

ABSTRACT

Hotel is a comfortable temporary inn. There are various facilities there, such as swimming pool, sauna, massage place, even refrigerator that is available in every room. To get those facilities, extra money is surely needed.

But, there is a problem in the refrigerator-facilitated hotel. Each guest who checks out of the hotel should undergo the check of stuffs in refrigerator. If those stuffs are decrease, so the guest will get bill for them. But, this kind of system is not efficient. In fact, that guest can take the stuff from refrigerator and then buy the same stuff from outside the hotel, and finally put that new stuff in the refrigerator without any recognition by the hotel officer.

In this final project, the design and implementation of stuff withdrawal automation system in a refrigerator prototype based on microcontroller has done. This system consists of 3 slaves and 1 master, where 1 slave is applied to 1 refrigerator. In each slave, there are push buttons which function as the laying of beverages and also as detector of taken beverages. Master functions to organize the activity of slave in order to prevent dispatch-data collision. Then, master will communicate with PC server. Before that, the PC is installed with a software to support communication with master microcontroller. For that, writer used Visual Basic as the interface and Microsoft Access as the database. The result gotten from this final project is a system which is able to detect the stuff withdrawal in a hotel's refrigerator and to be displayed in PC server.

Keywords: *refrigerator, master, slave, microcontroller*