

**BSc (Hons) Computer Science and Software**

**Engineering**

UNIVERSITY OF BEDFORDSHIRE

HireBuddy : Online Automobile Service Platform

**REFLECTIVE REPORT**

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# 1. Introduction

**1.1 Background**

In recent years there has been a significant increment of people as well as vehicles. So the vehicle accidents also increased due to this high vehicle population. Most of the people are not maintaining their vehicles as they are so busy with their day to day activities. So because of such reasons lots of people were suffering from the vehicle breakdowns and tire punctures. As many people are not having a proper knowledge about fixing their vehicle problems, they have to face for much kind of difficulties. This reality may waste the valuable time of the general population and also the neglect to oversee and to complete their daily tasks. Therefore people need a decent answer for this issue.

Most insurance providing agents offer some arrangements, yet the most of them are not practical. This project aims to develop a mobile application depends on Android and that guides people to get the help of an appropriate person in the area to recuperate the vehicle's disappointment. And it is not only to get the assistance of the person but also it gives lots of opportunities to the user by offering many features. The proposed system will be beneficial for every person to increase their efficiency while reduce the workload.

**1.2 Motivation**

The reason I chose the project is because of my past experience. Currently I’m supporting for my family business which owned by my parents. One of my main duties is to supply products to the middle party. Because of this reason I’m traveling long distances from home. As to my past experience I had to wait wasting many hours in the road due to vehicle breakdowns. Moreover, it was very tiring and stressful to find someone to recover the vehicle issues. I felt that there should be a proper organized system to handle such type of situation. According to service providers (Technicians, Mechanics) perspective they suffer with greater difficulties in finding a customer without having a proper system because some of the customer had the benefit of getting special based on their customer relationship.

Hence all the above matters motivated me to work on a customer user friendly, economical system which can be developing until Online Automobile Service Platform.

**1.3 Overview of the report**

This report contains 4 chapters. Such as;

* Introduction
* Reflection
* Future Work
* Detailed thesis content

From the first chapter, it gives an idea about the background of the proposed system as well as how I was motivated to develop such a system.

From next chapter, it basically talks about the issues I faced during some of the stages while it discuss how I overcome all of them during various stages of the software development life cycle model. Moreover up to now and the future works that I have to do.

Last chapter incorporates a review of the final thesis report mentioning what will be incorporated in to it.

**2. Reflection**

**2.1 Requirement Gathering and Analysis**

**2.1.1 Task**

I gathered primary data by using a distributed form. And then, I shared them with a sample of people. For example,

* Technicians
* Mechanics
* Vehicle users etc.

The form incorporates with general inquiries which are going to help me in the software creation process.

The questionnaire contained with questions as below;

1. What are the common breakdowns in your vehicle?
2. Can you handle a vehicle breakdown in your own?
3. Do you know any other service centre or an application as the proposed system? If so, what are they?

While analyzing the requirements, I used my experiences as well as the future discussion with the Supervisor.

Secondary data were gathered by reviewing the articles, researched papers as well as patent papers.

**2.1.2 Issues**

1. Chosen samples were been incapable to answer the questionnaire without having any knowledge about such type of proposed system.
2. Mechanics and technicians couldn’t clarify their requirements since they were not familiar with the technologies.
3. According to the analysed questionnaire, various people were given different sort of answers.
4. Questionnaire wasn’t been enough to identify the requirements.

**2.1.3 Solutions**

1. I was given a brief introduction about the idea of the system at the beginning of the survey.
2. Initially, I suggested my idea and got feedback from mechanic and technicians to enhance the proposed system.
3. I have done a self reflection to identify requirements.
4. Since I will be a user of the proposed system I generally cared about the requirements as my perspective and feasibility.

**2.2 Designing**

**2.2.1 Task**

By using analyzed gathered data I started designing the Graphical user interfaces of the system. And also I created real time data base using firebase. Further I began to create algorithms for the system.

**2.2.2 Issues**

1. Mobile Application Development is a complete new area of studying.
2. Changing the IDE. When starting the project I planned to develop the system by using react native. But after several supervisor meet ups he suggested me to use Android Studio.
3. Android Studio is completely new to me.

**2.2.3 Solutions**

1. I did a case study about mobile application development and followed an online course on Mobile Application development.
2. After having many discussions with experts I selected Android Studio as developing environment.
3. Get to familiar with Android Studio while working on it.

**2.3 Implementation and testing**

**2.3.1 Task**

I selected Agile as Software developing methodology. Since this is as Android based mobile application it is easy to develop the system sprint wise. Because of each sprint is having testing part it will help to achieve final product as expected.

**2.3.2 Issues**

1. The main problem I faced is time management. It is hard to develop proposed system while joining a job.
2. The tool which I used to build the Gantt chart was Microsoft project. Since I am new to this tool the initial Gantt chart was build according to incorrect date plan.
3. Had to work stressfully due to the first sprint must be finished and tested before the final release.

**2.3.3 Solutions**

1. By creating the Gantt chart it helped me to keep the project on the track.
2. Re made the Gantt chart until satisfied.
3. Consulted a Mobile Application develop expert to help me with the bug fix.

