Smart Queue Management System

for Health Care

Presented by

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Guided By

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Overview

What we going to discuss today?

- Existing solution
- Problems
- Why Problems
- Proposed Solution
- Conclusion
- References

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Management of Queue

The APPOINTMENTS

First and Foremost method

Appointment System

Organize patients only one time.

Patients

1	2	3	4	5

Patients assigned more priority as they arrive.

Patients

1	2	3	4	5

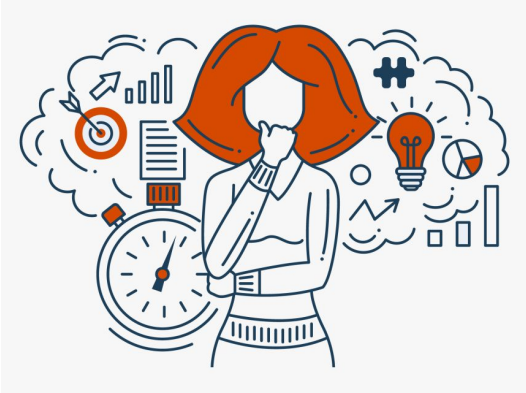
Information noted in order of their visit.

Patients

1	2	3	4	5

- Appointments completed !!
- Queue ready for next day.

Fakhra



Problems !

Why SQMS?

Problems

No Standard System

- Every Hospital has his own methods.
- Patients have to gather information before visit.

Problems

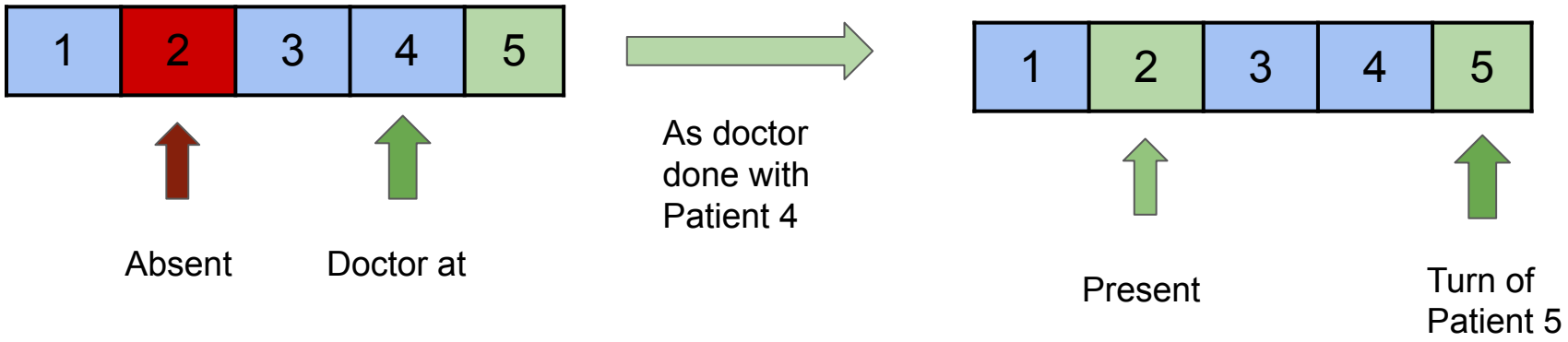
Long Queues

- New and unaware patients reach before time.
- Creates chaos.

Problems

No Proper Organization for Latecomers.

- Whom to prioritize
- Where to put the latecomer in case he arrived.



Mayank

Solution

Assign a Dynamic priority.

