ABSTRACT

In the era of technology, automation becomes something reasonable with

the goal of saving labor cost and accuracy of the system more than if managed by

humans, and process automation can be applied into the fields of purchase, such

as replacement cashier. As is known cashiers usually managed by a store clerk, to

be able to make payments, sometimes buyers queuing up in advance, because not

all open gauze and store clerks also can make mistakes that can harm shops and

shoppers. Therefore it is necessary we have designed a system that is capable of

performing the calculations themselves and make payments easy.

This thesis explores a tool that serves as a shopping system that is based on

the weight sensors, barcode reader and controlled by a SBC (Single Board

Computer). Weight sensors will be positioned under the shopping cart. Every

customer is to take the goods need to scann the barcode first before put into

trolley. Weight sensors will detect the weight of the goods and to check the

suitability of the weight and the weight accumulates in the trolley. When

payments on an automatic teller, customers simply make a payment using the

identity card members and the screen door would be open if the payment is

successful.

The test results of barcode detection indicates the use of a webcam quickly

with the average - average time required was 2:59 seconds. And the failure of

matching weight of trolley and database is 10.598%.

Keywords: Raspberry Pi, Load cell, Wireless LAN

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