

MELAKA CRIME VISUALISATION APPLICATION

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MELAKA CRIME VISUALISATION APPLICATION

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The report is submitted in partial fulfilment of the requirements for the Bachelor of
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**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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2015

DECLARATION

I hereby declare that this project report entitle
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is my original works and not copy from any resources except a few parts that were
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SUPERVISOR: _____ DATE: _____
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BINTI ABDULLAH)

DEDICATION

This study is dedicated to my beloved parents, my father, Mohd Rozani bin Mohd Noor and my mother, Halimah Binti Abdul Rahman, both of whom gave me the foundation of something they had never enjoyed. They gave me a valuable thing that others people can't give which is love, trust and education. With the love they gave makes me feel stronger to face a world with many challenges. With trust, i feel more confident to represent them as a future and lastly, with education they provide gave me strength to achieve a better life.

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ABSTRACT

Melaka Crime Visualisation Application is an application for viewing statistics of crime that happens in Melaka. This application will provide a map of Melaka which the district been color according to the total of crime cases happen in that district. There are also some charts and graphs for viewing the number of crime cases which can be choose to specific location or category. There are also functions to manage the data like location, crime cases, and color setting that will be used in the application. This management part included add data, update data and delete data. The methodology of this project is object-oriented analysis and design approach. The application will be develop using php, html, javascript, and sql query programming language. The users are public people and police staff of Melaka.

ABSTRAK

Melaka Crime Visualisation Application adalah satu aplikasi untuk memerhati statistik jenayah yang berlaku di Melaka. Aplikasi ini menyediakan peta Melaka dimana daerah diwarnakan mengikut jumlah kes jenayah berlaku di daerah itu. Terdapat juga beberapa carta dan graf untuk memaparkan jumlah kes jenayah yang boleh dipilih mengikut lokasi atau kategori tertentu. Terdapat juga fungsi untuk menguruskan data seperti lokasi, kes-kes jenayah dan aturan warna yang akan digunakan dalam aplikasi itu. Bahagian pengurusan ini adalah termasuk menambah data, mengemaskini data dan memadam data. Metodologi projek ini adalah analisis berorientasikan objek dan pendekatan reka bentuk. Aplikasi akan dibangunkan menggunakan bahasa pengaturcaraan php, html, javascript, dan sql query. Para pengguna adalah orang-orang awam dan kakitangan polis Melaka.

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CHAPTER I

INTRODUCTION

1.1. Introduction

Nowadays, crime statistic in Malaysia has been rising from day to day. People can get the news of the crime from the newspaper, magazine, television, and websites. But there are only a few site or source that showing statistic of the crime in Malaysia. The authorities might be worried about their safety as there is less awareness about the crime cases.

So, within this project, authorities can increase their awareness about the crimes. This project also prepared a statistic view about the crime so that users can know which place has a lot of cases recorded. As people nowadays use lot of mobile application, the project will be a system of a mobile application. With this project, people can easily see the crime cases that happen in details anywhere as long as they have a mobile.

For now, the project will be in Malacca. It will show a Malacca map with color system and statistic view including graph and pie chart about the crime. Users also can view details about the crime cases. The crime cases will be updated by the IPK Malacca staffs.

1.2. Problem statements

1.2.1. Information from website not enough or difficult to be understand.

Some website provides information about the crime but some authorities having problem to understand the presentation of crime information. A better presentation of data and information might be needed to make people getting correct information.

1.2.2. Unknown or unreliable source of information.

Source of information of the crime could not be confirmed correct and trustworthy. People need correct information of crime which comes from trustworthy sources.

1.2.3. Slow information about the crime.

Some people might need to get information as soon as possible and anywhere they want but sometimes it may be difficult to get the information required. Much information can be get form the websites but take time to search for them.

1.3. Objective

1.3.1. To help users to easily understand information about the crime.

A better visualization of crime cases in this system can help authorities to get better understanding about the information. So, this project will create a better visualization of crime cases.

1.3.2. To provide more trustworthy and accurate information about the crime.

System can help the authority get the right and correct information about the crime. Sources of the information will be confirmed and provided by authorized staff of IPK Melaka. So, this project confirms trustworthy and correct crime information for the people.

1.3.3. To facilitate user in getting information about the crime.

This project will help people to get information about the crime that happen in Melaka. User can get information faster with this system as it is a mobile application that can be use using mobile phone. Users do not need to take their time to search about the crime information they needed from the websites as this application is especially for crime information.

1.4. Scope

1.4.1. Module

1.4.1.1. Visualization Map for Crime Statistic

This module will provide a map that can show statistic of the crime that happen in Malacca. Map color change according to the total of crime happen at that district. People can get more information from this module when they click the map.

1.4.1.2. Login

Admin and police staff can login to the system to manage the system and they have special module or functions for them to handle the system. Users that use this system for getting information do not need to login.

1.4.1.3. Manage Crime Cases

This module can only be used by admin. Admin can add and update the crime cases that happen in Malacca. The crime statistic also is managed in this module.

1.4.1.4. Manage Crime Category

This module can only be used by admin. There are many category of crime that happens nowadays. Admin can add and update any category of the crime.

