

Abstract

The purpose of this project is to design and implement an RFID based employee time tracking system for J2 Innovations, a building automation software company. The following hardware technologies were used: IOT enabled ESP32 microcontroller, RFID scanner module, 3D printing, WiFi AP device configuration. In addition, a variety of software was used: Arduino IDE, NodeJS framework, Ractive library, AM Charts library, MySQL database. The user experience was greatly improved and user complaints were reduced to nearly none. Possible future expansions include handling different time zones for international employees, generating reports and charts for management, and scheduling days off and vacations through the UI.