



Designing "Meows .Co" Application as a Tool for Cat Lovers

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Abstract. Cats are one of the most common pets kept by humans. During a pandemic, keeping cats has many benefits for mental and physical health. The purpose of this research is to design a mobile-based application that functions as a tool for cat lovers who are still confused about how to take care of their cats, solutions to deal with the types of diseases or infections that can attack cats, and want to adopt cats. To support the research, the research method we use is descriptive, as well as in the application development process uses an object-oriented approach with System Development Life Cycle Waterfall. As a result, designing the Meows application makes it easier for cat lovers to find information using a digital platform that can be accessed through their respective smartphones. The concept of this application is to provide information to cat lovers about how to take good and correct care of their cats and features to share information about cats with other cat lovers. In the end, this application serves as a medium of information for cat lovers to get information more easily and help cat lovers with one another.

Keywords: Application, Cat Lover, Waterfall Method.

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1. Introduction

Cats, which are very popular with many people, are certainly often kept by the general public. But oftentimes, they are faced with obstacles when caring for these cats, as a result, they have to ask other cat owners to get tips on caring for them. Often, cat owners find that they have too many cats and have to donate some of them to other people who want to keep cats, but have difficulty finding people who are willing to accept them. At other times, people who want to

adopt cats also have difficulty finding people who want to let their cats be adopted. Therefore, there is a need for a platform that can connect cat enthusiasts so that they can interact easily.

A journal on factors for pets was conducted by Mikhail Fridman. The journal mentions that people who have pets such as cats have a positive effect of up to 50% compared to those who don't, with almost 30% better heart condition and 20% better on mental health than people who do not have pets [1]. This is in line with research conducted by Dilanti Nur Hafizhah and Stephani Raihana Hamdan on cat owners in Bandung City, also conclude that there is a positive reaction in cat owners in Bandung City who have a high attachment to cats also have higher mental health [2]. In addition, there is a journal on animal maintenance about cat's health conducted by Indra Gunawan, stating that cat skin disease is one of the many types of diseases most commonly encountered by cat owners. Skin diseases in cats are divided into three, namely non-contagious, contagious to fellow animals, and contagious to humans [3]. Likewise, the journal made by Azmadi, states that the concept of a framework for QR code technology in applications can make it easier for users to make donations [4]. This journal is also in line with research conducted by Karmawan, in his research contains the ease of making payment transactions or donations and how to use them using QR codes on Mobile Banking [5]. In a journal on Geographic Information System (GIS) technology studied by Yulianto, in his research. A system is needed that can present information and is facilitated by a distance search that is useful for getting to the nearest location [6]. A study conducted by Jovenn mentioned that people still find it hard to conduct discussions or socializing, because they are embarrassed or do not feel safe when using an online forum because there is a possibility of malicious users who can harm the cats they care about [7]. Therefore, from the above studies, we can see that the role of technology is crucial such as guides about cats or making donations to care for cats, especially during this pandemic. However, literature on technology, especially apps, to guide cat enthusiasts to care for cats properly are still rare.

The purpose of this research is to design a mobile-based application that functions as a digital platform for obtaining related information about cats such as how to care for cats properly and correctly, information related to adopting cats, and others. The research method used in this research is descriptive, as well as in the application development process using an object-oriented approach with System Development Life Cycle Waterfall.

2. Method

The method used in designing this application is a descriptive method with a qualitative approach so that the system design to be made can be conveyed properly. In the stages of designing applications, we use SDLC (System Development Life Cycle) Waterfall. The Waterfall method is a process commonly used in changing and creating systems and models used in software engineering. This waterfall method carries out the design process with a gradual flow, making it easy to determine certainty when designing software [8]. Based on Mitch Kramer's journal in the waterfall method, there are six stages that must be carried out sequentially which must be completed one by one and move to the next stage only when the previous stage has been fully carried out [9]. Here are the six stages in the waterfall method. Stages of the waterfall method that will be used in this research (see Figure 1).

