

ABSTRACT

The system built consists of hardware and software modules. Access room device for Smart Home is a combination of technology with the aim of increasing efficiency, comfort and security. The Smart Home system consist of device control, monitoring and automation device. Augmented Reality (AR) and Internet of Things (IoT) device are tools for communicating, monitoring , and remotely controlling with interface-connected hardware by placing virtual information about smart object and service in the user's view of the real world. In the construction of this final project, the emphasis is on hardware modules consisting of lamp control, servo motors and room Suhureadings. Light control, servo motors and Suhureadings are processed using the MCU mikrokontroller node which is transmitted by IoT to be later controlled and read by the software module. The command is sent to the API that acts as a server and will send it to nodeMCU via the http protocol. The test results for the DHT11 sensor there is a difference in temperature error of around 0.35 on Blynk and 0.40 on the website. While the results of the tests carried out for servo motors with on/off conditions have an average response time of 0.67-0.73 second when controlled via Blynk, during on/off conditions there is a response time of around 2.07-2.67 second when controlled via website. And the test results for lamp with on/off conditions the average response time is 0.63-0.73 second when controlled via Blynk, when on conditions the average response time is around 3.86 second, and when off conditions the response time is about 2 second when controlled via website.

Keywords : Smart Home, Hardware Module IoTAR, Lamp, Temperature, Servo Motor