the business is more reliable and secure that can be made for further analysis and decision making
- Service quality delivered to the tenants is increased as a result to this application

1.6 Structure

This thesis includes seven chapters that deal with different aspects of the project:

- **Chapter 1 – Introduction**
  This chapter contains of the background, the research problem, the research objective, the research scope, and the aims and benefit of the research.

- **Chapter 2 – Theoretical Foundation**
  This chapter explain about the theoretical methodology that includes process of business management and elaborate with technology to support the thesis.

- **Chapter 3 – Problem Analysis**
  This chapter explains the problem analysis that also addresses the issues discussed and proposes a solution to the problems.

- **Chapter 4 – Solution Design**
  This chapter covers the solution design of the website to be developed as well as the database. The design will consist of diagrams.

- **Chapter 5 – Testing and Implementation**
  This chapter covers the implementation of the website, testing it and give the result of the test.

- **Chapter 6 – Discussion**
  This chapter contains the discussion result of the result and website development.

- **Chapter 7 – Conclusion and Recommendation**
  This chapter conclude the thesis and provides recommendation for future development.