CHAPTER I
INTRODUCTION

1.1 Background

The automotive industry in Indonesia has suggestively increased during the past several years with more and more people investing in transportation, especially vehicle whether 2 (two) or 4 (four) wheels, use as a primary mode of transportation. This is clarified by the rapid growth of middle class people to be reached 7 million per year and has been increased 1.49% since 2003 to 2012, from 37.7 percent to 56.5 percent (Sedjati, Permana, & Pertiwi, 2017). Thus, drives them with the desire to own private transportation(s), mainly automobile(s), positively correlates to generate huge markets in repairing and maintenance works (Vroom & Eshun, 2016).

Repairing and maintenance works refers to a practice where an automobile is serviced on a regular basis to prevent a major breakdown or the need for major repair (Michael, 2014). Examples of high demands for repairing and maintenance purposes are changing engine oil, coolant replenishment/replacement, tires pressure, and cleaning of vehicles. These are caused by continuous uses of automobiles and poorly or delayed service, results in their general wear, faults, parts breakdown or even wear out.

Lots of automobile owners encounter difficulties in selecting automobile repair workshop due to the advancement in vehicle infrastructure and technology, and yet several are expertise in only traditional ways. One of another variables
being considered by owners is responsiveness, willingness to solve customer cars’ issues and provide immediate services with proper technical examination and works (Hossain, Zahid, & Hoque, 2017).

Consequences due to delayed/poorly service and breakdown trigger 2 (two) crucial variables which are altering daily routine and impact on productivity of owners, with more surprisingly also leads to one’s health risk (Fig. 1). In addition, car’s breakdown is out of owners’ control and it’s unpredictable. It could be arisen even in rural places with hardly any workshops could be found.

**Figure 1.1** Impact of delayed/poorly service and breakdown

Source: (Vroom & Eshun, 2016)

With the annual 10% growth rate of mobile phone users worldwide since 2014 has sparked the rapid growth of mobile applications (Tao & Edmunds, 2018). By that, it is even possible to reach owners to their very door steps and minimize the percentage of delayed/poorly service and breakdown with the help of mobile application specializes in online repairing and maintenance works.
While developing software in general can be more efficient with agile methodologies, the development of mobile application should be obligated in using agile methodologies since its direct benefits from its implementation. One also proposes in developing mobile application should not be used with traditional methodology based on documentation or time consuming processes, but should pursue with well time-boxed schema, especially developing a continuous application (Ventura, Hernández, Antonio, Izaguirre, & Mendoza, 2017). Based on the above exposure, author eagers to write a study entitled “Developing FiXHER using Scrum Model”.

1.2 Research Problem

Based on the background that have been described above, it can be defined author’s problem is as follows:

1. How to develop a mobile application to fulfill the demands which compatible in both Android and iOS platforms,

2. How to develop a mobile application to fulfil the demands in targeted time-box schedules using scrum, an agile methodology?

1.3 Research Purposes

In accordance with the research problem describes above, the purpose of this study are as follows:

1. Minimize the percentage of delayed/poorly service and breakdown with the help of mobile application specializes in online repairing and maintenance works,
2. To meet one of the requirements to achieve a bachelor degree in Information System Faculty of Computer Science,
3. To prove expertise in solving problems found.

1.4 Benefit of Research

The benefits of this thesis involve several parties, author, automobile owners, and repair and maintenance workshops.

1. Author

Able to provide easiness and effectiveness in doing repair and maintenance automobiles’ services,

2. Automobile owners

Easiness and effectiveness in creating transaction of automobiles’ repair and maintenance services and increasing daily routines,

3. Repair and maintenance workshops

Providing better customer service quality to automobile owners to their very door steps and increase on productivity,

4. Academics

Able to help author in developing mobile application by providing advance knowledge and management.

1.5 Report Structure

The systematics of report are as follows:

CHAPTER I INTRODUCTION
In this chapter, the writer described the reason author selects this title, manage research problems, research scope, research purposes and benefits of research.

BAB II THEORETICAL BASIS

This chapter discusses about the theories that have been researched, and discusses related researches that have been accomplished before.

BAB III RESEARCH METHODOLOGY

This chapter describes the method used in the information of software consist some stages that are literature study, analysis, standard operational of the variable, research model, design and implementation, and test to be performed.

BAB IV IMPLEMENTATIONS AND DISCUSSION

This chapter contains the database design, interface design, flowchart, mobile application results and usage procedures.

BAB V CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

This chapter discusses conclusion, limitations of research, and recommendations for future research about this study.