Traffic ticket management system

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ABSTRACT

Traffic ticket management System is a traditional traffic ticket management website, the main goal of which is to facilitate managers and ordinary users to manage and check traffic tickets more efficiently, eliminating the tedious offline process.It solves the problem of inefficient processing of traffic tickets for both management and the general public.

It is developed using php, mysql technology to achieve its goal.Traffic ticket management can search and process traffic tickets and also contains features to browse traffic news and pay ticket registration. Administrators can also access the software to edit and manage tickets.

As a website for daily life, it has a simple and clear interface, friendly function layout to achieve the smoothest browsing experience, to create the most efficient traffic

ticket processing. This system replaces the traditional method of mailing tickets, going to the Public Security Bureau to inquire and pay

INTRODUCTION

This article is a technical report on Traffic Ticket Management System. It mainly introduces the use of traffic ticket management system, design, development, software architecture and other processes, as well as the development of this thinking and summary.

Methodology

1. Software design methodology

Waterfall development method is often used in the development of this project. Including the core project of payment and ticket inquiry, as it focuses on successive phases with different objectives, we started development after identifying the main requirements, which is very useful in communication and cooperation with government departments. The Traffic Ticket Management System is a relatively fixed-function application whose main goal is to manage and process traffic violation tickets. The waterfall development model is suitable for projects with relatively clear and stable requirements. In the early stages of a project, it is usually possible to define the functionality and performance requirements of the system more clearly, which makes the waterfall model more applicable in the requirements analysis phase. In addition, the waterfall development model has a clear sequence of phases, including requirements analysis, design, implementation, testing and deployment. For the traffic ticket management system, the phases can be carried out sequentially in this order to ensure the orderly progress of the project. The waterfall model emphasizes the completion of one phase before moving on to the next, which is conducive to controlling and evaluating the process and results of each phase. This is important for the development of a traffic ticket management system to ensure that each functional

module and phase is fully tested and validated. This also allows both parties to have good control over the development process

2. Model design

2.1 Activity Diagrams

An activity diagram is an important UML diagram that describes the dynamic aspects of a system. Activity diagrams also summarize user details in the system. Figure 2.1 shows the activity diagram for the Traffic Ticket Administration. After logging in the users change to two categories: normal users and administrators. These two types have different permissions.
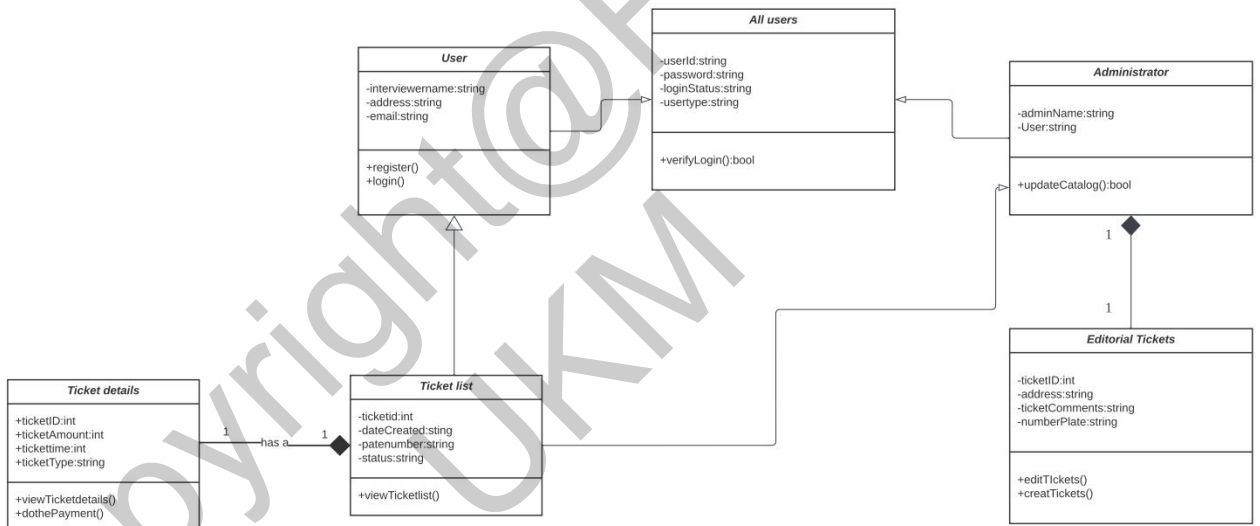
Figure 2.1. Activity Diagrams

