

CHAPTER 1

INTRODUCTION

1.1 Background

Mobile phone has been a huge part of our lives. As time goes by, mobile phone has developed into a smartphone that are capable to contain numerous applications inside of it. People tend to use their smartphone as their medium to communicate, nevertheless not only to communicate, smartphone can be the source of entertainment and information as well.

Smartphones are built in with operating system. There are two main operating systems which are Android and iOS. Android seems to have the biggest market share among other operating systems. Therefore, from the figure below, Android is currently the most used operating system in the world.

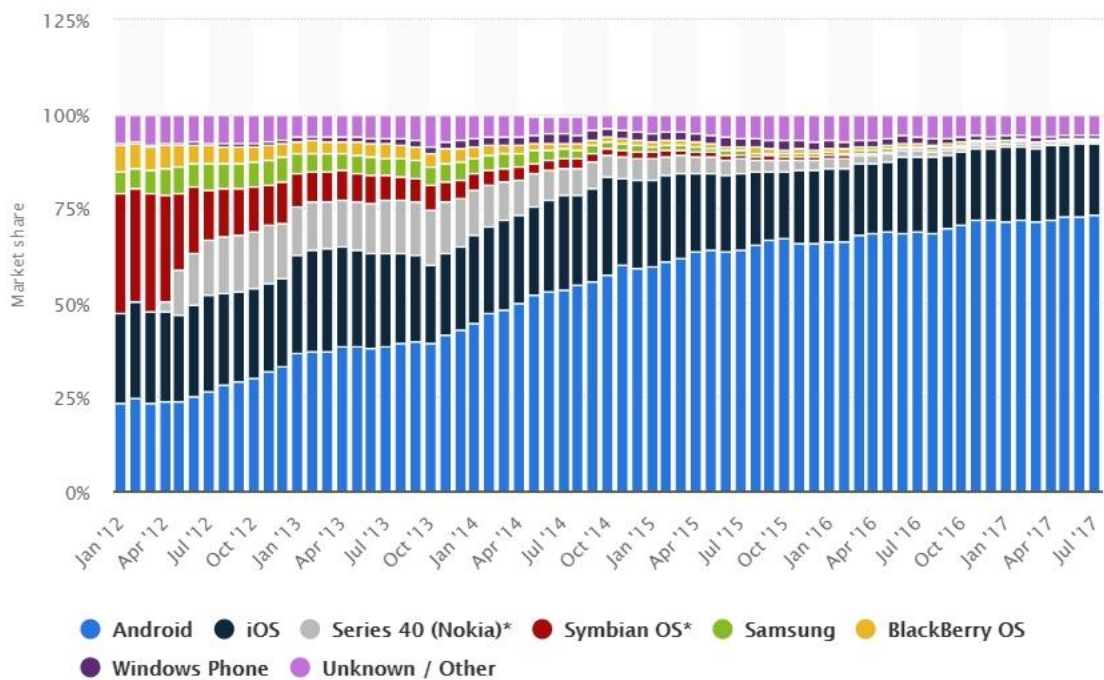


Figure 1.1 Statistic of Operating Systems [1]

Various applications can be downloaded on smartphone. Application itself has many categories such as games, tools, entertainment, and communication. Among all categories that is shown from the table below, games are the most popular one with 6.9 billion app downloads.

Table 1.1 Statistic of popular categories [2]

	Game	Tools	Entertainment	Photography	Communication
Q1 '16	5,530	1,110	621	729	741
Q1 '17	6,780	1,230	935	878	813
Q2 '16	5,280	1,160	613	731	786
Q2 '17	6,640	1,120	942	848	761
Q3 '16	6,060	1,210	684	788	831
Q3 '17	6,900	1,190	978	863	831

In order for one application is being used by the user, language is one of the most important component in an application. So far, the most common language that has been used is English followed by Chinese as the second most spoken language in worldwide. Right now, China is becoming one of the huge market in the world, therefore people such as business leaders are more interested in finding people who speak fluent in Mandarin shown from the figure below.

