



# Application of Pas Card Service at Hang Nadim Batam Airport Based on Web

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## ABSTRACT

### Keywords

Airport PAS card  
System water fall

With the status of an international airport and the size of this airport, the airport enforces a policy, namely that every area in Hang Nadim Airport has certain access restrictions. Airport employees can pass through or enter several vital areas of the airport, in contrast to shopkeepers or tenants, cargo employees, and airline employees, they cannot enter the airport area freely, usually all workers at the airport have certain area restrictions on the card. The airport's Public Address System (PAS) is used and has been determined. The objectives and expectations of this research are to analyze the needs, design, and implement a web-based PAS card service system at Hang Nadim airport. By determining the system design method used by researchers in making this research, namely the Waterfall method, and concluding that, the pass card service system at Hang Nadim Airport Batam currently has too many unnecessary procedures, which makes the bureaucratic process of making existing pass cards. In that place it seems convoluted. With the new system it is hoped that it can cut more unnecessary time and procedures, and the application of web-based PAS card services at Batam Hang Nadim airport which is designed is expected to simplify the process of making the pass card itself, as well as the implementation process at Batam Hang Nadim Airport. Done by installing software and also the required hardware and a system server whose system design only reaches the proposed stage of system implementation.

## 1. Introduction

In the development of technology and systems that are so fast and fast in life and the interconnectedness of human activities today, this technology also affects daily mobility without realizing it. The existence of information technology [1][2] which is the benchmark of an era is the birth of a new culture in human life. Currently, every human activity or work is already in the information technology space itself. However, these technological developments continue to develop and update with the presence of humans who also play a role in the implementation of information technology, with online interactions such as those at Hang Nadim Airport, Batam.

Airport employees can pass through or enter several vital areas of the airport, in contrast to shopkeepers or tenants, cargo employees, and airline employees, they cannot enter the airport area freely, usually all workers at the airport have certain area restrictions on the card. The airport's Public Address System (PAS) is used and has been determined. This PAS card is not only a token of entry permit, but also to control security at the airport by monitoring and controlling access for everyone who has access to certain areas.

The process of making PAS cards here is still using the manual system [3][4] because currently PAS cards at Hang Nadim Airport are processed using Microsoft Excel, without a database-based system. However, not all people or prospective PAS card makers are aware of every requirement needed in making the PAS card, and the card-making process also involves the applicant's requirements in the form of a sheet of paper that has been approved and filed in the cupboard. And that makes it difficult for related employees to search for information when the information is needed for a moment.





For this reason, the researcher proposes that there is a system website as an intermediary between the administrator and the applicant to make it easier for the public or prospective card makers to enter personal data and administrative completeness needed online, and related employees can immediately find out the data of the applicant who wants to make the PAS card, without having to face each other [5][6].

## 2. The Proposed Method/Algorithm

A system or pattern is a collection of various factors that are interrelated, interrelated, and interdependent with one another to achieve a certain goal. Not only that, the system can also be defined as a collection of variables and interrelated and related, and the bonds between entities can be viewed as an accuracy and formed to achieve a desire and have been formalized.

The above statement is based on the theory of research [7][8] that the system is a collection of components that are interrelated to implement requirements, uses and the modeling interface alternately supports to achieve goals. (The system is a set of interconnected components to implement the needs, functions and interfaces that support each other in modeling to achieve a goal).

## 3. Method

The concept of this method is to carry out a systematic approach and sequence starting from the level of system requirements and then leading to the analysis, design, programming, testing, and maintenance stages. If the system that has been raised there is a critical case and cannot be resolved in the system maintenance session until it needs to be brought back up to something in the system to overcome it and this process returns to the initial session is a concept scheduling session, and cannot continue to the next stage of the process if it has not completed the previous stage.

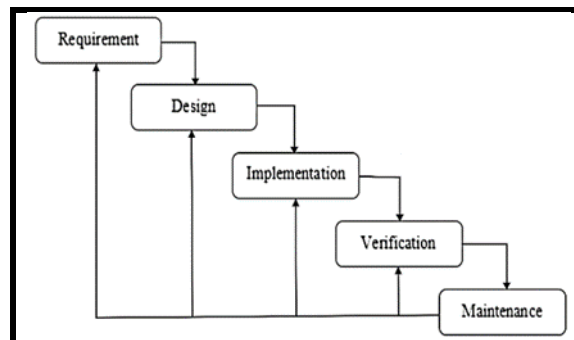


Fig. 1. Waterfall Model

### Research Steps:

#### a. Requirement Analysis

Stages of the needs analysis stage system needs to be created and must be understood by the client and the developer. At this stage the client should be able to explain and define the purpose of the system to be built. As a developer should be able to capture the intent of the client regarding the system to be built as well as providing advice and possible constraints on the system to be built. Documents produced at this stage is the basis for the contract between the client and the developer. This method is applied by means of researching and enter the data that will be used as a point in filling out the questionnaire.