2.2 Context diagram

Context diagrams clearly identify external entities that interact with the system, including other systems, users, organizations, or devices. This helps to understand the upstream and downstream relationships of the system and ensures that the system is properly connected to external entities.
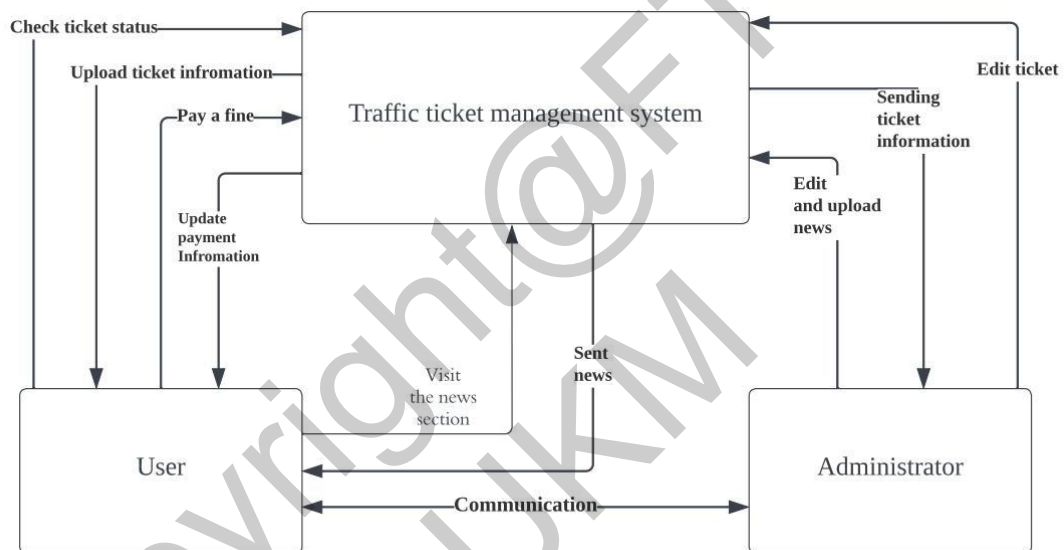

Figure 2.2. Context diagram

2.3 Client-Server Mode

A client-server model is shown in which a user, as a client, sends a request to a server and the server responds by accepting or rejecting the request to connect to the client. Before the user logs into the application, the client device sends a request to the server to confirm acceptance of the user's login. After the user successfully logs in, the user can start modifying personal data and applying to view other user data requests.
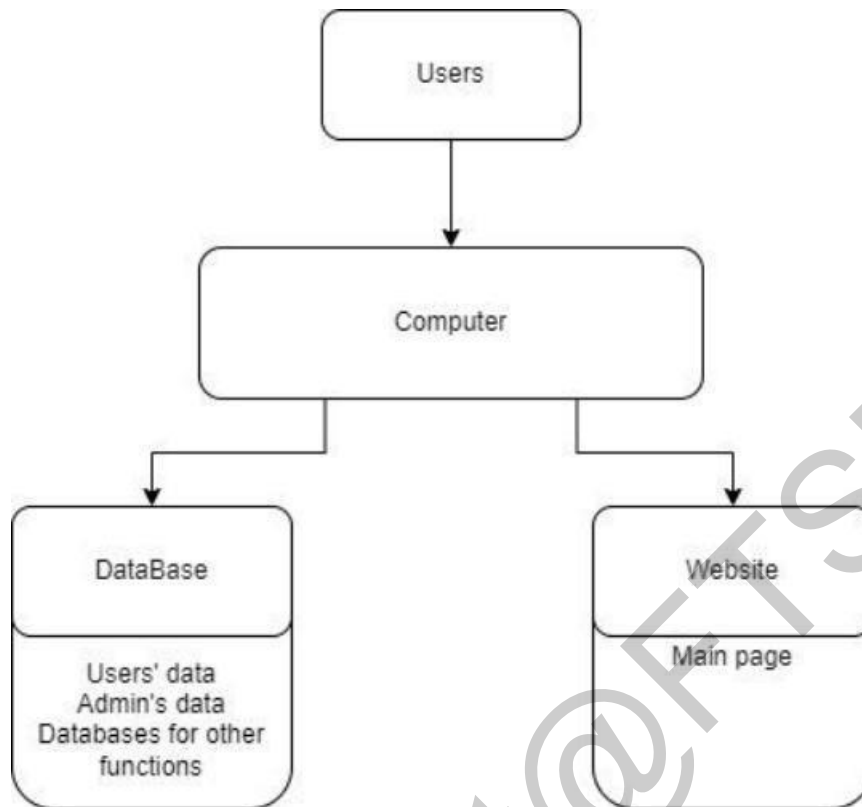
Figure 2.3. Client-Server Model

