Arduino Based Plug Remover with GSM Remote Control

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Abstract. In recent years, the open-source hardware development platform Arduino has grown in popularity. Nowadays, the Arduino platform has become a significant component in the remote control and monitoring of electrical devices at home, in the office, and in the workplace. The Arduino platform has good specs, affordable, and simple to use. A broad variety of shields have been developed for a variety of uses, including Ethernet and Global System for Mobile communication (GSM) connectivity. This study proposes an Arduino-based system for remotely controlling and monitoring electrical devices and sensors for power conservation and protection purposes. Unexpected power outages can cause a power surge, which can cause damage to appliances or gadgets as well as produce high voltage electricity. We must unplug the appliances or gadgets before the power is restored to avoid damage. The Arduino Microcontroller (AM-side) and the Mobile Phone make up the suggested system (MP-side). The MP side serves as both a receiver and a controller for receiving responses from the AM side. While the AM-side is in charge of reading/producing data-signals/control-signals from/to the devices.   As a microcontroller, the Arduino Mega 2560 is employed in this system. To connect between the microcontroller and the mobile phone, the SIM900 GPRS/GSM module was employed. The system could be plugged into a socket. To avoid a bad scenario, a mobile phone can be used to unplug the device utilizing the Global System for Mobile Communication (GSM).

Keywords: Arduino Microcontroller (AM), Mobile Phone (MP), Global System for Mobile communication (GSM)