Project DAVA SEVA

Ayush Medicine ATM: Pioneering Healthcare Accessibility through Innovative Automation

The Automated Ayush Medicine Dispensing System is a groundbreaking innovation poised to revolutionize the accessibility of Ayush medicines, addressing a longstanding challenge in healthcare.

DAVA SEVA stands for **D**rug **A**utomated **V**ending **A**paratus **S**wayamchalit **E**-aushadi **V**ikri **A**alay

1

Preprocess (Software)

QR Code Generation

We've streamlined the critical QR code generation process, transforming it from complexity to simplicity.

When doctors save prescriptions on their websites, which are then stored in the patient's profile within the database.The database interacts with this prescription data and generates a unique QR code specific to the patient's prescription.The generated QR code is then sent to the patient's application through a secure connection.The patient's application receives and stores the QR code securely.

2 DAVA SEVA Process (Hardware)

When a patient arrives at the ATM, they scan their unique QR code using DAVA SEVA camera. It decodes all the information of patient and prescription from QR and display the data on DAVA SEVA screen. When patient verify the data, system will check the avalability of medicines in database and calculate the total amount. The bill will displayed on screen and patient can pay using UPI. Once the payment process is done, control center will command the dispensing mechanism to dispense the medicines according to prescription.

3 In-detailed hardware Process

1) Microprocessor

The Raspberry Pi functions seamlessly in this process. The Pi Control all the electronic components and manage all the process in a seamless manner.

2) Dispensing Mechanism

X-Axis motion : Horizontal Lead screw Linear actuator mechanism is used to move the dispensing head in horizontal motion along the trays

Y-Axis motion : Vertical Lead screw Linear actuator mechanism is used to move the dispensing head in vertical motion along the trays

3) Elevated Tray

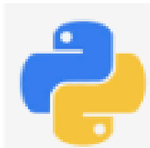
There will be a tray placed at an certain angle which will be connected to the outlet window. The medicines drop in the tray will be slide towards outlet window

4 Conclusion

The ATM we are developing brings several advantages for both patients and doctors. Foremostly, it offers convenience as patients can easily get authentic Ayurvedic medicines from a nearby location. Secondly, it ensures accuracy, making certain that patients receive the right medicines in the right amounts. Additionally, it makes these medicines more affordable for patients. Moreover, the system prioritizes security, safeguarding patient information and preventing any unauthorized access. Lastly, it boosts efficiency, saving doctors time and effort by automating the dispensing process. It support more than 20 languages (i.e Available in regional language). These benefits combined make our project a significant step towards improving healthcare accessibility and effectiveness. If the prototype is successful, the next step is to produce a full-scale ATM and deploy it in a clinical setting.

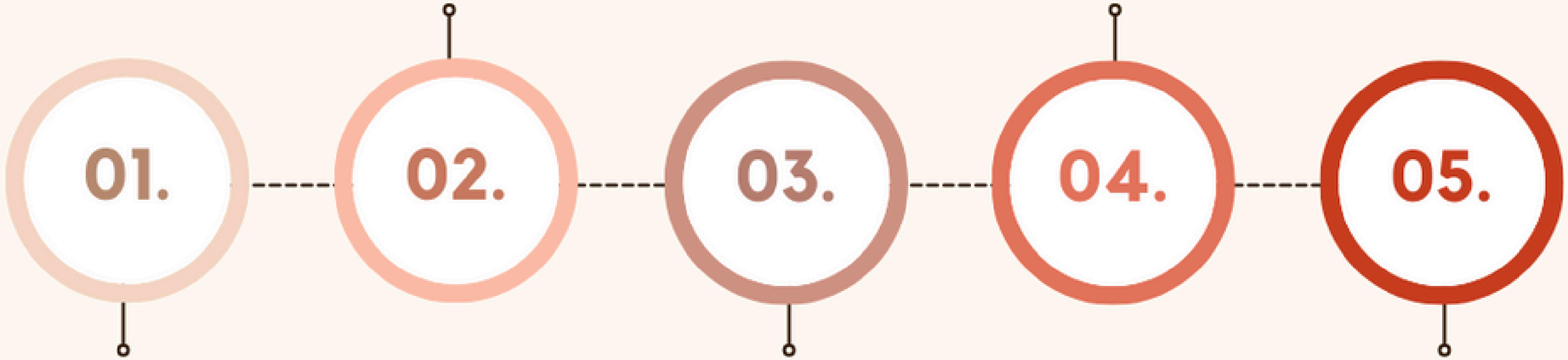
TECHNOLOGY STACK

1 → 2 → 3 → 4 → 5

1	2	3	4	5
WEBSITE	**APPLICATION**	**ATM INTERFACE**	**ATM MECHANISM**	**DATABASE**
Frontend  Backend Firebase	Frontend Android Studio Backend Java 	Interface Windows 11 +  	Microprocessor RaspberryPi JWT JSON Web Tokens UPI	DATABASE Firebase

The Database will store the data of Doctors, Patients, and medicinal history and will also generate a unique QR for the medicine prescription.

The Dava Seva ATM will help patients to get medicines without standing in long queues and also in remote places.



WEBSITE

The Website will help the doctor to view the patient's history and prescribe his medicines in the app itself.

APP

The App will help the customer to get medicines from the ATM as well as locate the ATM.
In future, we can add home delivery of medicines and integrate it with e sanjeevani for online doctor consultation .

payment

We offer a secure payment gateway using upi and accepting credit and debit cards.

Important

*Please review all the documents we uploaded on SIH portal. This project is really very important for me and my team. We want to implement this project in real world to solve the healthcare industry problem. We try our best and proposed this solution and we thought this is the simplest and easiest solution of problem statement. We really work hard for this project so please read all documents we uploaded on SIH portal. Thanks for this Smart India Hackthon we learned many things while working on this project that things we cannot learn in our academics.