2.4 Hierarchy Model

The hierarchical database model requires that each child record has only one parent record, while each parent record can have one or more child records.
Figure 2.4 shows the hierarchical model of the traffic ticket management system. This application contains two main modules, the user and the administrator modules, the user module allows to check orders and pay fines. The administrator module can enter tickets and edit tickets
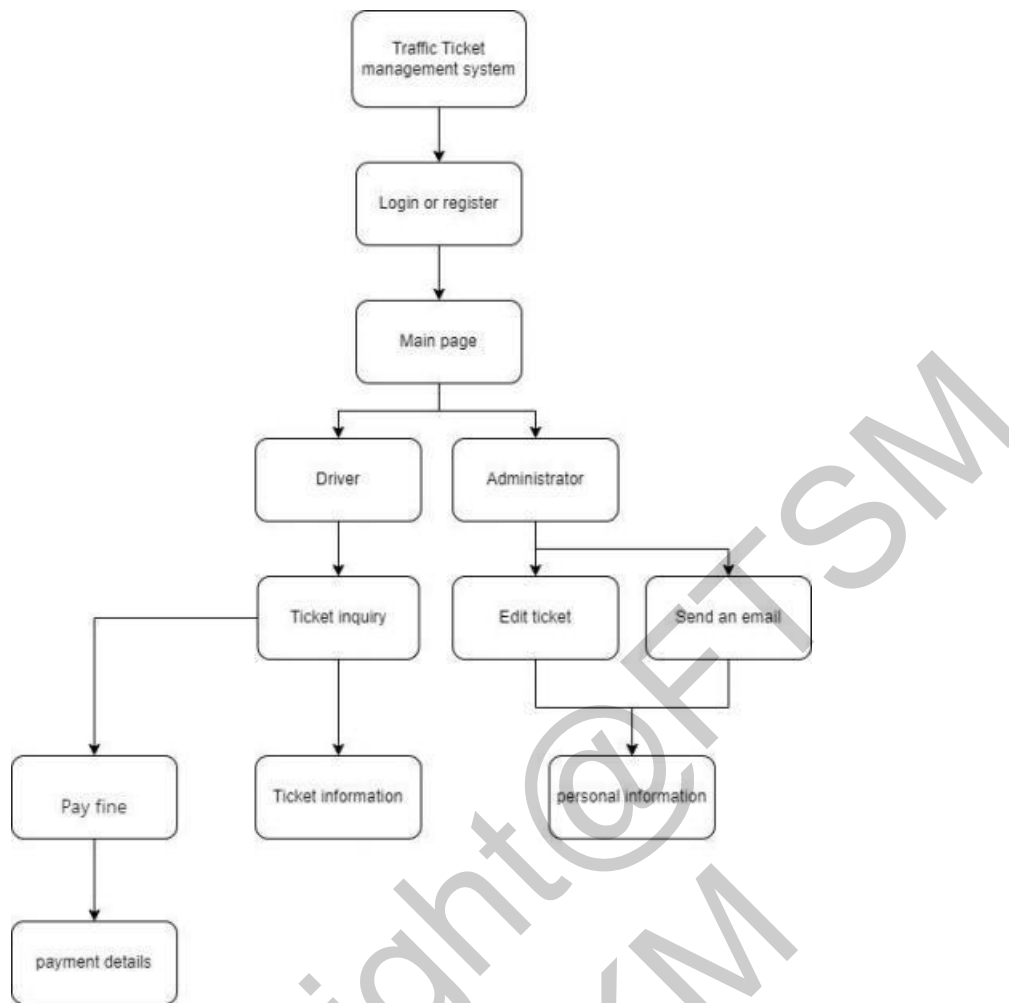
Figure 2.4.Hierarchy Model

