

FINAL YEAR PROJECT 2



Title: Marketplace Apps for e-Nelayan Kota Samarahan

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ABSTRACT

Fishermen are one of the most essential part of a society where they supply fresh seafood to be consumed by other part of society such as customer. Most of these fishermen, mainly in Kota Samarahan still practices traditional trading method where they sell their fish at place such as fish market, door to door and others. As we know, our country, Malaysia has reach modernisation in parallel with other developed countries. Almost every member of the society has widely used mobile devices such as a smartphone. The most dominant part of mobile devices is a mobile application. So, this project will introduce a mobile app which allows the fishermen to sell their fish directly to the consumer. The fishermen will be able to advertise their fish or other types of seafood products in the mobile app.

ABSTRAK

Nelayan merupakan salah satu bahagian daripada komuniti yang penting di mana golongan ini merupakan penyumbang kepada keperluan makanan laut yang segar untuk ahli komuniti yang lain. Kebanyakan golongan Nelayan ini terutamanya di Kota Samarahan masih mengamalkan cara tradisional untuk menjual hasil tangkapan mereka seperti menjual di market, rumah ke rumah and sebagainya. Seperti mana yang kita ketahui, negara kita iaitu Malaysia telah mencapai permodenan sejajar dengan negara maju yang lain. Hampir keseluruhan ahli komuniti di Malaysia telah menggunakan telefon pintar. Antara komponen terpenting dalam sesebuah telefon pintar ialah aplikasi telefon pintar. Sehubungan dengan itu, projek ini akan memperkenalkan sebuah aplikasi telefon pintar yang membolehkan nelayan menjual hasil tangkapan mereka secara terus kepada pelanggan. Selain itu, nelayan juga boleh mengiklankan ikan atau lain-lain produk makanan laut menggunakan aplikasi ini.

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Chapter 1: Introduction

1.1 Project Title

Marketplace App for e-Nelayan Kota Samarahan.

1.2 Introduction

The e-Nelayan mobile application project is conducted to help the fishermen mainly in Kota Samarahan with their fish trading activities. The usage of smartphones has been mainstreamed for people nowadays. But there is no available mobile application that can be used by the fishermen specifically in Kota Samarahan that fully utilise their fish trading activities. So, the presence of mobile marketplace application can be an excellent platform for the fishermen to trade their fish with other groups of people in Kota Samarahan. For the proposed marketplace mobile application, there are several target groups of users for this mobile application which are the fishermen in Kota Samarahan themselves, the customers, the fish dealers and the fishmonger. By referring to the group of users as the central purpose, there would be several essential features that will be made available in this marketplace mobile application.

1.3 Problem Statement

The absence of a modern platform such as mobile application can be a limiting factor to the movement of evolution for the fisheries industry in Kota Samarahan. Fisheries industry in Kota Samarahan up until now only practising the traditional method to deliver the fish from the fishermen until the consumer can consume it. Besides, there is also an absence of platform such as mobile application that can help these fishermen in Kota Samarahan to sell their catch to the consumer in a simpler and faster manner.

1.4 Scope

This project is conducted to produce a fully working fish marketplace mobile application that can be used by the people in Kota Samarahan, mainly fishermen, fish dealers, fishmonger and customer to perform the fish trading transaction. The scopes of this project are:

- i. This mobile application will be accessible using the user's Android devices.
- ii. This mobile application will not be available for the use of PC with an operating system such as Windows and macOS.
- iii. The targeted users for this mobile application are fishermen, fish dealers, fishmonger and customer in Kota Samarahan.
- iv. This mobile application is used as a marketplace for fish trading for users in Kota Samarahan.

1.5 Aims and Objective

The main reason to conduct this project generally is to help the fishermen in Kota Samarahan increasing their sales. The interview and survey have been done to several groups of targeted users in Kota Samarahan such as the fishermen, fish dealers, fishmongers and the customers. The feedback from this interview and questionnaire shows a positive result where most of them are agreed if there is a mobile application that can help them with the fish trading transaction. Most of the fishermen that have been interviewed also believe that the mobile app will help them promote their fish and can make the fish trading less complicated if compared to the traditional method. Based on the results of the interview and survey, the aims and objectives of this project are:

- I. To analyse and enhance the current manual system of fish trading activity in an online platform using the mobile application.

- II. To design and implement a mobile application to help the fishermen to calculate their income easily through the features in the mobile app.
- III. To help the fishermen market their catch without the needs of the middle person.

1.6 Brief Methodology

The methodology that is chosen for this project is Extreme Programming (XP). Extreme programming is one of the methodology available in Agile methods. Extreme Programming is a software development methodology that allows the improvement of software quality in order to fully satisfy the needs of the clients (Powell-Morse, 2017). Figure 1.0 shows the cycles in Extreme Programming (XP) methodology.