#### b. System Design

Details prerequisites of the previous stage will be examined at this stage and prepared the system design. System design helps in deciding (equipment) and the system requirements and further help in characterizing the general systems engineering.

#### c. Implementation

The implementation is the stage where the public system design has been prepared to be converted into program code and modules which will be incorporated into a complete system according to the contract of employment.



d. Verification

At this stage, the system generated will be combined and tried to test whether the system is working well and that is no less significant according to the agreement that has been agreed. Stage verification is done by people who responded to the questionnaire.

e. Maintenance

The last stage is the waterfall model. Software so, run and maintain. Maintenance is carried out to correct previous errors that are not found. Improved implementation of the system unit and improved service system as new requirements. At this stage the results of the questionnaire were analyzed, mapped and inferred.

## 4. Results and Discussion

### 4.1. Analysis Of System Requirements

Research design is a framework used to conduct research and provides procedures to obtain the information needed to solve a problem. Therefore, before conducting research, the researcher first makes a structured plan, for a solution to the incident in the dissertation recording problem, and then the research design to be described, namely:

1. Carrying out a deepening of literature such as declaring a journal about website system design and understanding the concept of how it works;
2. Carry out observations and consultations in order to obtain the information needed in this research;
3. Determine the needs and collect data about data management on a website basis;
4. Creating a program system design, system view, database design, and designing the required UML diagrams;
5. And test the system that has been created.

### 4.2. System Design

#### 4.2.1. Diagram Use Case

Use Case diagrams to describe an interaction between actors and the system.

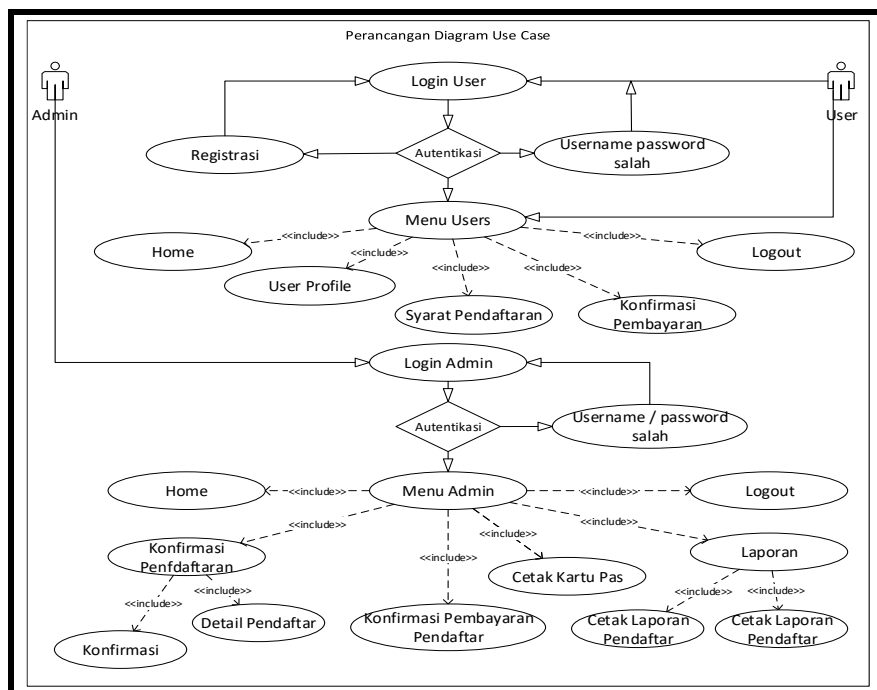


Fig. 2. Use Case Diagram

#### 4.2.2. Class Diagram

The following is a design of a class diagram that has been designed by the researcher by determining the data needed in making the system.