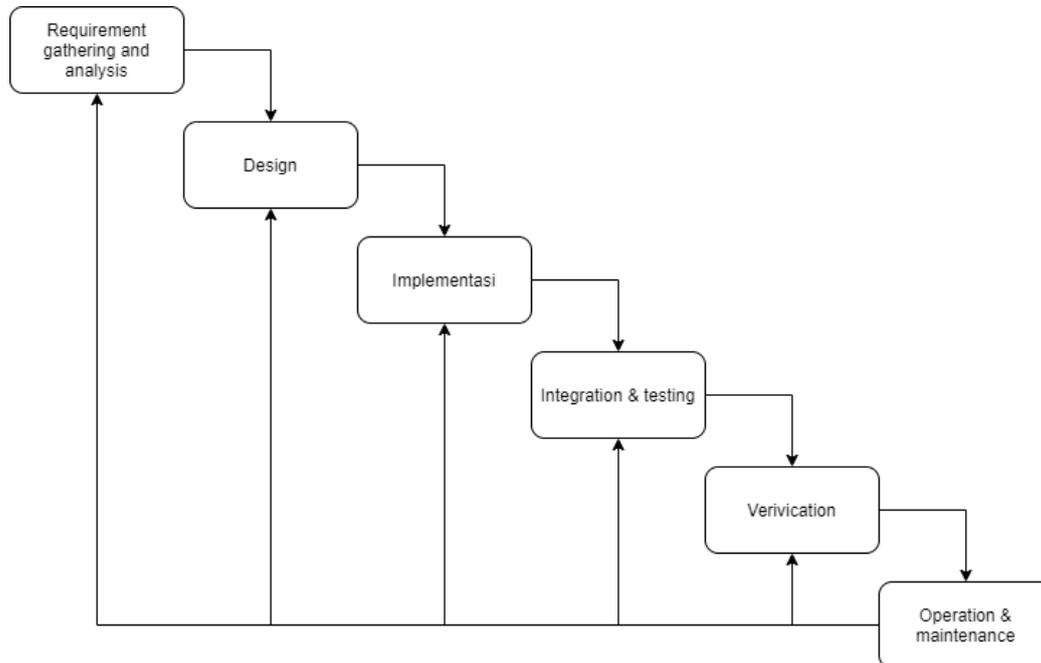


Figure 1. System Development Life Cycle Waterfall

2.1. Requirement gathering and analysis

At this stage, the process of interviewing, discussing, or surveying sources to obtain data will be carried out, then it will analyze the objective that must be achieved by the system to be created.

2.2. Design

At this stage, the process of designing software requirements with an Object Oriented model using UML (Unified Modeling Language) is carried out. First, analyze the external and internal entities involved in the system, then the input and output, and lastly, analyze the business processes that exist in the system.

2.3. Implementation

At this stage, the coding process is carried out based on the design of the previous stage that has been made to facilitate the collaboration process when coding with the use of GitHub. GitHub is a cloud service that is useful for storing and managing a project called a repository (git repo).

2.4. Integration & Testing

At this stage, the software testing process that has been made is carried out to determine conformity with the design and function.

2.5. Verification

At this stage, final testing is carried out by the client, to ensure that the software is following the problems faced or not.

2.6. Maintenance

At this stage, the process is carried out to maintain the system that has been completed, then repair errors if there is malfunction to the system that has been running due to changes in the needs of the usage tool or the occurrence of something unexpected [10].

3. Results and Discussion

3.1. Identifying Requirement

The Meows app is designed to help cat enthusiasts find information related to caring for cats, as well as conduct cat-related discussions and sharing with other cat enthusiasts. The Meows app is equipped with article and posting features. The menu structure of the Meows application is shown in Figure 2 below.