Another Parameter

Assign priority in the appointment order

Appointment Order

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6

Priority

1	2	3	4	5	6

Keep Record of Patients

Appointment Order

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6

Priority

1	2	3	4	5	6

Assign Penalty

Appointment Order

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6

Priority

1	2 **(+ 2)**	3	4	5	6

Assign Penalty

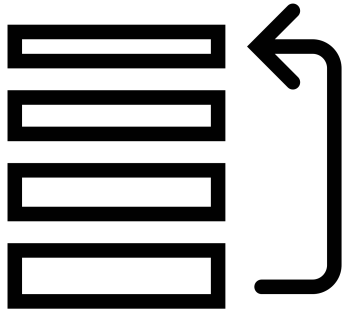
Appointment Order

Patient 1	Patient 2	Patient 3	Patient 4	Patient 5	Patient 6

Priority

1	4	3	4	5	6

Re-order



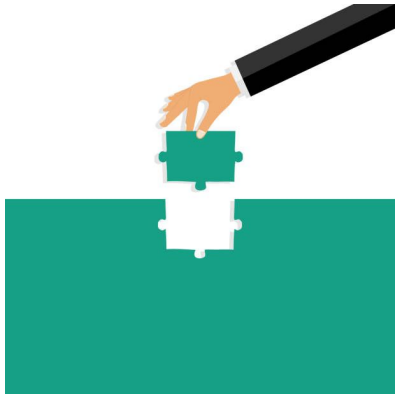
Appointment Order

Patient 1	Patient 3	Patient 2	Patient 4	Patient 5	Patient 6

Priority

1	3	4	4	5	6

Final Queue



Appointment Order

Patient 1	Patient 3	Patient 2	Patient 4	Patient 5	Patient 6

Priority

1	3	4	4	5	6

How this is helping?

How this is helping?

Fixing the Position of latecomers.

Appointment Order

Patient 1	Patient 3	Patient 2	Patient 4	Patient 5	Patient 6

Priority

1	3	4	4	5	6

How this is helping?

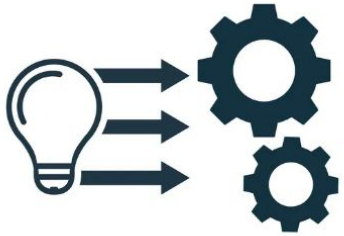
Resolving issue of Prioritization.

Appointment Order

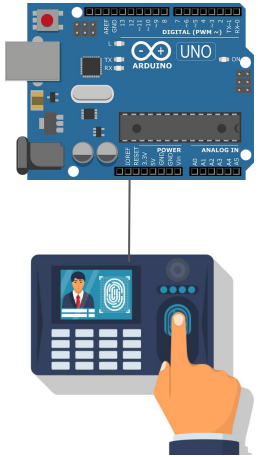
Patient 1	Patient 3	Patient 4	Patient 5	Patient 6	Patient 2

Priority

1	3	4	4	5	7

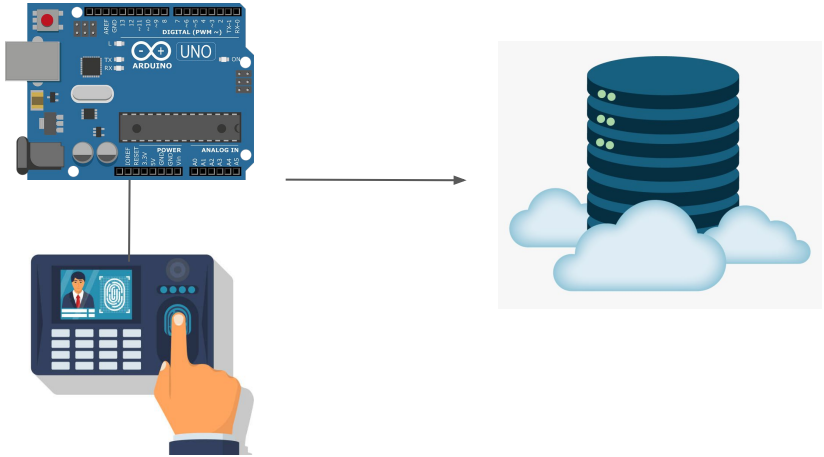


Implementation



As Doctor will arrive, he will mark his presence using Biometrics.

Smart Queue Management system will upload his presence on the cloud.



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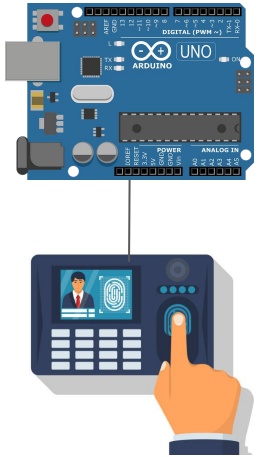
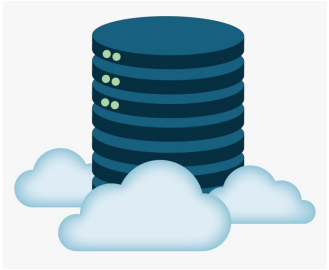
As Cloud receive the response from Biometrics system.

It will let respective users know.





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Smart Queue Management system will upload his presence on the cloud.

As Cloud receive the response from Biometrics system.