1.4.1.5. Manage Map Setting

This module also can only be used by admin. This module will decide the color of the map. Admin can update color threshold according to maximum crime cases.

1.4.2. User

1.4.2.1. Admin

Admin will be staff of IPK Malacca. Admin have more functions and module in this system as they have to manage the system.

1.4.2.2. Police Staff

Police staff of IPK Malacca. They can manage the crime event and category of the crime.

1.4.2.3. User

User will be any people or public people. They can only view the map function which also contains information about the crime cases.

1.5. Project Significant

This project is to create a system that can help people to get information about crime statistic. Maybe there are some websites or application that already prepared to give information about crime but this new application is to deliver information better and easy to understand. This new application will be created containing map, chart and other visualization of data which can be understand better than text or other type of data presentation.

Existing application or websites about the crime also cannot be confirmed the correctness of the information. This application that will be created is manage by the police staff which their information for sure trustworthy and correct. The crime cases that happen in Malacca will be updated to the system by the police according to report of incident or events make by the people. So, this application will provide correct information about crime to the people.

This project is also an application that is used in mobile phones that support android system. Nowadays, most people using mobile phone which they can bring it wherever they want. So, people can use this application easily and anywhere they want. They can get the information faster and efficient by using this application on their mobile phone.

1.6. Expected Output

An android application that helps people to be more concerned about their safety. People also might take a good action to counter crime and be more prepared. With these actions, the rate of crime also will be reduced and people will feel safer to go anywhere.

User of the system also can easily get information about crime just by using their mobile phone. This mobile application also will save more time for people to get information. With a good visualization of crime information, users can easily understand about the crime details.

It will also help the government take further actions by placing the more policemen at area with more crime and build more police stations nearby. It is also to improve the efficiency of police's work by using this system and police will monitor the dark area to prevent crime to happen again.

1.7. Conclusion

In this chapter, the introduction about the application that will be created during the project be listed out. The application is about the crime statistic visualization which is for helping people to get information about the crime cases that happen in Malacca.

The problem with existing system, websites and application that provide information about crime is unknown or unreliable source of information and sometime difficult to be understand by the users. So, the objective of the new application is to prepare trustworthy information about the crime by showing the crime cases data in a better visualization like maps and graph.

In the next chapter, the methodology about this application will be listed out. The methodology is about how the application will be design and created. There also will be some literature reviews about application or websites that have relation or connected to this new application.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1. Introduction

One of the main points of Melaka Crime Visualization Application is for visualization of information of crime cases. In computer science research, the term visualization describes the field of study that uses interactive graphical tools to explore and present digitally represented data that might be simulated, measured, or archived. Some people prefer visual than text to get information as it can be more effective to deliver information.

Other main point of the system is to create a mobile application which mostly be used by the people nowadays. A mobile application is a computer program designed to run on smartphones, tablet computers and other mobile devices. Just using mobile phone people can get fast information anywhere they want as long as

they have internet connection. The system is to help people get information about crime anywhere and anytime they want easily.

In this project, an application for visualization of crime cases statistic will be created following object-oriented analysis and design. This approach is one of the common use approaches in creating a system as it is suitable in designing an application by applying the object-oriented paradigm and visual modeling throughout the development life cycles. It is also best conducted by iterative and incremental way.

2.2. Facts and Findings

2.2.1. Domain

Melaka Crime Visualization Application is an android application which provided visualization for users to get information about crime cases statistics that happen in Melaka. Users can use this application in their mobile that support android.

Mobile applications have many advantages as a system like portability and ease of development, deployment and maintenance, inherently multi-device, and mobile is a feature.

Melaka Crime Visualization Application is created to provide visualization for information about crime cases that happen in Malacca. It is also the most effective way for experts and specialists to analyze data. Visualization also can ease decision making processes and facilitate communications. It can be used to render abstract information in a visual form that allows for interactive exploration and brings new insights in complex data.

2.2.2. Existing System

Melaka Crime Visualization Application will be referring to Malaysia Crime website as an existing system. This website provides information about crime cases that happen in Malaysia. This website can be view using web browser as it is a web based system.

Malaysia Crime has information about crime in all places in Malaysia but the Melaka Crime Visualization Application only cover crime information in Melaka. The Malaysia Crime website has map with icon markers based on category of crime but the icon markers is limited to some category only. This website listed the newest crime cases under the map and the title of the cases can be clicked to go to stories of the cases.

Users or people can add information about the crime cases into this Malaysia Crime website. For Melaka Crime Visualization Application, only police staff can update and manage the information of the crime cases. So, the information will be more trusted. This new application also can be used in mobile phone directly as an application but Malaysia Crime can only be view using web browsers.

Table 2.1: Comparison of existing system and new system

No	Category	Malaysia Crime website	Melaka Crime Visualization Application
1	Place Covered	Whole Malaysia	Melaka only
2	Map	Google Map with icon markers	Google Map with different color based on crime statistic
3	Domain	Web based system	Web based and android application system
4	Sources	Any people or users	Police staff in IPK Melaka
5	Statistics	Total of all crime cases	Variety choices of statistics. Examples are total crime in each district, based on category and graph view