

**DESIGN AND DEVELOPMENT OF A MICROCONTROLLER-BASED  
LIBRARY BAGGAGE COUNTER FOR THE MAIN LIBRARY  
OF CAVITE STATE UNIVERSITY MAIN CAMPUS**

Undergraduate Design Project  
Submitted to the Faculty of the  
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In partial fulfillment  
of the requirements for the degree of  
Bachelor of Science in Computer Engineering



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*Design and development of a  
microcontroller-based library baggage  
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## ABSTRACT

**CAPUCHINO, JONA P., MARASIGAN, CAROLINA B., and TERESITA V. SAFLOR.** Design and Development of a Microcontroller-Based Library Baggage Counter for the Main Library of the Cavite State University. Undergraduate Design Project. Bachelor of Science in Computer Engineering. Cavite State University, Indang, Cavite. April 2004. Adviser: Mrs. Aileen V. Rocillo.

The design and development of a library baggage counter was constructed at Navarro, Gen. Trias, Cavite. The general objective of the study was to develop a Microcontroller-Based Library Baggage Counter for the main campus.

Library Baggage Counter assured the security of the user's baggage and the staff previously assigned to the baggage counter who can do other tasks. It was designed to show that students of Cavite State University are technologically aware. It was implemented at the main library, where massive students are entering and several baggages are kept.

The machine contained the circuit that controlled the whole system. The system was composed of the controller unit, baggage holder, storage unit and the partition wall of the baggage counter. The primary component of the microcontroller unit was the PIC16F874, which acted as the brain of the whole system. The system provided controls for the function of the machine such as: a keypad which served as an input device and LCD which displayed the instruction on how to use the system and also served as output device. The software used for the system was assembly language.



The project was introduced to the proponents' adviser and technical critic during the primary evaluation conducted at the Reading Room of the College of Engineering and Information Technology on January 7, 2004. It was done by presenting the actual machine.



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