

Introduction

To address the challenges posed by crowded conditions in Al-Haram Al-Maki, we propose "Riwa," a system designed to provide a technical solution for supervisors of Zamzam water dispensers. Riwa streamlines operations by remotely measuring water levels and electronically monitoring worker performance, leading to time savings, improved task efficiency, and enhanced productivity. The main focus is on ensuring high-quality performance and optimizing the functioning of the dispensers in Al-Haram Al-Maki.

Objectives

Eliminating Hourly tours



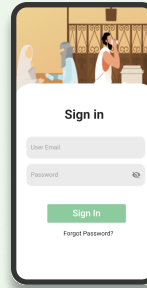
Monitoring workers' performance

Eliminating manual checking



Digitizing the system

Riwa Application Interfaces



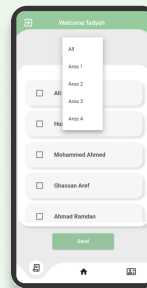
Sign in Screen



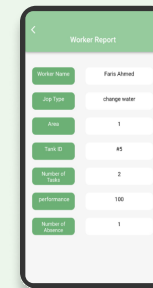
Home Page Screen



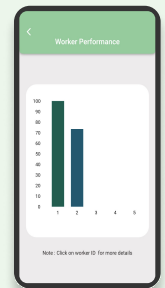
Dispenser Information Screen



Attendance Screen

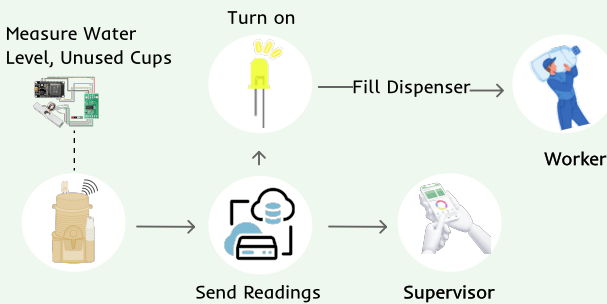


Worker Report Screen



Worker Performance Screen

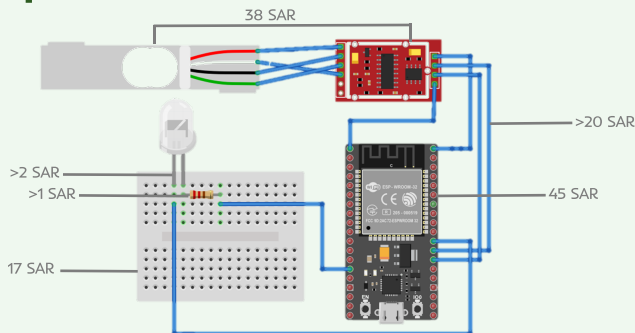
System Architecture



Tools



Dispenser Circuit



Future Work

- 01 Utilize an AI model to analyze and determine optimal dispenser replacement times during peak hours.
- 02 Enable real-time notifications for workers to change water dispensers through the application.

Conclusion

Riwa project embodies the power of digital transformation in Al-Haram Al-Maki. It demonstrates its efficiency through the utilization of smart water dispensers equipped with sensors and a central application, which enhance efficiency and enable remote monitoring. As a result, the Zamzam management process is enhanced. Riwa's data-driven approach contributes to the ongoing development and management of the dispensers in Al-Haram Al-Maki.

