ABSTRACT

Terrarium is an artificial microhabitat that resembles natural habitat and made in a glass box. Terrarium itself usually contains either plants or animals according to each owner. One of the type of animals that can be kept in a terrarium is reptiles.

Reptiles are animals that can't control its own body temperature or usually called a cold-blooded animal. Reptile's active time also affects reptile's stress level. These factors are commonly be known as health issue for reptiles. It's affecting reptiles to lost weight until it died or failure in breeding.

In this final project, a monitoring and control system is made to control and monitor temperature, humidity, and lightning in a reptile terrarium using Arduino MEGA as the microcontroller and connected to android. Temperature and humidity quantified from temperature and humidity inside the terrarium. Lightning is controlled by Arduino MEGA through relay. Temperature, humidity, and lightning's information will be forwarded to android through ESP8266. The indicator for reptile's health inside the terrarium is by measuring temperature, humidity and its weight.

Keywords: Terrarium, Temperature, Humidity, Reptiles, Arduino MEGA, Android