Sanitary Napkin Vending Machines with Various Size and Payment Options.

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acceptance of Coins and it was also provide payment made by Paytm.

Abstract— Today's most challenging and development issue was Menstrual hygiene. The women and girls often lack of access to hygenic sanitary materials and basic facilities.So there were a sanitary napkin vending machines are installed. The main drawback of the existing coin operated system is no mechanism available for the person refilling the napkinsto know about the status of napkins available in the sytem.So this work aims to install an Automatic napkin dispenser in public toilets, schools, hospitals etc. And this Automatic vending machine will give the avilabilty of napkins to the owner and machine will provide a napkins with different size and payment options.

Keywords: Sanitary Napkin, Dispenser, Menstrual hygiene, Market for Sanitary Napkins, etc.

Literature Survey:

1. Sandip Institute of Technology & Research Centre, Nashik, "Sanitary Napkin Vending Machines and Incinerators" 2014

Gov. of India has taken the initiative and issued the GR **(Govt. Circular No. D. O. No.4-160(10)/2013-NCW dt 03/09/2014)** to install the vending machine. The machine will provide the napkins with the acceptance of coin.And the machine will also providing a disposing facility of Incinerators.

I. INTRODUCTION

According to examine in India just twelve percent of ladies utilizes Sterile Napkins and rate is much lower in Country Zones. To educate and create awareness of use of Sanitary Napkins and provide easy access to Sanitary Napkins by installation Simple

Vending Machines with replenishment program in Rural Schools and Colleges. The Proposed Machine is able dispense Sanitary Napkins with different size and against

2. K. Harish, M. Kevin Kumar,, "Solar Powered IoT based Intelligent Sanitary Napkin Dispenser" March 2018

A person has to regularly check the availability of napkins in the system manually and refill it. This work aims at installing an automatic napkin dispenser in toilets and places that can keep track of available napkins and inform the person concerned when fewer napkins are available.

3. K.Samba, Siva Rao. Subhas Mukhopadhyay, "Iot Based Intelligent Sanitary Napkin Disposer" August2017

Proposed Machine is Iot Enabled to status of available napkins and able to dispense napkins with single size against acceptance of coin payment only.

PROPOSED WORK:

From the survey of different vending machines .There is lack of problems has been seen regarding to the size ,payments and for the refilling of Napkins.

For avoiding Such type of problems We are going to develope a Snitary napkin vending machine with different size and also provide a different payment option.

- Machine will most likely acknowledge coins just as advanced installments too.
- Android interface with machine installed equipment will be there to get status of accessible napkins just as direction machine.
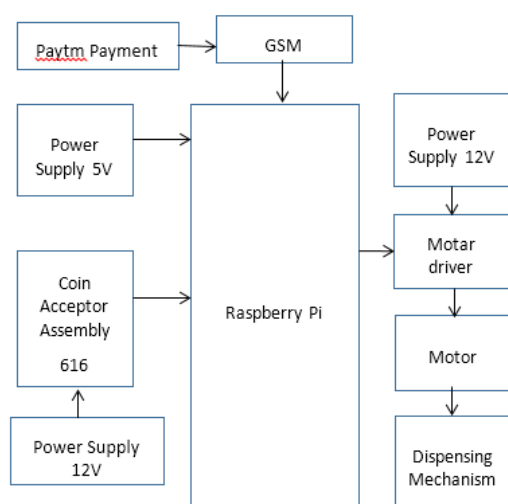
A. *Block Diagram*

Fig 1-Block Diagram of Proposed System

Embedded Equipment will contain administering gathering controlled Raspberry Pi with couple of electronic sensors and actuators

Hardware Description:

Raspberry Pi :

The Raspberry Pi is a progression of Mastercard estimated single-board PCs created in the Assembled Kingdom by the Raspberry Pi Establishment. A few ages of Raspberry Pi's have been discharged. The original (Pi 1) was discharged in February 2012 in essential model An and a higher detail show B. A+ and B+ models were discharged a year later. Raspberry Pi 2 display B was discharged in February 2015 and Raspberry Pi 3 demonstrate B in February 2016. These sheets are estimated somewhere in the range of US$20 and 35. rbased Linux conveyance for download, just as outsider Ubuntu, Windows 10 IOT Center, RISC OS, and specific media focus dispersions. It advances Python and Scratch as the primary programming language, with help for some different dialects. The raspberry pi board contains a program memory (Smash), processor and illustrations chip, CPU, GPU, Ethernet port, GPIO pins, Xbee attachment, UART, control source connector. It additionally requires mass stockpiling, for that we utilize a SD streak memory card. So raspberry pi board will boot from this SD card comparatively as a PC boots up into windows from its hard plate. Basic equipment details of raspberry pi board for the most part incorporate SD card containing Linux OS, US console, screen, control supply and video link. Discretionary equipment determinations incorporate USB mouse, controlled USB center point, case, web association, the Model An or B: USB Wi-Fi connector is utilized and web association with Model B is LAN link.

Coin Acceptor :

A Coin acceptor is a device that determines whether the coins are genuine or counterfeit.These devices are used in a wide range of automated machines,self checkout machines,car parking Ticket machines,public transport ticket machines and vending machines.

The basic principle for coin detectionis to test the physical properties of the coin against known characteristics of acceptable coins. It analyses the coin based on its mass,size,diameter,thickness,metal composition and then sends appropriate electrical signal via its output connection.

GSM Module ;

GSM is a mobile communication modem,it stands for Global system for mobile Communication (GSM).GSM is an open and digital cellular technology used for mobile voice and data services operates at 850MHz,900MHz,1900MHz frequency bands.

It uses TDMA technology for communication.A GSM digitizes and reduces the data,then sends it thrugh a channel with two different strems of client data,each in its own particular time slot.It has an ability to carry 64 kbps to 120Mbps data rate.

GSM Architecture :

1.A mobile Station : It is a mobile phone which consist of the Transreceiver,the display and the Processor and it is controlled by a SIM card operating over the network.

2.Base Station Subsystem : It act as an interface between the mobile station and netwok subsystem.

3.Network Subsystem : It provides the Basic network connection to mobile Stations.It consist of the home location register and visitor location register which the call routing anf roaming capabilities of GSM.

Features of GSM Module :

1.SIM phonebook management.

2.Real time Clock with alarm management.

3.high quality speech.

Motar Driver :

1.It is a Motar Driver IC ,which allows DC motar to Drive in both direction.

2.It controles two DC Motars simultaneously with H-bridge motar driver IC.

3.A small Vcc voltage needs for its own internal operation . The motar will work on logic high and logic low concept.

Software's Used:

Python IDE:

Composing Python utilizing Inactive or the Python Shell is incredible for basic things, yet those devices rapidly transform bigger programming ventures into baffling pits of depression. Utilizing an IDE, or even only a decent devoted code manager, makes coding fun however which one is best for you? Dread not, Delicate Peruser! We are here to help clarify and demystify the bunch of decisions accessible to you. We can't pick what works best for you and your procedure, yet we can clarify the advantages and disadvantages of each and enable you to settle on an educated choice.

Conclusion:

This system can be designed to easily available the napkins to rural areas and Urban areas with Digital payment method and also with coins.And for monitoring the availability of the napkins.

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