

Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation:

Ministry of AYUSH

PS Code: SIH1503

Problem Statement Title: Automatic Drug Dispenser

Team Name: JEC2330

Team Leader Name: Cheru Ashish Joy

Institute Code (AISHE): C-8003

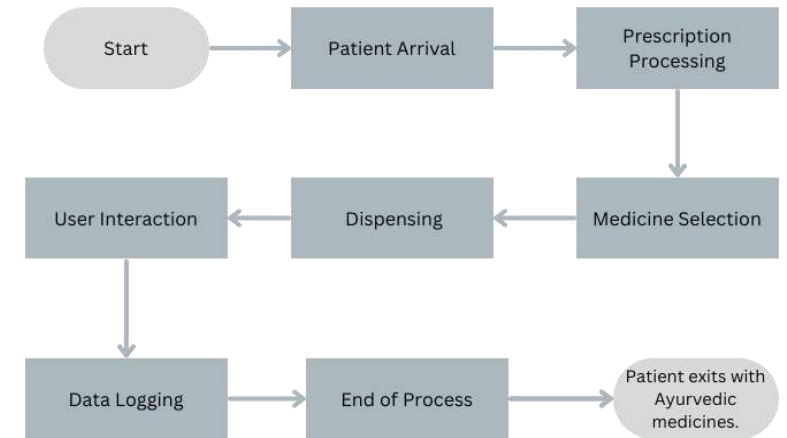
Institute Name: Jyothi Engineering College, Cheruthuruthy

Theme Name: MedTech

Idea/Approach Details

Describe your idea/Solution/Prototype here:

- The AyurNidhi – Automated Ayush Dispenser represents an innovative solution that redefines the medication retrieval process within hospitals and pharmacies.
- The patient is registered in the hospital/healthcare database system and is assigned with a patient ID. The doctor diagnoses the patient and prescribes medicine into the database which can be
- The prescription details are stored in the QR Code generated for the patient visit. AyurNidhi scans the QR code using a scanner and the controller specifies the motor and spring system to dispense the Ayush medicines.
- The patient can make the payment using UPI. For every prescription, a dynamic QR Code will be created. A successful transaction would dispense the Ayush medicines.



Process Flow Chart

Describe your Technology stack here:

- QR Code detection and patient authentication using QR Code scanning software.
- Sensor and Actuator control using a Controller like Raspberry Pi.
- Database software to manage the medicine availability .
- UPI Payment Gateway.

Idea/Approach Details

Describe your Use Cases here

AyurNidhi can be installed in medical centers, healthcare centers and hospitals with Ayush medicine.

- **Efficient Medication Retrieval:** Patients can swiftly retrieve prescribed medications by scanning the QR code on their prescription
- **Improved Operational Efficiency:** Optimizing the workload of hospital or pharmacy staff by automating the dispensing process
- **Data Analytics and Tracking:** Enabling tracking and analysis of medication dispensing patterns, helping healthcare providers better understand patient needs and preferences.
- **Improved Patient Compliance:** Enhancing medication adherence by providing quick access to prescribed medicines, potentially reducing the risk of patients forgetting or neglecting to collect their medications.

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Describe your Dependencies / Show stopper here

- On the **hardware** side, we rely on precision sensors for accurate medication quantity monitoring, servo motors for precise and controlled dispensing, and a seamlessly integrated QR code scanning mechanism for patient verification and prescription matching.
- On the **software** front, the solution involves a complex ecosystem of database systems responsible for inventory management, patient authentication through QR codes, and ensuring the accuracy of real-time dispensing.
- The variety of Ayush medicines that can be stored in the dispenser is a show stopper.

Team Member Details

Team Leader Name: CHERU ASHISH JOY

Branch : Btech

Stream : MR

Year : IV

Team Member 1 Name: ASHID RAHMAN P P

Branch : Btech

Stream : MR

Year : IV

Team Member 2 Name: VARGHESE C B

Branch : Btech

Stream : MR

Year : IV

Team Member 3 Name: ROSHANT J

Branch : Btech

Stream : MR

Year : IV

Team Member 4 Name: MOHAMAD ADNAN

Branch : Btech

Stream : MR

Year : IV

Team Member 5 Name: ALITA ANTONY

Branch : Btech

Stream : CSE

Year : III

Team Mentor 1 Name: Mr. Jain Varghese

Category : Academic

Expertise : Mechatronics

Domain Experience (in years): 2

Team Mentor 2 Name: Mr. Jinesh K. J.

Category : Academic

Expertise : Microprocessor

Domain Experience (in years): 12