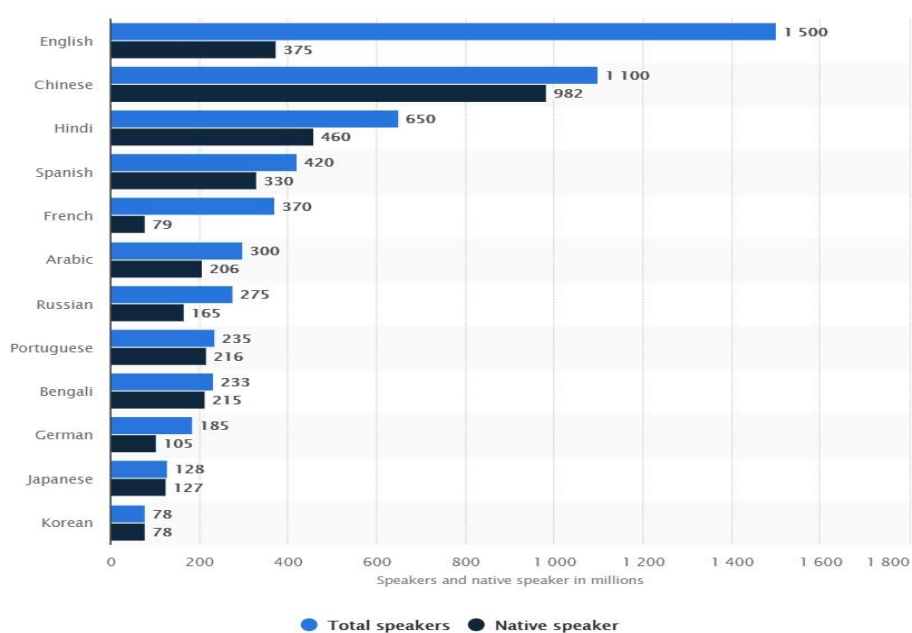


Figure 1.2 Statistic of spoken languages [3]

With the existing data, the Author is trying to comply the consumer's interest in learning mandarin, which will be shown in chapter five. However, according to business insider, Chinese is one of the most difficult language because it requires the memorization of over a thousand unique characters and on average it could take 1.69 years (88 weeks), or 2,200 class hours [4].

With the occurrence of this problem, the Author intended to create a mobile game application aimed to ease people in learning Mandarin. There once was an old Chinese proverb that said “Tell me and I will forget. Show me and I will remember. Involve me and I will understand” [5], therefore the Author will create a game application using English and Mandarin as the main language for people who are willing to learn by involving themselves more through playing the game.

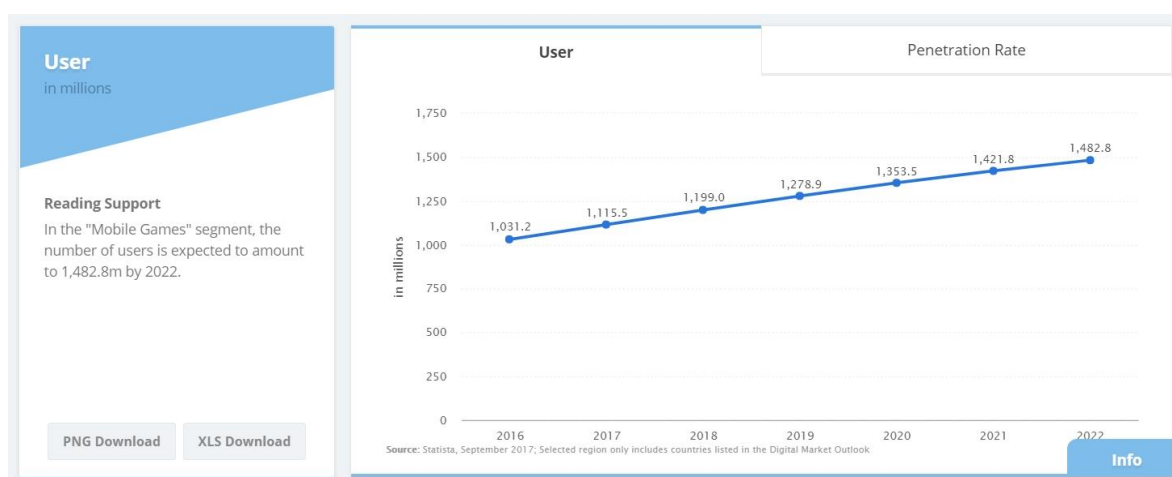


Figure 1.3 Statistics of mobile game users [6]