**2.4Documentation**

**2.4.1 Task**

As the part of the assessment procedure I had to submit four major documents along with signed Progress Reports. The documents submitted are as follows

1. Project proposal
2. Contextual report
3. Reflective report
4. Final thesis report

**2.4.2 Issues**

1. Poor practice of referencing the sources.
2. Select suitable articles, research papers relevant to the system.
3. Some web applications ask for payment when download articles and papers.

**2.4.3 Solutions**

1. Got the support of MS Word for paper referencing.
2. Got the guidance from the supervisor when selecting the paper articles.
3. University network has given the free download access to the relevant sites.

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**3. Future Work**

**3.1 Current Progress**

As to the methodology which I selected for the proposed system, the requirements gathering phases are almost over. It’s unable to decide future requirements of the system until the first sprint will release and test among the selected samples. Up to now I completed designing the database and implemented some main functionalities of the system while design GUI’s for the main interfaces

Initially I’m at the last phases of building up the first sprint and it can be finish implementing within few days. And I would like to test it for one more week with selected samples.

**3.2 To be completed**

The first sprint of the proposed system will be completed by 28th of February 2019. And the finished sprint will be test among the people by 4th of March 2019. And next 10-15 days the first sprint will be finished by fixing all the errors and bugs. And relevant alterations will be done as to feedbacks of the selected samples.

By the last week of upcoming April, the final product will be release and people will be able to use it.

Furthermore, as a stage of the assessment procedure, final thesis report will be submitted.

**3.3Conclusion**

At the end of the Reflective Report I got to know to keep the quality of the proposed project I need to handle the triple constrains: “Scope”, “Cost” and “Time”. Within these three, Time is the most critical constraint that is difficult to handle.

**4. Detailed Thesis Content**

Title page **–** The main page of the thesis report will contain the University logo along with University name and the Degree pathway. Furthermore it contains the project title as well as a short description about the project. The “Student name” and the “University ID number” also included in the Title page.

Abstract – The abstract of the report will contain summery of how the proposed system will work and requirements for such type of system.

Acknowledgement **–** This will include a statement of gratitude for every single person who helped through the whole procedure to make it triumph.

Content Page/List of figures/ List of tables/ Acronyms/Abbreviations.

**Chapter 1: Introduction**

* 1. Project Background **–** Project Background will contain the explanations for the proposed system and how the system will satisfy the requirement.
  2. Project name and Objectives – Aims of the projects will include the point of the undertaking the proposed system and the Object of the project will describe the achievements of the system.
  3. Project Realisation – under the project realisation it describes how the Requirements Gathering phase of the methodology is gone and overall summery of system development phase.
  4. Structure of the report – Under this section it includes an overall idea about the final thesis report as well as it describe each of the chapter.

**Chapter 2: Literature Review**

2.1. Introduction – This chapter describes about many kind of vehicles, increment of vehicles as well as the common vehicle issues. Also in this part it I have included the important of a vehicle breakdown cover service and common automobile services.

2.2. Review of the Scholar Articles

2.2.1. Vehicle Service Repair Network – This chapter will include about the reaction of people at a vehicle breakdown. And also about the procedure and the framework of an efficient service people require for their vehicles. The overall network diagram which they used to Vehicle Service Repair is also included in this chapter.

2.2.2. Equipment Service Vehicle with network-assisted vehicle service and repair – This chapter describes how the investigators found a way to provide the more efficient service to the customers.

2.2.3. Vehicle Repair Cost Estimated Acquisition System and Method – In this chapter I have included about the investigation done to find a method of calculation repair estimates for vehicles. The Vehicle Repair cost estimate acquisition system database and network server diagram, Notify Repair Provide Process, Notify Repair Provide of Acceptance Process, Damage Report Post GUI, Damage type Select GUI, Mileage Select GUI, Shop Dashboard GUI and Shop Bid GUI is also described.

**Chapter 3: Methodology**

3.1. Methodology – This chapter will explain the kind of methodologies and the methodology that has been chosen to develop the system. Also it describes about the Agile Methodology as well as the advantages and disadvantages of agile methodology.

3.2. Planning – This chapter will explain the way of planning of the proposed system.

3.3. Requirement Gathering& Analysis –This chapter will explain how the requirements collected as primary and secondary data gathering and analyzing with the relevant Questionnaires and the analyzed answers in the form of charts.

3.4. Design – This chapter will include the design phase of the proposed system. It describes the project Gantt chart as well as the Work breakdown chart. And also the Use Case diagram has designed to determine how the users interact with the system.

3.5. Implementation & testing – This chapter will include all the details about the implementation and the testing of the prototype of the system further it will include code segments.

**Chapter 4: Results and Discussion**

This chapter will include the test cases and their results. As evidences required screenshots during and after testing and debugging will be included to show the results obtained.

**Chapter 5: Evaluation**

This chapter will include how the evaluation is done and the critical discussion is done based on the evaluations of the system.

**Chapter 6: Conclusion**

6.1 Conclusion**–** This chapter will give an overall idea about the importance of the project and its progress.

6.2Limitations**–**This section will include the limitations I faced throughout the time period of this project.

6.3Future work**–**This chapter willconclude the report andwill include any future development that can be added to the system in future

**References-** The external sources that have referred will be cited here according to Harvard style.

**Appendices–** other supportive materials which supports the document will be mentioned here.