**"Rambol: A Mobile Application Enhancing Motorcycle Transportation Services for Efficient Travel in Butuan City"**

A Capstone Project Presented to

The Faculty of Computer Studies Program

Father Saturnino Urios University

Butuan City, Philippines

In Partial Fulfillment

Of the Requirements for the degree

BACHELOR SCIENCE IN INFORMATION TECHNOLOGY

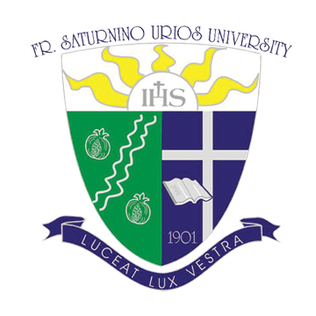
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**APPROVAL SHEET**

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**EXECUTIVE SUMMARY**

Public transportation is essential for those who lack personal vehicles, as it is the only means to reach their desired destinations efficiently and affordably. It provides accessibility, saves time, reduces environmental impact, and fosters community connection. This study is about developing a ride-hailing mobile application also, determining the insights of respondents about the existing public transportation system in Butuan City.

**Keywords:** ride-hailing, rambol, papalit, pilian, pasundo

**DEDICATION**

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**CHAPTER I**

**INTRODUCTION**

1.1 Background of the Study

Public transportation plays a crucial role in keeping societies running smoothly, ensuring efficient transportation systems. In Butuan City, existing transportation options cater to the needs of the population for reaching their desired destinations. However, motorcycle transportation holds a significant position in daily commuting, and a revolutionary mobile application called Rambol has emerged to transform the way people travel on two wheels.

Rambol is a cutting-edge mobile application designed to place motorcycle transportation services and streamline travel in Butuan City. This capstone project aims to develop and explore the transformative potential of ride-hailing in the city. By encouraging investors to embrace this change, Rambol strives to provide residents and visitors with a reliable, safe, and efficient mode of travel.

According to Bausch and Mesarovic (2018), motorcycle transportation offers affordability, flexibility, and efficiency, especially in congested urban areas. With its ability to navigate through traffic and reach specific destinations quickly, motorcycles present a more cost-effective option compared to traditional four-wheeled transportation choices, making them accessible to a broader range of commuters.

Throughout this study, we will dig in into the features, functionality, and user experience of Rambol. Our goal is to assess how Rambol can enhance the accessibility and convenience of motorcycle transportation services, ultimately improving the overall travel experience for commuters in Butuan City.

* 1. Statement of the Problem

The aim of the study is to develop a mobile application that will give efficiency on daily commute to the user in Butuan City.

In urban areas, particularly in Butuan City, the issue of expensive and time-consuming travel with traditional taxis becomes prominent, especially during rush hours when traffic congestion is prevalent. Furthermore, the existing jeepney system's limitations, characterized by fixed routes that may not cater to passengers' specific destinations, pose obstacles to effective mobility within the city. Additionally, four-wheel vehicles encounter difficulties in accessing passengers' exact locations, particularly when navigating through small access roads.

The lack of affordable and efficient transportation options for urban mobility in Butuan City significantly contributes to slow travel times and inconvenience, particularly when relying on taxis. The inflexible routes of the current jeepney system further restrict accessibility to specific locations, exacerbating transportation challenges for residents and commuters alike.

1.3 Objectives

The objective of this study is to create a mobile application called Rambol to place motorcycle ride-hailing services in Butuan City to address the challenges of expensive and time-consuming travel with four-wheel vehicles and the limitations of the current jeepney system. The aim is to improve urban mobility by providing a more affordable, efficient, and flexible transportation option that caters to passengers' specific destinations within the city.

1.3.1 Specific Objectives

* To develop a mobile application, Rambul, that provides efficient motorcycle ride-hailing services in Butuan City, offering an affordable and time-saving alternative to conventional four-wheel vehicle transportation options.
* To develop a mobile application, Rambul, that provides door-to-door motorcycle ride-hailing services in Butuan City, ensuring convenient and direct transportation for users to their specific destinations within the city.
* To introduce Rambul, a motorcycle service ride-hailing platform, to our city, that will give convenience to the users even in the small area where 4 wheels cannot enter.
* To develop a ride-hailing application that empowers users to select their desired motorcycle for their transportation needs.

1.4 Significance of the Study

This capstone project carries substantial significance as it aims to promote the widespread adoption of ride-hailing services, thereby enhancing transportation efficiency and addressing the urban mobility challenges faced by Butuan City. Additionally, by leveraging technological innovation, this research seeks to improve accessibility and convenience for both travelers and commuters. The outcomes of this capstone have the potential to yield highly valuable insights, benefiting future researchers in this field.

**Future Researchers.** This study encompasses the comprehensive development of the mobile application called Rambol, along with valuable insights from commuters regarding the existing commute system in Butuan City. As a result, the findings of this study hold significant relevance and can serve as a foundation for future discussions and considerations regarding the adoption of ride-hailing services in Butuan City.

1.5 Scope

The Scope of this study and application development project, Rambol, is the development of motorcycle ride-hailing services in the city of Butuan. The project's geographic scope includes Butuan City due to the city's unique urban transportation issues and characteristics. With a focus on door-to-door transportation, the project seeks to create a mobile application that enables users to call Riders, monitor the arrival of motorcyclists, Real Time Location of the rider and be driven from their pickup spot to their chosen destination. A user-friendly interface must be created, efficient ride-matching algorithms must be implemented, real-time tracking, and compliance with local laws and legal requirements governing motorcycle ride-hailing services must be ensured.

1.5.1 Limitation

The Rambol application has a limitation because it depends on the availability of motorcycles and the participation of riders. The effectiveness of the service relies on having enough active riders who use the application. However, there are additional constraints to consider when implementing this feature, especially the need for a strong and stable internet connection. This is essential for both users and riders to receive real-time location updates, which are necessary for smooth navigation towards the desired destination.In areas where the internet connectivity is limited or unreliable, both riders and users may encounter difficulties accessing the application, requesting rides, and receiving timely updates.

1.6 Definition of Terms

**Ride-haling**- Based on the data that the researchers gathered, ride-hailing is the practice of arranging for travel in a private vehicle driven by its owner for a fee, using a website or app.

**Rambol**- Based on the data that the researchers gathered, rambol is refer to a journey or trip taken by vehicle, typically involving transportation from one place to another.

**CHAPTER II**

**REVIEW OF RELATED LITERATURE**

**CHAPTER III**

**RESEARCH METHODOLOGY**

**REFERENCES**

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