Based on this figure above, it is proven that the game since mobile games attract numerous people. According to statista.com the user of mobile games throughout the year is continuously increasing [6]. Due to its phenomenon, the Author believes that by creating “Mandarin for Newbies” is a good opportunity for those who are interested in learning Mandarin.

1.2 Scope

The Author develops a mobile game application called “Mandarin for Newbies” using android operating system on smartphones. “Newbie” is a short language used on the internet to describe an individual who is new to something and it has the same meaning as beginner, novice and newcomer [7]. “Mandarin for Newbies” will be using Unity that is stored in Android SDK as the base of the game

application. The game will help people to understand and learn Mandarin's basic vocabulary, especially those who have specific interest in learning Mandarin. By understand and learn, the game will help people to be able speak and write Mandarin in Pinyin. Pinyin (拼音) is a system of romanization for the Chinese which is a standardized pronunciation and it is intended to end the confusion in alphabetizing Chinese characters [8]. The Author will mainly focus on developing and designing the game's features, which are:

- Developing level feature: when the user gained enough "stars", they will be able to level up from "Newbie" to "Pro", "Veteran", "Expert", and "Master".
- Sound feature: when the user taps one of the questions, they will be able to hear the answer in Mandarin language so they can drag the answer into the questions in the right order.
- Categories feature: there are so far five categories in this game which will be "Numbers", "Colors", "Animals", "Fruits", and "Clothes".
- Achievements feature: when the user finishes a category with three "stars", they will be able to claim the achievements which will be a bonus "stars".

1.3 Aims and Benefits

In this thesis project, the Author aims to educate people and ease the learning process regarding Mandarin language. The Author hopes that the game will engage more audiences of people who are interested in learning Mandarin to have a fun and interactive way in the form of android-based game application. The benefits that could be obtained by the user from this game application being created are:

- The game will provide basic information of Mandarin that are programmed in a simple gameplay.
- This game will have an easy learning process for the user to learn Mandarin language.
- The user will be able to read and hear the pinyin (拼音) which is a romanization of Mandarin through the sound projection that the game provided.
- The user can view their completed and incomplete achievements that are gained from completing several categories.

1.4 Structures

Chapter 1: Introduction

The chapter provides a brief explanation regarding the background of the problem, supported by the facts and research in some websites. This chapter also discusses the Author's solution in overcoming the problem. The introduction contained the scope of research, aims and benefits which explaining the program that are going to be used in the project with a slight of the structures of this thesis.

Chapter 2: Theoretical Foundation

This chapter explains the theoretical foundation suggesting the expected solutions for the obstacles that has been discussed in the previous chapter. Furthermore, this chapter contains theories related to the game.

Chapter 3: Problem Analysis and System Design

This chapter will discuss further issue related to the game and the propose solution will also be discussed in this chapter.

Chapter 4: Solution Design

The Author provides the overall system design, includes the architecture and diagram that are relevant to this project.

Chapter 5: Testing and Implementation

After going through some phases of discussion and suggested program of application, the Author will execute the program by testing the game to some users. This Chapter allows the Author to have a vision whether the program is solving the problem or not. As for the result, there will be some feedback supported by users for making solutions and prototype created for this chapter.

Chapter 6: Discussion

The Author focuses more on the evaluation of the application, the Author will discuss about the limitation of the game.

Chapter 7: Conclusion and Recommendation

After gathering information through testing and asking feedback from users, a conclusion will be made by the Author. Besides conclusion, this chapter also supported by recommendation coming from users after using the program,

recommendation should provide improvements that could be made to polished the program in the future.