ABSTRACT

Nowdays, the fast-paced societies makes influence coffee lovers to procure coffee easily, quickly, while keeping the taste delicious. Howover, in some cases, the taste of the blended coffee is somewhat different. Many people needs to have the right amount of each ingredient without having to weigh it first and be able to combine them accordingly. Existing coffee machines usually procure one type of coffee taste at the same rate, and on most existing coffee machines still utilize manual method to order coffee.

To solve this problem, *Smart Coffee Maker* system was created based on the *Internet of Things* using a web application as a medium for ordering and *monitoring* the coffee-making process, then the compounding system was carried out using the FSM method control system *(Finite State Machine)*. The components used are the LDR and LED sensors for detecting the presence of glass, a stepper motor to move the glass receiver move according to a predetermined step. Servo motor for opening and closing valves on coffee-making ingridients, as well as ultrasonic sensors to send data to the server to find out the remaining available ingredients.

The smart coffee maker can serve a cup of coffee with an error resolution of ± 2 gr of coffee, ± 1 gr of sugar, a resolution of water accuracy of 96.73% of the set standard. With the wireless LAN ordering system, the ideal distance to place an order is from 0 to 16 meters. A delay of 79.374167 ms was measured. Ingridients status can be monitored by WAN via the Thingspeak platform which can update data every ± 15 s. The installed FSM control system meets the SCAA dosage standard.

Keywords: Coffee Maker, Internet of Things, FSM, ultrasonic, LDR, and LED