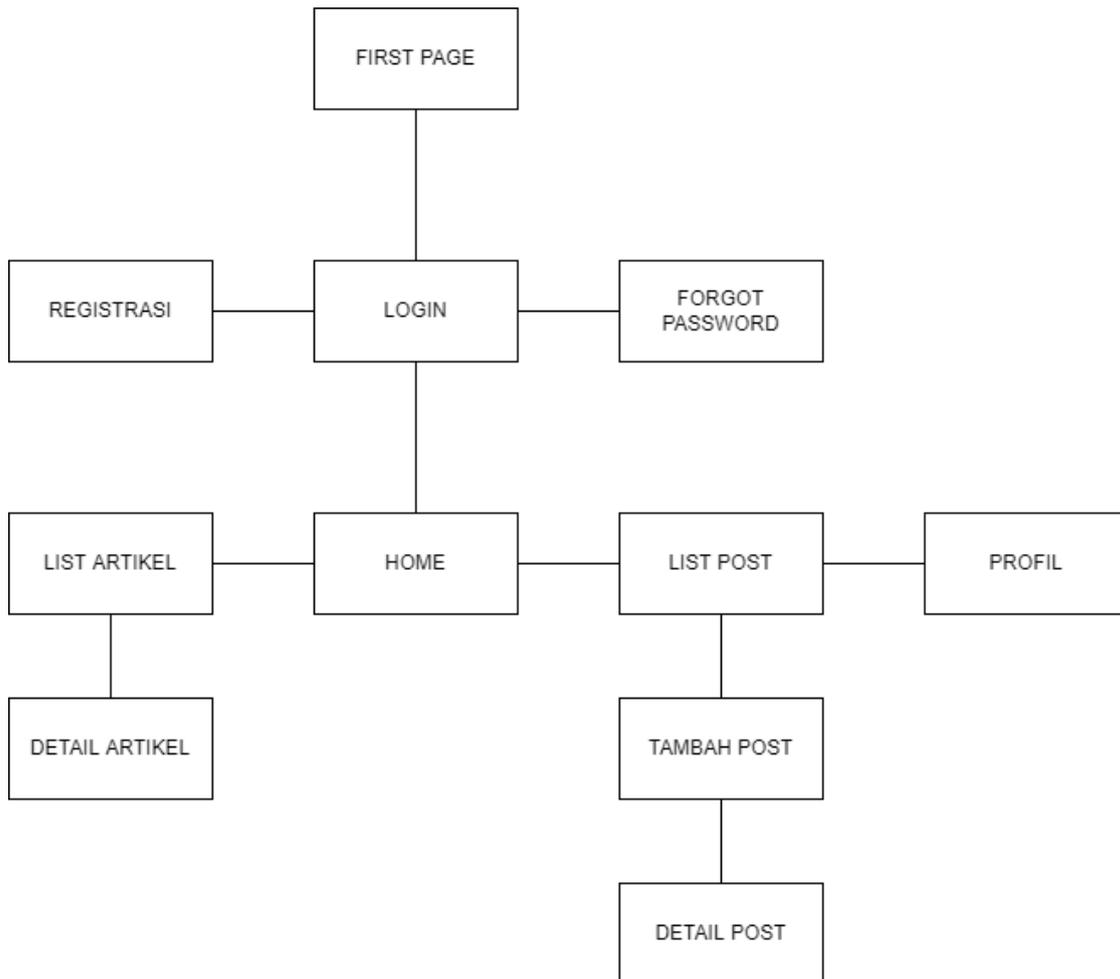


Figure 2. Meows App Menu Structure

3.2. Developing the Initial Prototype

In the early stages of prototyping, there is a front page of the application (see Figure 3). The front page has a slogan and the name of the application.



Figure 3. Meows App Welcome Page

Figure 3 shows an illustration which means that this application is suitable for cat enthusiasts, and there are also buttons for login and registration. The Registration page is shown in Figure 4.

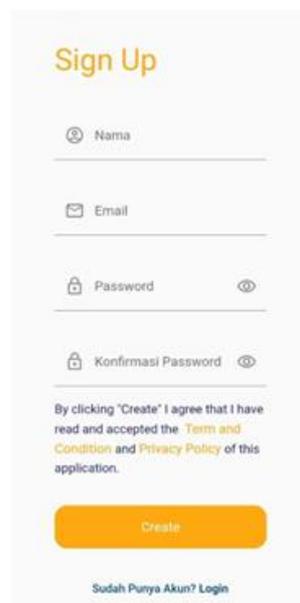


Figure 4. Meows App Registration Page

This page is used to create an account before using the application. Users must fill in data in the form of name, email, and password and read related terms and conditions of the application. Users can also move to the login page by clicking the 'Login' text. Login page is shown in Figure 5.

