

ABSTRACT

Thesis Title : DESIGN AND BUILDING OF AN AUTOMATION SYSTEM FOR AL-QUR'AN READING ROOM IN TAHFIDZ QUR'AN'S HOUSE USING ARDUINO MEGA 2560

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Memorizing the Qur'an is becoming an increasingly popular activity nowadays, supported by various facilities such as Qur'an houses, tahfizh houses, and tahfizhul Qur'an programs in schools, especially Primary Schools/Madrasah Ibtidaiyah. Many schools make tahfizhul Qur'an programs their flagship, showing the importance of memorizing the Qur'an. There are more and more supporting facilities for Qur'an tahfidz.

The Al-Qur'an reading room is one of the important facilities in education, requiring adequate lighting and air conditioning for a comfortable learning process. However, there are still many Al-Qur'an reading rooms that use manual locks and manual electrical systems. This causes inconvenience to the user and wastes electrical energy. Therefore, the Al-Qur'an reading room designed in this research is equipped with ultrasonic sensors to detect the presence of people, as well as servo motors to open the door automatically.

Keywords: *Al-Qur'an Reading Room, Automation System, Arduino Mega 2560.*

ABSTRAK

Judul Skripsi : **RANCANG BANGUN SISTEM OTOMATISASI RUANG BACA AL-QUR'AN PADA RUMAH TAHFIDZ QUR'AN MENGGUNAKAN ARDUINO MEGA 2560**

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Menghafal Al-Qur'an menjadi kegiatan yang semakin populer di zaman ini, didukung oleh berbagai fasilitas seperti rumah Qur'an, rumah tahfizh, dan program tahfizhul Qur'an di sekolah-sekolah, terutama Sekolah Dasar/Madrasah Ibtidaiyah. Banyak sekolah menjadikan program tahfizhul Qur'an sebagai unggulan, menunjukkan pentingnya menghafal Al-Qur'an. Fasilitas-fasilitas pendukung untuk para tahfidz Qur'an semakin banyak.

Ruang baca Al-Qur'an menjadi salah satu sarana penting dalam pendidikan, memerlukan pencahayaan yang memadai dan pendingin ruangan untuk kenyamanan proses belajar. Namun, masih banyak ruang baca Al-Qur'an yang menggunakan kunci manual dan sistem listrik manual. Ini menyebabkan ketidaknyamanan bagi pengguna dan pemborosan energi listrik. Oleh karena itu, ruang baca Al-Qur'an yang dirancang dalam penelitian ini dilengkapi dengan sensor ultrasonik untuk mendeteksi kehadiran orang, serta motor servo untuk membuka pintu secara otomatis.

Kata Kunci : Ruang Baca Al-Qur'an, Sistem Otomatisasi, Arduino Mega 2560.