

ACOWIN

Solving emergency department overcrowding by guiding patients to hospitals with available beds using beacon technology



Jumanah Al-Wafi

Tasneem Al-Zahrani

Manar Al-Emam

Rawan Abdu Essa

Reem Al-Shareef

Supervised by: Afnan Al-Dhahri

College of Computer and Information Systems, Department of Computer Science

Project ID: UQU-CS -2022S-10

Abstract

Overcrowding in emergency departments (ED) is a global concern that limits the efficiency of the healthcare system. Our application provides a unique solution to solve this problem by leveraging Internet of things (IoT) technology. We aims to minimize the overcrowding in EDs by guiding the user to the most appropriate ED based on the crowdedness and delivering self-check-in service using the Bluetooth Low energy Beacons devices.

Related work







MEDIKTOR





(1) 50% of the patients had intentions to visit an ED before using the app (2) Reports not processed or being declined regardless of the seriousness of the situation (3) Diagnosis through AI but only recognizes certain diseases (4) Tried to convince the patients to not visit the ED instead of guiding them to appropriate ED.

Objectives

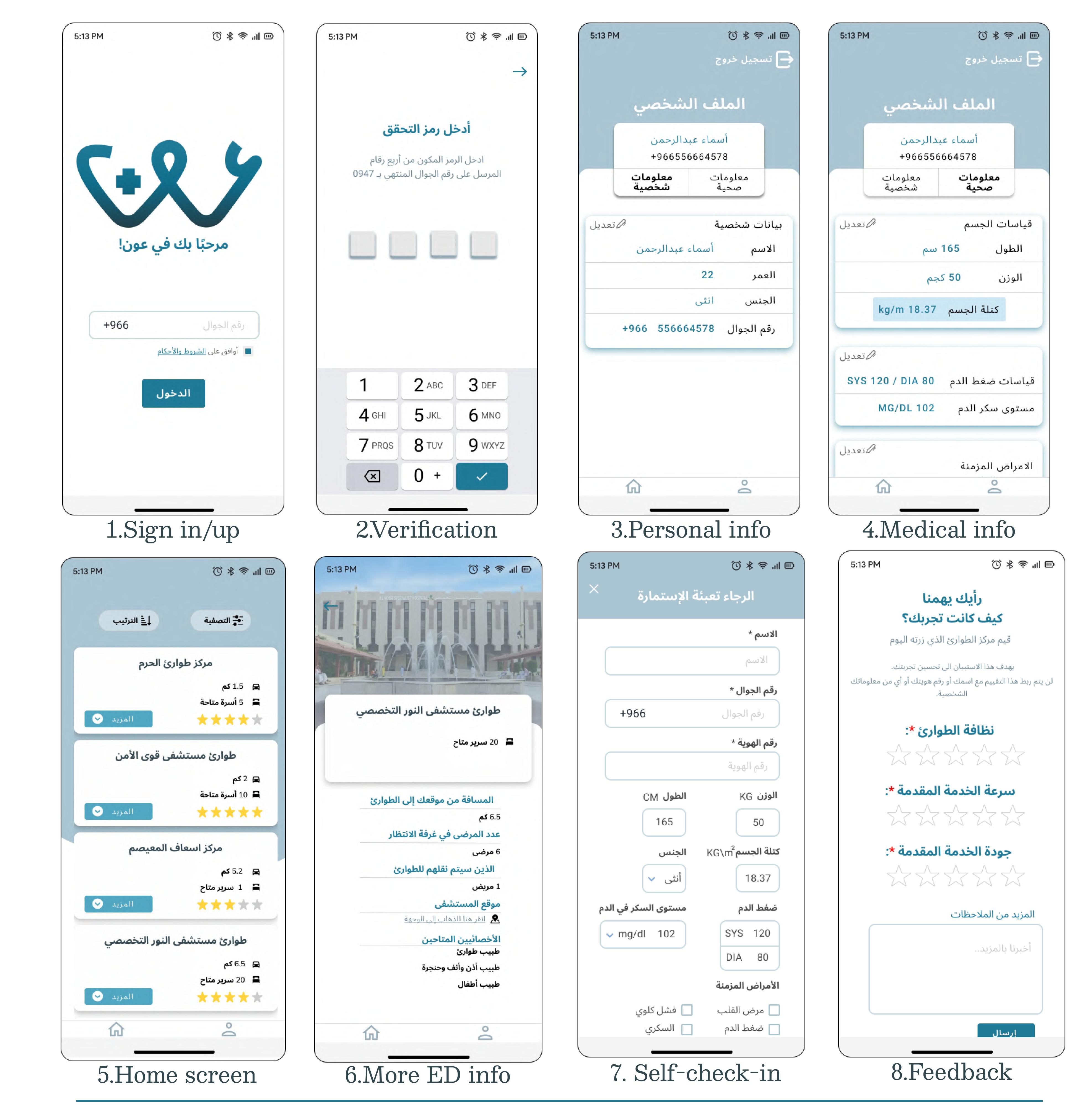
- Use technology to reduce the emergency departments overcrowding consequences.
- Guide patients to the most appropriate emergency department.
- Integrate IoT using Beacon devices to make checking in to an emergency department faster.
- 4 Provide patients with good experience.

