

**ANDROID-BASED TRIGONOMETRY MODELING SIMULATION FOR  
SECONDARY EDUCATION**

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**In Partial Fulfillment of the Requirements for the Degree  
Bachelor of Science in Computer Science**

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**APPROVAL SHEET**

The thesis project entitled **"Android – Based Trigonometry Modeling Simulation for Secondary Education"** was prepared and submitted by **Cedric Custodio, Julyle Demasuay, Wiljane Monato and Veronica Papiona** in partial fulfillment of the course requirements for the degree of **Bachelor of Science in Computer Science** has been examined and recommended for the oral examination.

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## ABSTRACT

Android-based application designed to provide users with an interactive and immersive learning experience in trigonometry through simulations. This presents the key features and potential benefits of Trigonometry Simulation, highlighting its ability to enhance the understanding and application of trigonometric concepts. It has the potential to be utilized in educational settings, as a valuable resource for self-learners, enthusiasts, and professionals seeking to strengthen their understanding of the application of trigonometry. An application leverages the computational power and interactive capabilities of Android devices to create dynamic virtual environment where users can explore and experiment with various trigonometric principles.

The researchers applied an adapted survey method to develop an Android – based Trigonometry Modeling Simulation for Secondary Education. Forty (40) students, five (5) teachers and five (5) IT professionals evaluated the proposed Android – based application. Researchers concluded that the proposed system gained “Strongly Agree” overall result. A survey questionnaire was used to assess the software’s functional suitability, performance efficiency, compatibility, usability, reliability, security, and maintainability and portability.

The researchers successfully developed an interactive and user-friendly trigonometry simulation application that caters to users of all demographics and skillfully designed and developed software that effectively stimulates trigonometric management scenarios and provides concise instructional clips on proper procedures and actions to be taken in various trigonometry- related situations. Some recommendation of the study is to enhance the efficacy and user engagement of the trigonometry application, it is recommended that the content and appearance of the application be revamped to align with

current industry standards and user preference. These recommendations strive to address the observed shortcomings of the application and offer guidance for its improvement, making it more suitable for educational purpose, while also expanding its potential applications within the field of trigonometry.

**Keywords:** *(Android-based, Trigonometry, Simulation)*

## CHAPTER 1: THE PROBLEM AND ITS BACKGROUND

Introduction

Local Context

Statement of the Problem

Significance of the Study

Scope and Limitations

## CHAPTER 2: THE REVIEW OF THE STUDY

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Trigonometry

Simulation-based Learning

Simulation-based Learning

Conclusion