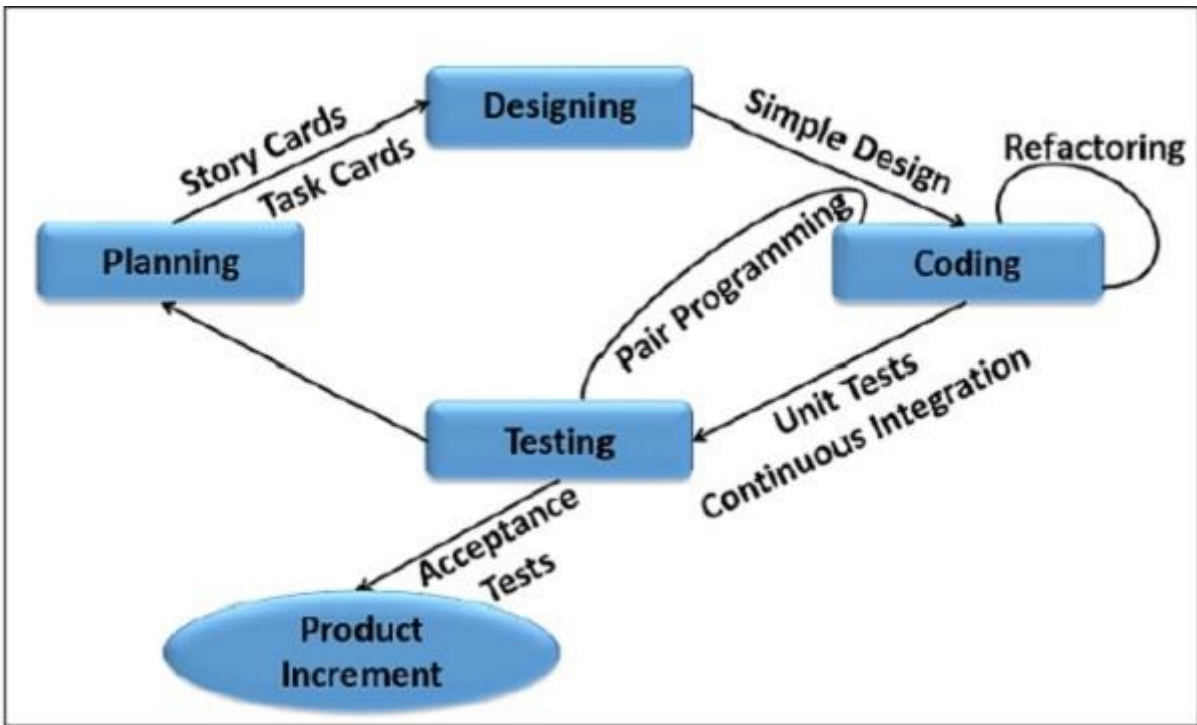


Figure 1.0 Extreme Programming Methodology Cycles.

In this project scope, the clients are the fishermen, fish dealers, fishmongers and the customers. This is because they are the targeted users that are going to use this mobile application. By using Extreme Programming method, the quality of this mobile application can be change from

times to times according to the user's satisfaction level. It is easy to practice this method for the development of this mobile application because the opinion from the targeted users can be communicated through methods such as interviews and questionnaire. Besides, the feature of the mobile app can be frequently updated since there is the specified timeframe for each software cycle to meet the requirements from the targeted users. As the cycle past from one iteration to another, the quality of the mobile application increases from those iterations. There are five main values that needed to be paid attention while using Extreme Programming methodology, which are simplicity, communication, feedback, respect and courage. These values need to be followed to ensure the effectiveness of the development process. There are also some rules in Extreme Programming that is needed to be followed to support the development process.

1.6.1 Phases in Extreme Programming

1.6.1.1 Planning

In this phase, the requirements are gathered from the targeted users. The stories from the targeted users is recorded and the requirements are extracted from their stories. As for this part, the interview sessions have been done with fishermen and fish dealers in Kampung Muhibbah. While the questionnaire has been spread to the customers and fishmongers also with the same intention. The results from the interview and questionnaire will be used as the planning for the requirements needed to develop the mobile application. Besides, the story from the users will also be used to preparing the planner and planning the time to complete this mobile application.

1.6.1.2 Designing

In this phase, the mobile application will be design according to the plans from the first phase. This phase includes grouping the iterations in order to complete the projects accordingly and satisfy the needs of targeted users.

1.6.1.3 Coding

This phase is the most important phases for Extreme Programming methodology. This is because the actual product from the project will be produced through this phase. The coding process also needed to be done according to the plan framed in phase one. One of the examples is to produce code with a specified function or features of the mobile applications in a planned time frame.

1.6.1.4 Testing

For the testing phase, unlike the Waterfall model, which each process needed to be done sequentially (Sergeev, 2016), Extreme Programming method promotes this phase to be concurrently done with the development phases. This is done to ensure that all the problem or bugs occurred within the mobile application during development can be readily solved rather than waiting it to be employed first. This phase also includes acceptance tests in which the mobile application will be demonstrated to the targeted users on every end of the coding phase in each iteration.

1.6.1.5 Listening

This phase mainly involves feedback from the users. Users play a very crucial role in this phase. The feedback from the users will be recorded to produce a new design if there should be any. This contributes to a new iteration for the designs of the mobile application. If there occur to be any changes, the mobile application will be updated accordingly in the next iteration. This phase goes every iteration to ensure that the satisfactions of the targeted users can be fulfilled.