Methodology

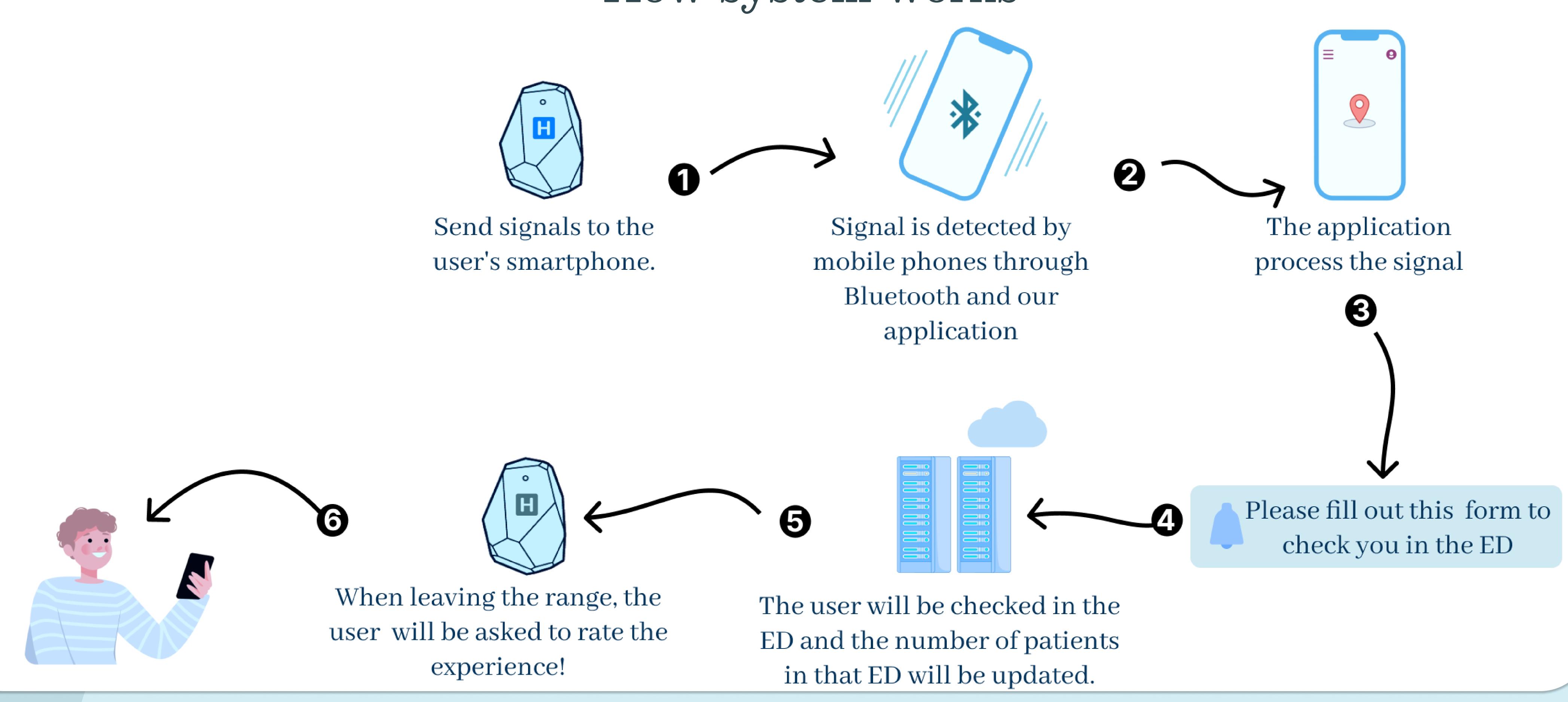
The waterfall model

Implementation

User interfaces



How system works



Conclusion

This project ends with a real-time application called "Aown". Our main