

ABSTRACT

This final project research focus on home condition system control design. Generally, manual system is used to control home devices; or automatically but in a relatively short distance. In this final project, WEB remote home controlling and monitoring by using Arduino microcontroller will be discussed.

This system integrates WEB and Arduino microcontroller using serial communication as main controller that is able to translate web-sourced user instructions accurately. Within the system, several sensor and indicator as actions basic that need to be executed by microcontroller. Post execution, feedbacks are sent to the WEB for real time user monitoring.

System testing level is based on the Arduino microcontroller actions accuracy towards instructions given through WEB or through sensor, automatically. Testing result shows that the instruction accuracy level from user and or automatically through sensor is 96% approximately.

Keywords: *serial communication, real time, web, Arduino microcontroller*