**College of Engineering and Computer Technology**

**APPROVED DESIGN PROJECT for BSCpE Program**

1st Semester SY 2023 - 2024

**Approved Design Project**: Design and Development of FurrPaws: Your Gateway to Pet Wellbeing.

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**Abstract**

This paper introduces the development of FurrPaws, an Android app revolutionizing how pet lovers access essentials. Beyond locating pet supplies, grooming, and vet care, it integrates real-time location services to connect users with nearby pet businesses, that ensures users to discover nearby pet stores and vet clinics. FurrPaws features include online consultation, tracking pet details, and a pet guard. FurrPaws is more than an app—it's a comprehensive solution fostering a connected, pet-friendly community.

In the development of FurrPaws, the researchers will employ the Waterfall model of the System Development Life Cycle (SDLC) to ensure a systematic and structured approach. The process will begin with thorough analysis, where the specific requirements and functionalities of FurrPaws will be identified. Subsequently, the design phase will outline the visual representations of the application.

This computer engineering research aims to fill a critical gap in understanding pet health through data analysis. The significance extends to stakeholders, researchers, and the community, promising practical applications for Cabanatuan City's improvement. For stakeholders, it offers benefits to industries. Researchers gain insights for Veterinary Clinics, contributing to knowledge. The community benefits from potential societal impacts in Cabanatuan City. Overall, this research serves as a foundation in the evolving landscape of computer engineering, fostering advancements with far-reaching consequences.

**Introduction**

Give a background / justification / problem definition / what you have researched about the area / topics you have done in the past months. What you have presented during the oral presentation. Please include references (news, articles from the valid sources like books, magazines, technology subscriptions, internet, etc.)

**Design Project Objectives**

This study focused on developing an application for overall online health monitoring and consultation of pets, called FurrPaws. The purpose of this application is to track the overall health of pets. Specifically, the project aimed to achieve the following objectives:

1. Create a user-friendly interface.

2. Foster seamless communication between pet owners and veterinarians through secure messaging that allows users to:

2.1. Schedule appointments.

2.2. Online consultation.

3. Implement a convenient access to pet medical records and educational resources on pet health and wellness.

4. Implement real-time location services collaborating with local pet businesses, enabling users to easily discover nearby pet stores and vet clinics.

**Respondents**

The target respondents for this research are pet owners and veterinarians in Cabanatuan City, Nueva Ecija, who have smartphones and are interested in using a mobile app for managing their pet's healthcare. It is difficult to determine the exact population size of pet owners in Cabanatuan City with smartphones and interest in a pet healthcare app. However, based on the 2020 Philippine Statistics Authority report, there are roughly 81,792 households in the city. Assuming that 50% of these households own pets and 70% of pet owners own smartphones and are interested in a pet healthcare app, we can estimate a population size of approximately:

N = 81,792 households \* 50% pet owners \* 70% interested app users = 28,627 individuals

This research will utilize stratified random sampling to ensure a representative sample of the target population. This involves dividing the population into subgroups (strata) based on certain characteristics, such as pet type and location. Random samples will then be selected from each stratum proportional to its size in the population. This ensures that the final sample represents the diversity of the target population and allows for valid generalizations about the population based on the research findings.

**Methodology**

The methodology will involve a structured approach to software development, specifically employing the System Development Life Cycle (SDLC) throughout the development process to ensure the successful completion of the project. This approach encompasses several key stages, including:

1. **Literature Review -** In-depth study of existing missing persons systems, user interface design principles, and advanced search algorithms.

2. **Requirements Analysis** - Identify and analyze the project requirements meticulously to define the scope and objectives of the system.

3. **System Design and Development -** Utilize wireframing and prototyping techniques to create visual representations of the user interface and system functionality.

4. **Testing -** Implement testing protocols, including usability testing through scenario simulations. Validate the system's functionality, reliability, and performance to ensure a seamless user experience.

5. **Deployment -** Deployment of strategies that emphasize scalability as well as guidelines for the application's usage.

6. **Assessment -** Conduct comprehensive assessments using a combination of surveys, interviews, and real-time data analysis to gather user feedbacks.

*Approved during the Design Project Title Presentation on December 7 and 11, 2023.*

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