2.5 Flowchart

A flowchart is a diagram that represents a workflow or process. A flowchart can also be defined as a graphical representation of an algorithm and is a step-by-step approach to solving a task.

The flowchart displays the steps as boxes and shows their order by connecting the boxes with arrows. This graphical representation illustrates a solution model for a given problem. Flowcharts are used to analyze, design, document, or manage processes or procedures in various areas
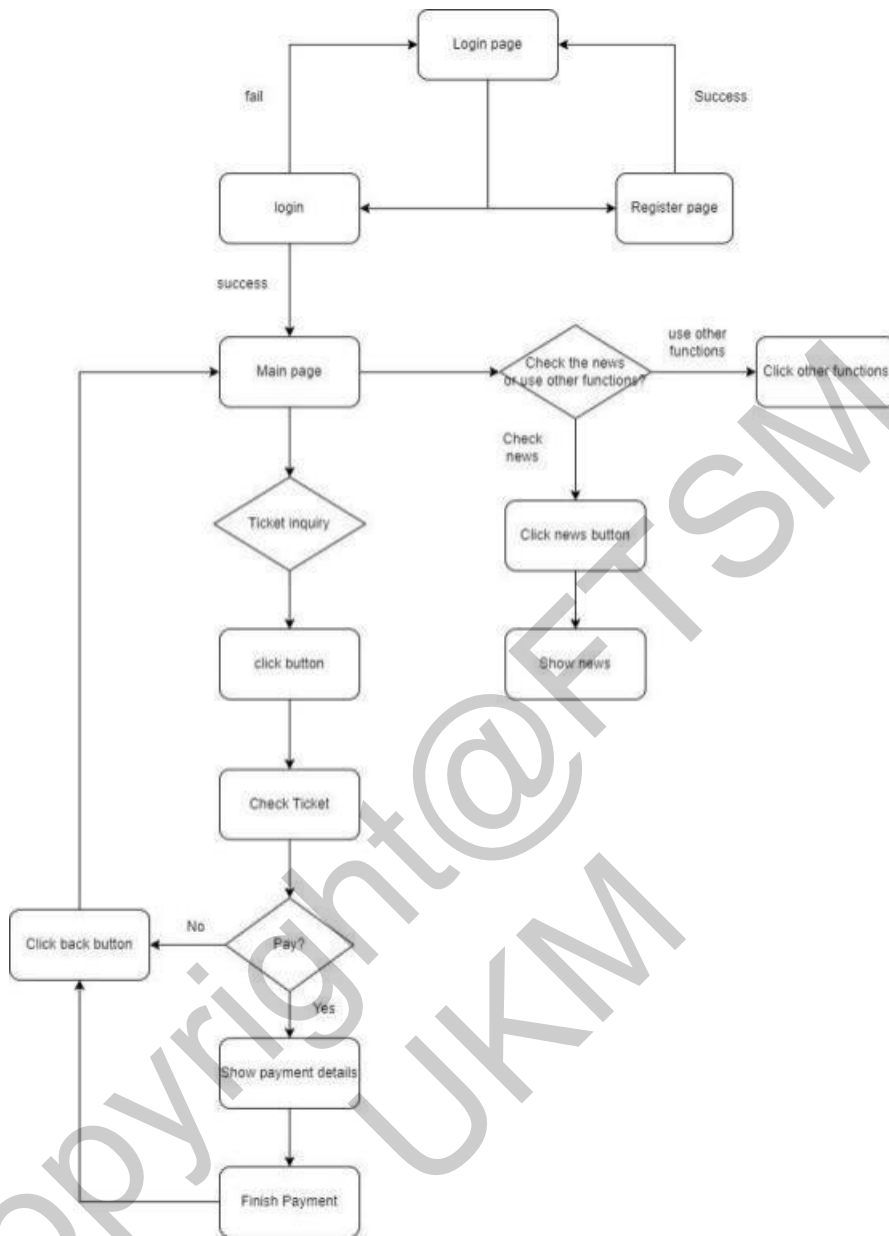
Figure 2.5 System Flowchart

