# "SHE" Secure Health

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## 1. Abstract

Access to sanitary napkin pads is vital for the menstrual health of Indian women. Due to cultural stigmas and financial constraints, many women are compelled to resort to unsanitary homemade cloth pads, causing discomfort and potential health risks. Efforts to develop affordable sanitary pads have been explored to address this pressing issue. More significant than the price of the napkins is their prompt availability. Finding places that sell sanitary napkins in schools, universities, and public places such as train stations, airports, and bus terminals while traveling can be difficult.

Therefore, a vending machine is required for always being accessible and available. This issue can be resolved by installing a vending machine that can both adx is e maintenance personnel of the stock lexel and collect non- cash payments. This helps ensure that there is a consistent supply of sanitary napkins by encouraging the replenishment of stock when needed.

### Introduction:

Sanitary pads are an essential item for many women, but they can be expensive and difficult to access in some areas. This project aims to create a sanitary pad dispenser that is affordable, accessible, and easy to use. The dispenser will use an ESP32 microcontroller to control the dispensing mechanism and to communicate with a GSM module for online payment processing. An IR sensor will be used to detect stock levels, and a Blynk app will be used to monitor stock levels and to allow users to remotely purchase sanitarpads.

The GSM module will be used for online payment processing. When a user wants to purchase a sanitary pad, they will send a payment request to the GSM module. The GSM module will then process the payment and send a confirmation message to the ESP32 microcontroller.

## 2. Working of pad dispenser:

1. The user will open the sanitary pad dispenser and select the number of sanitary pads they want to purchase. The user will then send a payment request to the GSM module.

2. The GSM module will process the payment and send a confirmation message to the ESP32 micro controller. The ESP32 microcontroller will then signal the motor driver to dispense the sanitary pads.

3. The motor will power the dispensing mechanism, which will dispense the sanitary pads to the user.

4. If the stock level falls below a certain threshold, the IR sensor will send a signal to the ESP32 microcontroller.

5. The ESP32 microcontroller will then send a notification to the Blynk app to inform the user that the stock level is low.

6. The user can then use the Blynk app to monitor stock levels and remotely purchase sanitary pads.

### 3. Components Specifications:

**ESP32 microcontroller**

Model: ESP32-DevKitC V4,CPU: Dual-core Xtensa LX6micro processor operatingat up to 240 MHz,Memory: 448 KB ROM, 520 KB SRAM,Wireless connectivity: Wi-Fi, Bluetooth, BLE,Power supply: 3.3V,Operating temperature: - 40°C to +85°C
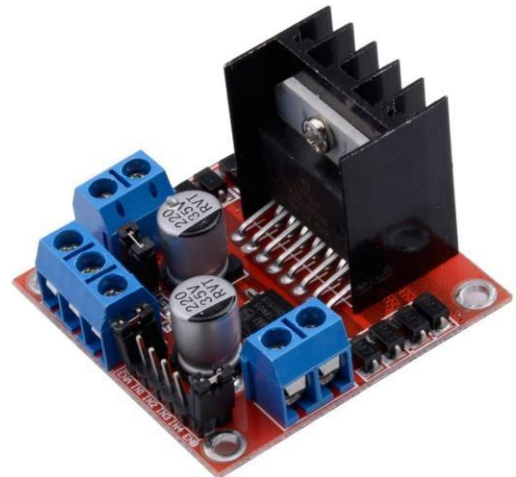
**GSM module**

Model: SIM800L,Frequency bands: GSM 850/900/1800/1900 MHz,Data rates: Up to 9.6 kbps,Power supply: 3.6V to 4.2V,Operating temperature: -40°C to +85°C

**Motor driver**

Model: L298N,Voltage: 5V to 35V,Current: 2A per

, Power: 25W,Operating temperature: -20°C  t+75°C

**Motor**

Model: DC 12V 20RPM motor,Voltage: 12V,Current: 1A,Power: 12W,RPM: 20,Operating temperature: -10°C to +50°C

### Heater coil

A nichrome wire coil with a high resistance and a high melting point. This causes the coil to heat up when an electric current is passed through it. The heater coil should be able to reach a temperature of at least 500°C to incinerate the sanitary pad completely.
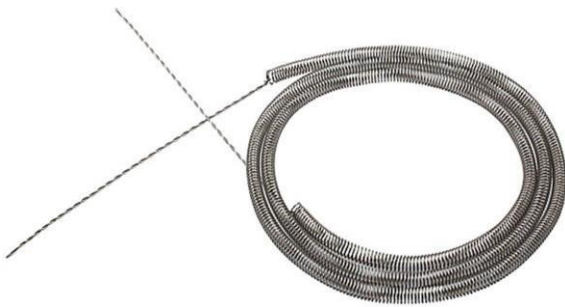


### Camber

A curved metal sheet that helps to distribute the heat from the heater coil evenly. The camber should be made of a material that can withstand high temperatures, such as stainless steel.
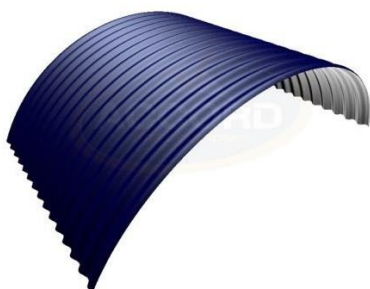
### Adapter

A funnel-shaped metal device that helps to direct the ash from the incinerated sanitary pad into a safe collection chamber. The adapter should also be made of a material that can withstand high temperatures, such as stainless steel.

**Enclosure**

A metal enclosure that houses all of the components of the sanitary pad disposal machine. The enclosure should be made of a material that is fire-resistant and can withstand high temperatures.

**User Interface**

A keypad and display to allow the user to interact with the machine. The user interface should allow the user to start and stop the incineration process, and to monitor the status of the machine.





**Power supply**

A 12 V power supply to power the heater coil and the control system. The power supply should be able to provide enough current to operate the heater coil.

### 4. Conclusion

The prototype model for an automatic slot machine is the proposed system. The controller component was tested, and it was discovered that the automatic slot machine prototype was operating according to the requirements for which it was created. The prototype model was created for the mechanical implementation of a slot machine that eventually results in the vending of a product upon the input of the coin. This helps ensure that there is a consistent supply of sanitary napkins by encouraging the replenishment of stock when needed.With better design and quicker control equipment , vending machines of the highest accuracy and efficiency may be produced in the future. This was initially a movement of cleanliness" in rural regions, and frequently included self- dispensing sanitary napkins.

### 4. ACKNOWLEDGMENT:

### 5. REFERENCES :

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