



Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation: Govt of Himachal Pradesh

PS Code: SIH1383

Problem Statement Title: Optimizing Doctor Availability and Appointment Allocation in Hospitals through Digital Technology and AI Integration.

Team Name: SqUAdRAMa

Team Leader Name: Umer Salim Khan

Institute Code (AISHE):C-33770

Institute Name: Anjuman-I-Islam's M. H. Saboo Siddik College of Engineering

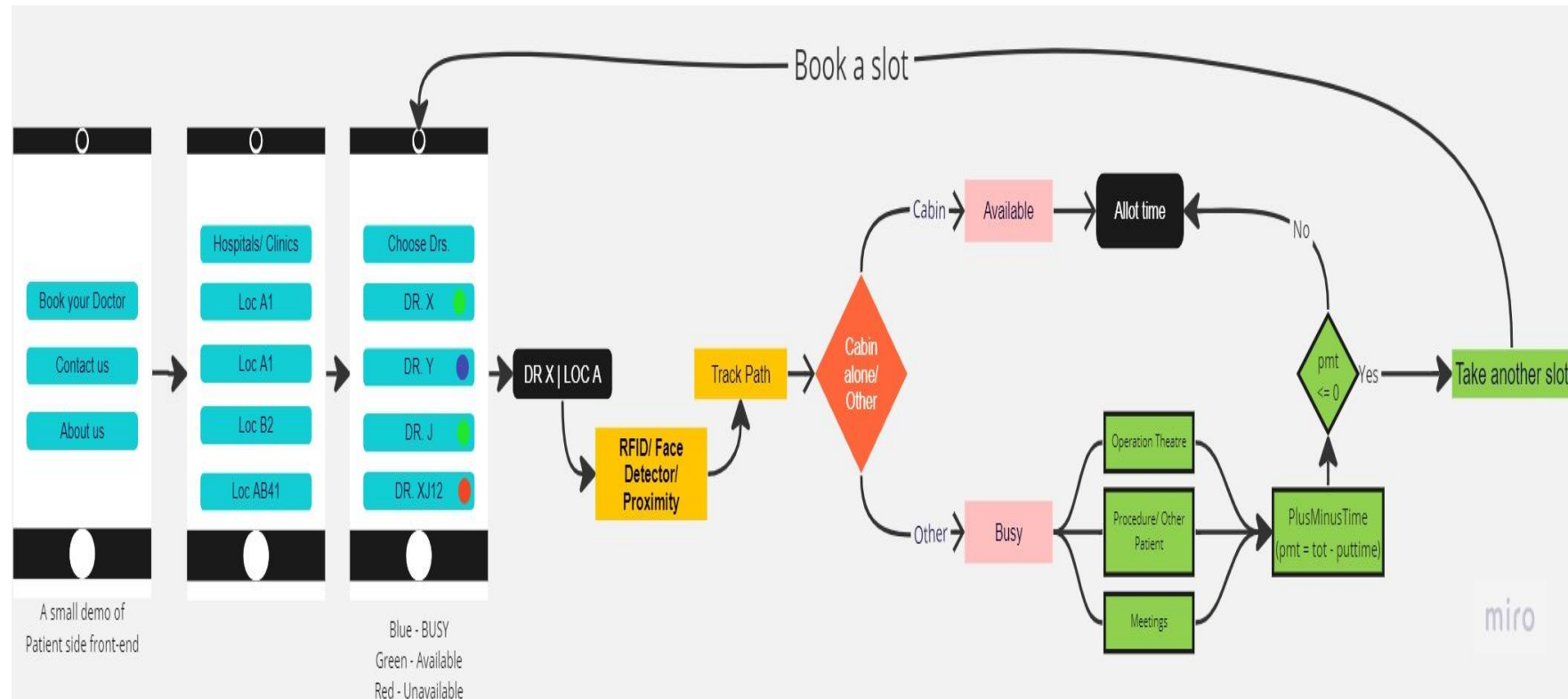
Idea/Approach Details

Idea/ Solution:

We will be adopting web approach to make it accessible to every person.

Time will be allotted based on Allot time function. It will be adaptable to any change making it agile.

- It will help patients to avoid sitting for long, rather time will be allotted based on there appointment and doctors availability.
- Estimate time for appointment.
- Real time notification updates as reminder of appointment also will acknowledge if any condition occur.



Required formulae

Available/ Remaining time = $DRTIME.initial - curr_time + tot$

Allot time = $lpt + curr_time$

tot (total time) = $|DRTIME.initial - DRTIME.end|$

lpt (last patient time) = $\langle \text{Set to 0 @ } DRTIME.initial \rangle$

puttime (busy time) = $Hr(Proc|Meet|OT)$

LPT updated after recent 'Allot time'

Idea/Approach Details

Describe your Technology stack here:

- Front End – HTML, CSS, JS
- Backend – Node JS, Flask, Axios
- Database – MySQL
- Server – AWS
- Other possible less use technologies
- Possible third parties – Msg 91/ Twilio/ Some other JS libraries for user Auth.
- Session management – JWT

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Describe your Use Cases here

- For situation where adaptability should be quick.
- Agile methodology for faster delivery
- For doctor management of patients.
- For avoiding long waiting time
- Patient convenience
- Doctor feasibility

Describe your Dependencies / Show stopper here

- High snowy places can cause propagation delay.
- User – User conflict: Type of conflict where both users take appointment at same time. (This can be reduced by FCFS approach from HR-MIN-SEC)
- Doctor available but a small query of patient in the room will display it busy. (This can be tackle using delay in time).
- Proximity/ RFID/ Face detection intrinsic flaws (Like error in reader/ detector).
- Availability can be mistaken by proximity (Can be tackle by using all three at once).
- Long/ Short range sensors can be some time less effective in estimating.
- Too many sensors required.

Team Member Details

Team Leader Name: Umer Salim Khan

Branch: BE Stream: CSE (AI & ML) Year: IV

Team Member 1 Name: Adiba Naaz Khan

Branch: BE Stream: CSE (AI & ML) Year: III

Team Member 2 Name: Sana Khan

Branch: BE Stream: CSE (AI & ML) Year: III

Team Member 3 Name: Tuba Sultana Ansari

Branch: BE Stream: CSE (AI & ML) Year: III

Team Member 4 Name: Mohammed Kalsekar

Branch: BE Stream: CSE (AI & ML) Year: IV

Team Member 5 Name: Rutaab Ahmed Khan

Branch: BE Stream: CSE (AI & ML) Year: IV

Team Mentor 1 Name: Arshi Khan

Category: Acedemic Expertise: AI/ ML & Electronics Domain Experience: 15+