Results and discussion

1. Results

1.1 Database

The traffic ticket management system cannot be used without a stable database where all data needs to be kept in one database.

1.2 User interface

The interface of Traffic Tickets is designed with simplicity as the main goal, just enough to satisfy the users to use it efficiently.

Figure 1.2.1 is the login screen. Users need to complete the selection of the user type in this interface and log in to use the traffic ticket management system normally. If you don't have an account, you can register by clicking Register Account.
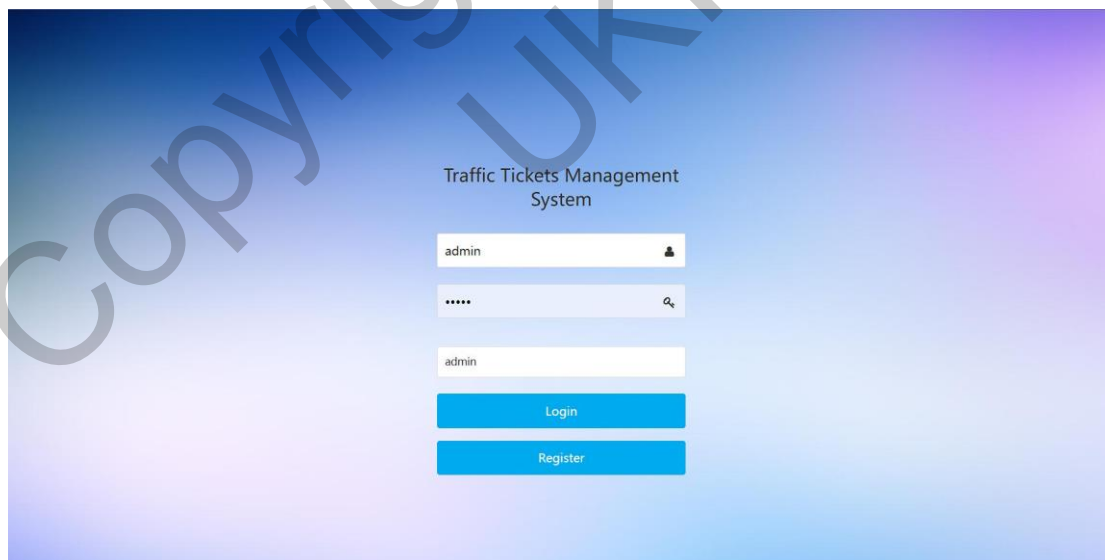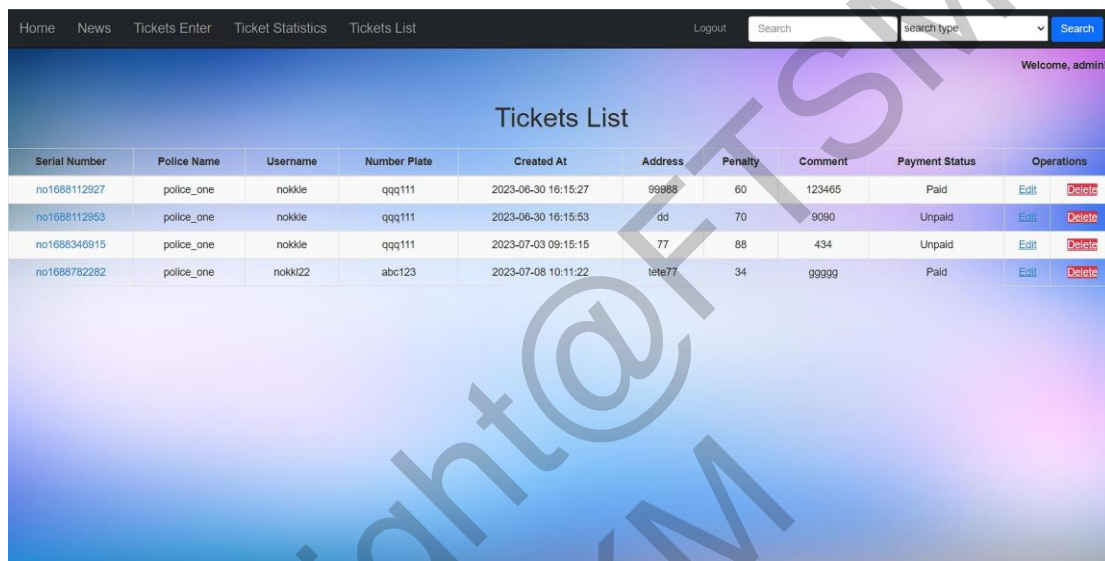