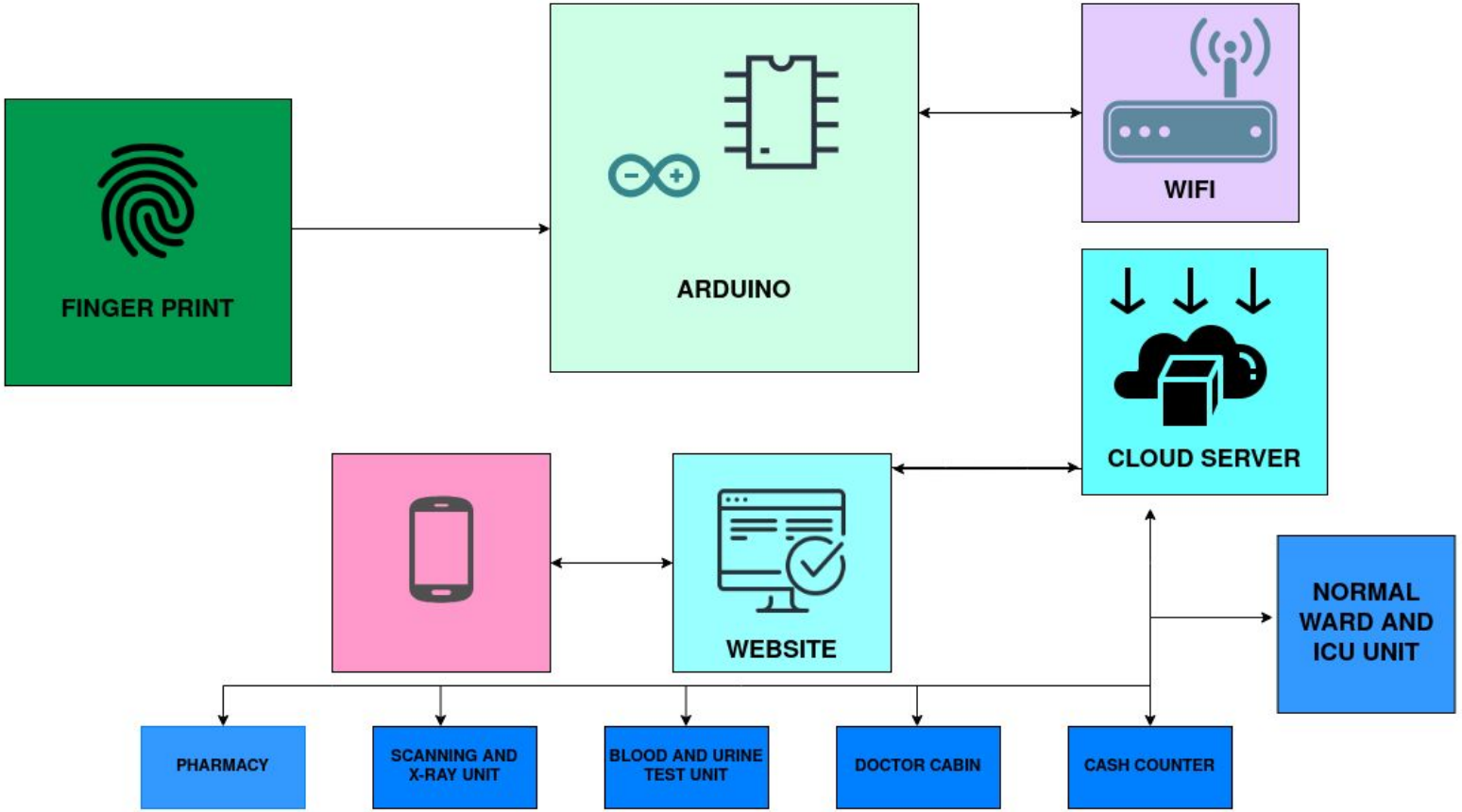
It will let respective users know.

Users can see the presence of Doctor from web app.

And thereafter can plan to reach clinic accordingly.

System Architecture

of SQMS


FINGER PRINT
ARDUINO
WIFI
CLOUD SERVER
WEBSITE
NORMAL WARD AND ICU UNIT
PHARMACY
SCANNING AND X-RAY UNIT
BLOOD AND URINE TEST UNIT
DOCTOR CABIN
CASH COUNTER

Conclusion

1. Implementing this solution will correctly Prioritize each patient.
2. Time of the patients are valued.
3. Needs of the patients, staff and hospital authorities are covered.
4. Interaction inside a Queuing System becomes easy and convenient

References

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