BASIC NEEDS PRICE AND BUDGET CHECKING PERSONAL MOBILE APPLICATION WITH BUBBLE SORT ALGORITHM

UNDERGRADUATE FINAL PROJECT

Submitted as one of the requirements to obtain
Sarjana Komputer (S.Kom.)

By:

MUHAMAD RAYHAND PRASETYA
001202000020

FACULTY OF COMPUTING

INFORMATICS STUDY PROGRAM

CIKARANG

MAY, 2023

PANEL OF EXAMINER APPROVAL

The Panel of Examiners declare that the undergraduate final project entitled **Basic Needs Price and Budget Checking Personal Mobile Application with Bubble Sort Algorithm** that was submitted by STUDENT majoring in **Informatics** from the Faculty of Computing was assessed and approved to have passed the Oral Examination on 09/05/2023.

Panel of Examiner

……

Rosalina, S.Kom., M.Kom.

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Dr. Hasanul Fahmi, S.Kom., M.Kom.

……

Cutifa Safitri, M.Sc., Ph.D.

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Name : Muhamad Rayhand Prasetya

Student ID number : 001202000020

Study Program : Informatics

Faculty : Computing

I hereby declare that my final project entitled "**Basic Needs Price and Budget Checking Personal Mobile Application with Bubble Sort Algorithm**"

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Final Project author : Muhamad Rayhand Prasetya

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ABSTRACT

The commodities of life have become the necessities of the society. Because the prices of commodities foods in the market can fluctuate at any time, it is difficult for the general public to monitor these price fluctuations. Technology is a part of our lives, so smartphone usage in Indonesia's population over 50% of his indicates that digital access is already fairly evenly distributed in Indonesia. Based on these circumstances, this project focuses on developing a simple commodity price monitoring application to enable ordinary people to monitor prices via smartphones. This makes it easier to save time and money.

This final project aims to help people especially for mothers who always go to the market in the morning to monitor the price of commodities in the market with technology. This work involves the development of an Android-based mobile application, which can enable users to obtain information about prices of staples in the available market. The application may contain features such as price of commodities, and information about the total product they are about to buy. The method of data collection used is by taking the price data of basic commodities from several traditional markets. The methodology that is used for the project called Rapid Application Development (RAD) where it consists for 4 phases. First phase is about planning all the requirements needed, second phase is about design of application, third phase is about develop the application, and last phase is about testing.

The data collected will be processed and stored in a database to be displayed in real-time on the application. Therefore, the aim is assisting users in monitoring the prices of basic commodities in the market, so they can maintain their budget before going to market and it saves time and money in the process of purchasing daily basic commodities. The results of this work are expected to contribute to the development of an effective mobile application to monitor prices of staples in the market and can assist users in making wiser purchasing

decisions. In addition, the results of this study are also expected to contribute to research related to the development of similar applications in the future. The result that the main feature in the application includes add product to the cart one by one or add product from the recipe menu and it will show the total price of product. The menu that allows user to search and filter product. Also, price sorting from lowest price to highest price or vice versa that developed using Sort Algorithm. The application has covered all the features mentioned and runs as expected after some process like research, development, and testing. There are some further development or improvement of the application to support the platform in better performance such as UI improvement, track the nearest market, and print order history as a struk.

Keywords: **Android**, **Application**, **Commodities**, **Project, Rapid Application Development**

ACKNOWLEDGEMENT

Praise and gratitude show the presence of Allah SWT, for His blessings and guidance so that I can complete this Final Project. Not to forget, I also express his deepest gratitude to all parties who have supported and assisted me during this Internship Study activity to completion. I also thanks to:

1. Both of my parents and my brother have prayed and provided encouragement and support me in everything to finish this final project.
2. Ms. Cutifa Safitri as a final project advisor who always provides full support and guidance assisted me in finishing this final project.
3. All my lecturers of Faculty of Computing who shared their knowledge that I can implement in this final project and real work.
4. All my friends who always support me in finishing this final project.

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