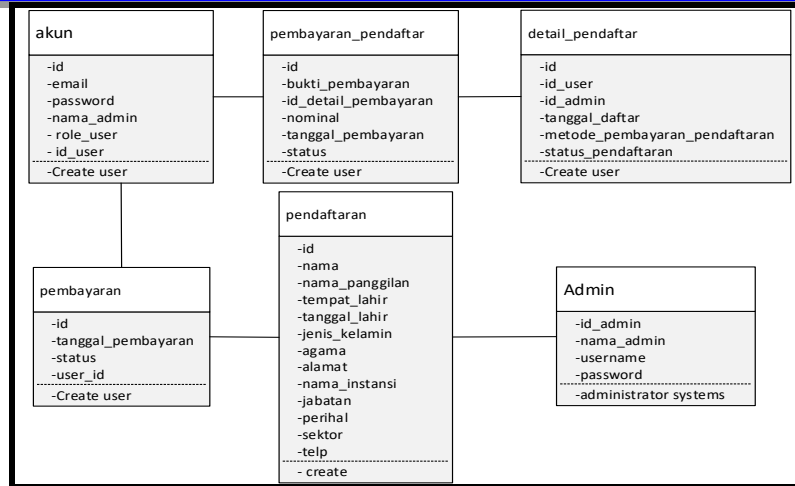


Fig. 3. Class Diagram

4.2.3. Design Application Display

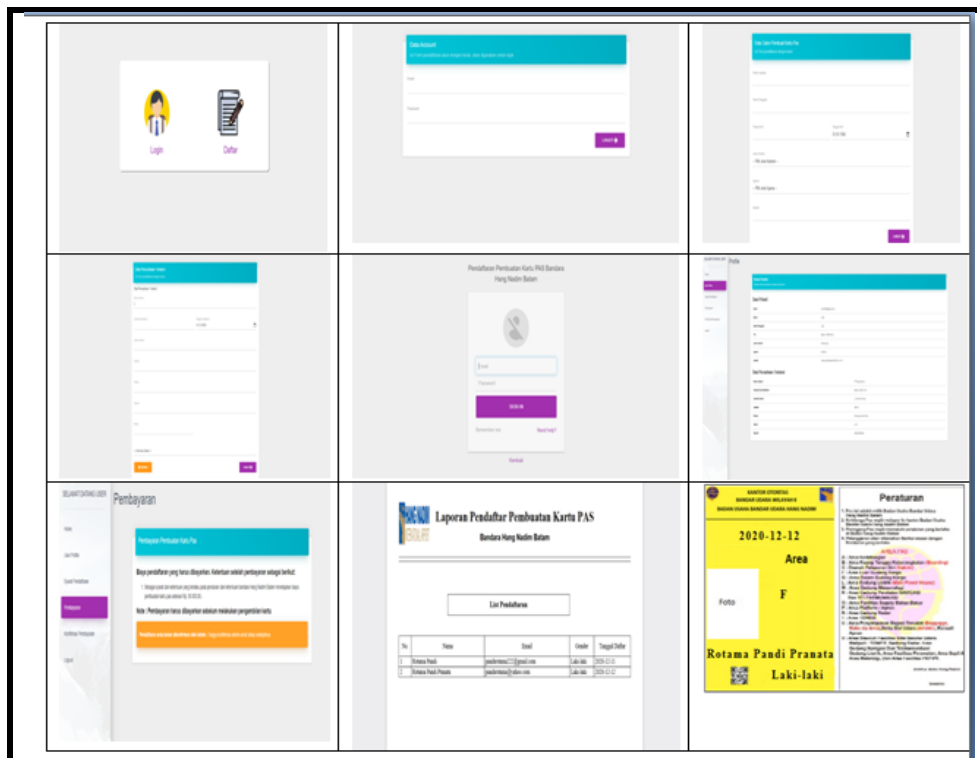


Fig. 4. Application Display

5. Conclusion

Based on the results of the discussion that researchers have done previously regarding the web-based application of the pass card service at Batam Hang Nadim Airport, the researchers concluded.

1. The pass card service system at Batam's Hang Nadim Airport currently has too many unnecessary procedures, which makes the bureaucratic process of making the pass cards in that place seem convoluted. With the new system, it is hoped that it can cut unnecessary time and procedures more;
2. The web-based PAS card service application at Batam's Hang Nadim airport is expected to simplify the process of making the pass card itself;



3. The implementation process at Hang Nadim Airport in Batam is carried out by installing the software and hardware required as well as a system server whose system design is only up to the proposed system implementation stage.

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