

## **ABSTRACT**

Vending machine is an automatic seller machine for any goods that operated with payment tools. It is always like a coin and money but these coin and money aren't like common money. Just it forms that having equally same with a real money and coin. But firstly, this machine uses a coin for its operation then it developed for its operation with sensor system for reading nominal of pieces money. Due to those aren't like a common money and coin, so we must going somewhere to get those. This machine usually sells only one kind of goods with same prices of its. As if, there is other vending machine that sell variety kind of goods but a price of those goods is same each others.

Through USSD system, it can be easily especially for its transaction system that consist of its payment tools and it prices. USSD is one kind of GSM protocol is used as mobile phone's pulse transfer that called application electric money. USSD can transfer mobile phone's pulse with variety nominal so that it is very suitable for vending machine with multi kind of goods sold inside with multi price too. Beside that, hardware for its operation only needs mobile phone that has been having by amount of people. Of course it will make this system more easily than conventional system. User only bring their mobile phone without commonly payment tools for having transaction through USSD vending machine.

Pulse of mobile's user as electric money that had been transferred will be read through GSM kit then for nominal and execution processing will be processed inside microcontroller for the next step after that. Microcontroller will give a command for moving machine's actuator after nominal pulse process inside it. So, we want a system work properly and efficiently to make simplify transaction process.

**Keyword: Vending machine, USSD, Electric money, Pulse**