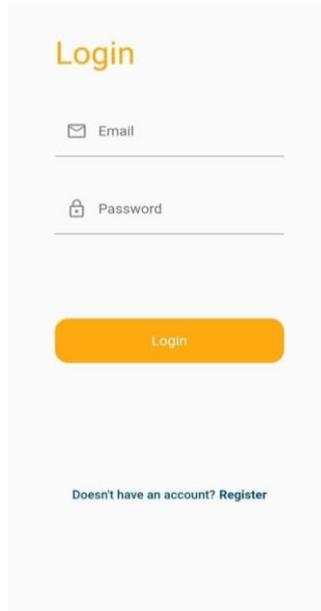


Figure 5. Meows App Login Page

Login page is used for users who already have an account to access other application features. When the user has logged in, the main page of the application will appear, as shown in Figure 6.



Figure 6. Meows App Main Page

On this main page, there is an application logo, a menu for viewing owned cat data, a menu for viewing cat growth statistics, a menu related to cat health, as well as a menu for viewing cat feed and there is a list of recent articles. On the menu at the bottom, there are four other menus namely, Home (home page), Articles, Post, and Profile.

3.3. Developing the Initial Prototype

After the initial stage of the prototype was successfully made. Then, we continued testing the prototype to test the features contained in the application, as shown in Figure 7.

On the article page, there are articles related to cats that are useful such as types of cats, health, and so on. Users can click on one of the articles and then it will display a detailed page as shown in Figure 8.



Figure 7. List of Meows App Articles Page



Figure 8. Meows App Article Details Page

This page contains the details of the article that has been selected by the user. Users can also add articles to the favorites list by clicking on the heart icon located at the right top corner within the article image.

3.4. Revising and Enhancing the Prototype

The next prototype test is the forum feature for cat lovers to interact and share something related to cats and other issues. Figure 9 is a view of the list page of cat lovers posts.



Figure 9. Meows App Post List Page

In each post, there is the content of the post, the number of comments on the post, and an add button that is used to display the post page. To add a comment on one of the posts. Users can select one of the posts then the detail page will appear as in Figure 10.



Figure 10 . Meows App Post Details Page

On this page, users can interact by adding comments, as well as voting on comments to show whether the comments are useful or not. To add a post, users can return to the post list page and click the add button (see Figure 10), which will display the new post page as shown in Figure 11.

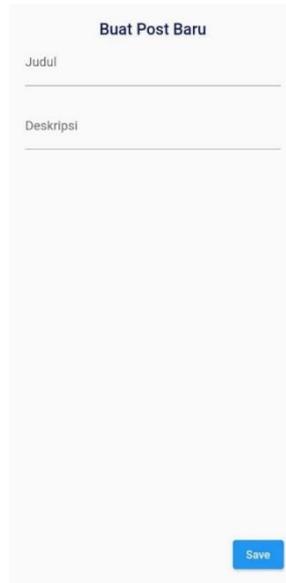


Figure 11. Meows App New Post Page

On this page, users fill in the title and description of the post they want to discuss. Then, press the save button to post it. The next feature is the profile menu, the profile menu is shown in Figure 12.

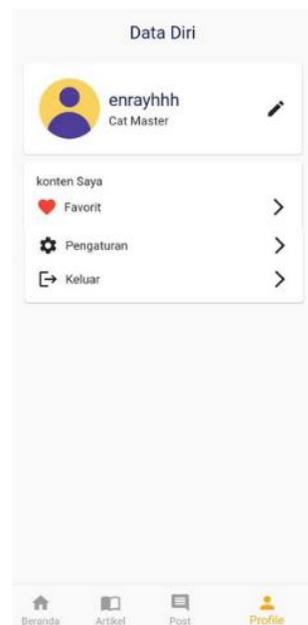


Figure 12. Meows App Profile Page

The profile page contains user data information such as profile picture, username, and title. There is also a favorite menu that contains favorite articles that have been selected by the user, downloads, settings, and exit to log out of the application.

The Meows app prototype was designed to help cat enthusiasts take care of their cats and share information with fellow cat enthusiasts. The app provides posts, guides, and articles related to cats.

4. Conclusion

The Meows application was designed to be a model application related to cats. In this application, there is information related to cats such as how to care for cats properly and correctly, solutions to deal with the types of diseases or infections that can attack cats, and a forum system that can be used to ask questions for problems that are not contained in the article.

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