Figure 1.2.1 Login page

Figure 1.2.2. is the ticket list page for the administrator, you can see that the administrator can see specific information about each ticket. And there are Edit and Delete buttons after each ticket. If you are a user, you will only see the Pay button on the ticket list page.

Figure 1.2.2 Ticket list page

2. Discussion

In my personal opinion, the current development of the project is still a long way from the expected results.The expected results are still a long way off. I will briefly elaborate on the following points:

2.1 Character limit

During development I omitted the character limit feature, which allows users to enter an unlimited number of characters during the login or registration phase. This would have caused a lot of difficulties and hassles in maintaining the site

2.2Payment Page

Since this is a completely new area and since I am not familiar with how to add the major online payment functions in Malaysia such as Touch and Go, I chose Alipay as the only payment method, although Alipay is still available in Malaysia but it is not a major payment software.And after the payment is complete it doesn't automatically close the payment page to go back to the page it was just on, it jumps to a new page that is exactly the same. Because you have to fill in a callback address after paying, this affects the user experience in case of paying multiple tickets

Conclusion

1. This technical report describes the development of a traffic ticket management system. During the current development phase, we have achieved the following goals

1.1 Software Architecture

The overall operation of the software has been tested and every feature works on the browser.

1.2 Functionality

Most of the features have been able to perfectly meet the pre-development expectations, such as the most crucial ones such as checking tickets, paying fines, administrator editing tickets and so on. However, the payment function can only be realised with a virtual account, because it is not possible to apply for merchant qualification, so only the most basic functions can be realised.

2. Goal

I've finished accessing the payment function so far, but it's still a long way from being properly operational

3. Influence

The research direction of this project is to replace the traditional inefficient way of traffic ticket management through online ticket management. It can be applied everywhere, especially in more economically developed areas with a large number of cars.

4. Shortcomings and suggestions

The development of the project still does not fully meet the expected standards, which reflects my immaturity in planning and goal-setting as well as weaknesses in my ability to write code, such as character features I should have coded in a timely manner instead of ignoring them as unimportant. This development process has also given me a lot of experience. I hope that I can effectively avoid these problems in the future development process. The actual development process is not consistent with the design phase. Excessive pursuit of perfect and demanding features will greatly increase the difficulty of implementation.

Appreciation

I would like to thank my Supervisor Assoc. Prof. Dr. Umi Asma' Mokhtar for his guidance and advice in the process of project development and the college for educating me on my professional skills.

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