ABSTRACT

Lightning is an unpreventable natural electrical phenomenon in the Earth's atmosphere that occurs due to the release of both positive and negative electrical charges contained in clouds. Lightning has a harmful impact on humans and their electronic goods. Such as the occurrence of damage to electronic devices. The energy released by lightning even exceeds the energy produced by power plants in the United States, so it can be imagined what disasters might occur due to lightning strikes. So a tool is needed that can provide predictions as to how far the charge separation activity takes place, so that it can provide an early warning before lightning actually occurs. This early lightning detection tool is expected to be an alternative for users to detect before lightning occurs. And the tool can be used to protect and secure the electronic items used.

The results of final project testing show that lightning can be detected around 1 Km, 5 km and 10 Km and is carried out when lightning is possible, the tool designed in this study uses the AS3935 Sensor then connected to the Arduino IDE and ESP32 which get lightning detection data