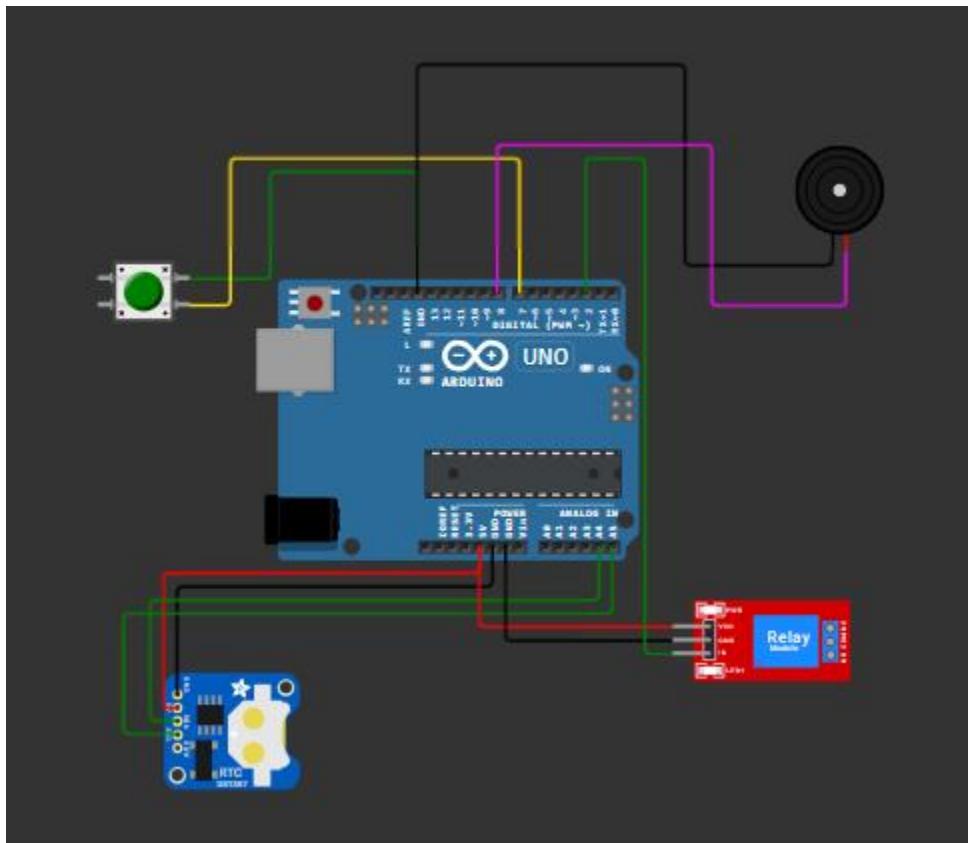


Description for project:

Initially, it is a project to protect electrical appliances (refrigerators, washing machines, etc.) from damage due to frequent power outages.



This project contains several components which are:

1. Arduino uno
2. RTC(ds1307)
3. Relay Module
4. Buzzer
5. Pushbutton

In our project, we relied on the **Pushbottom** to simulate a power outage, with each press acting as a power cut, and the next press acting as a power restore.

The **RTC** records the actual time of each power outage.

If three power outages occur within 30 minutes, the **Relay** cuts off the power to the target device (refrigerator, washing machine).

At the same time, the **Buzzer** emits a warning sound to alert the household.

Electricity will be restored automatically after a quarter of an hour of regular power outage.

With each click on the Pushbottom, the power will be disconnected or restored, and the last time, the period between the first power outage and the last power outage will be displayed, all on the Serial begin screen.

## **Future improvements:**

1. Connect the project to the Internet using a (WiFi Module) so that a notification is sent to your email or WhatsApp.
2. Add a screen to display:
  - A. The current time.
  - B. The time between interruptions.
  - C. The number of interruptions.

This makes it easier to understand and gives the user a better experience.

3. add battery power (power backup) in the event of a power outage, so the system can continue to operate and record time.

**Link to the WOKWI:** <https://wokwi.com/projects/430864528806475777>