ACTIVE BUZZER

You can use a **buzzer** whenever you want to make some noise.

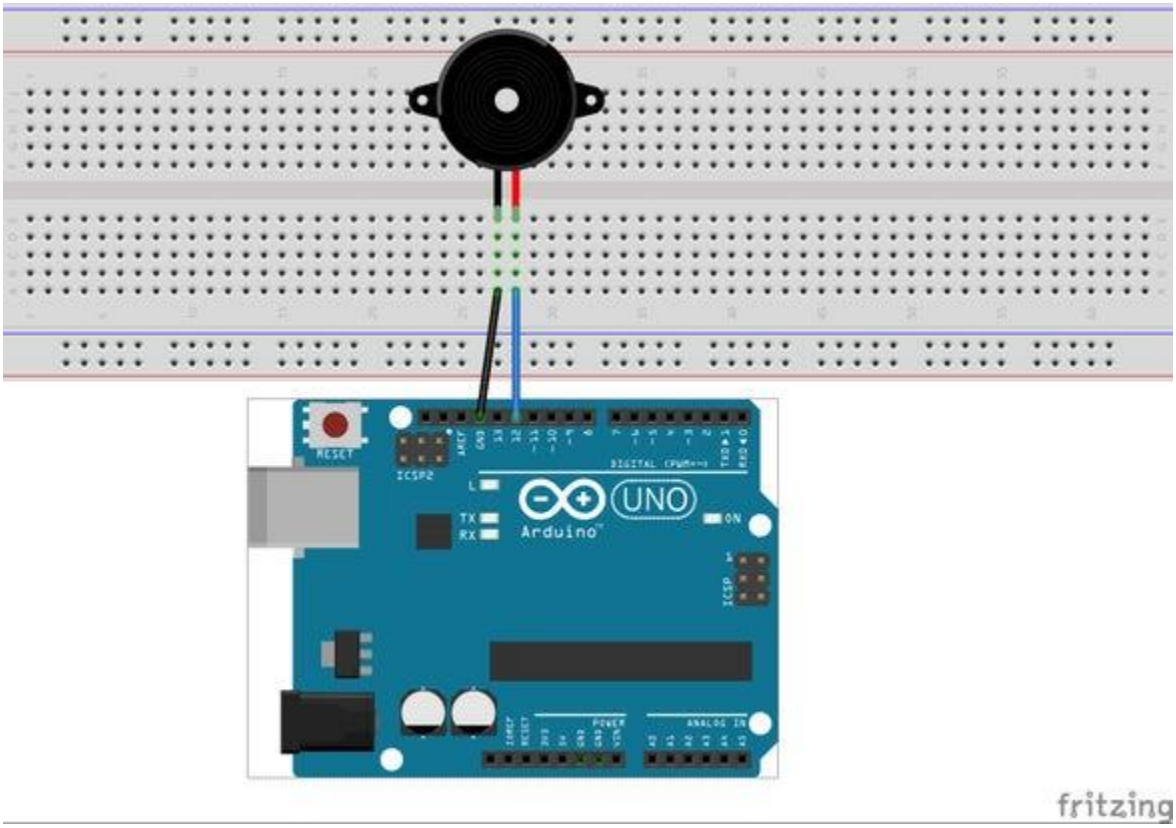
COMPONENTS REQUIRED

- Arduino Uno board
- USB cable
- Buzzer (active)
- Breadboard
- Jumper wires

PRINCIPLE

As a type of electronic **buzzer** with integrated structure, **buzzers**, which are supplied by DC power, are widely used in computers, printers, photocopiers, alarms, electronic toys, automotive electronic devices, telephones, timers and other electronic products for voice devices. Buzzers can be categorized as active and passive ones (see the following picture). Turn the pins of two buzzers face up, and the one with a green circuit board is a passive buzzer, while the other enclosed with a black tape is an active one.

THE SCHEMATIC DIAGRAM



The difference between an **active buzzer** and a **passive buzzer** is:

An **active buzzer** has a built-in oscillating source, so it will make sounds when electrified. But a **passive buzzer** does not have such source, so it will not tweet if DC signals are used; instead, you need to use square waves whose frequency is between 2K and 5K to drive it. The **active buzzer** is often more expensive than the **passive** one because o f multiple built-in oscillating circuits.

In this experiment, we use the **active buzzer**.

Procedures

Step1:

Build the circuit.

Step 2:

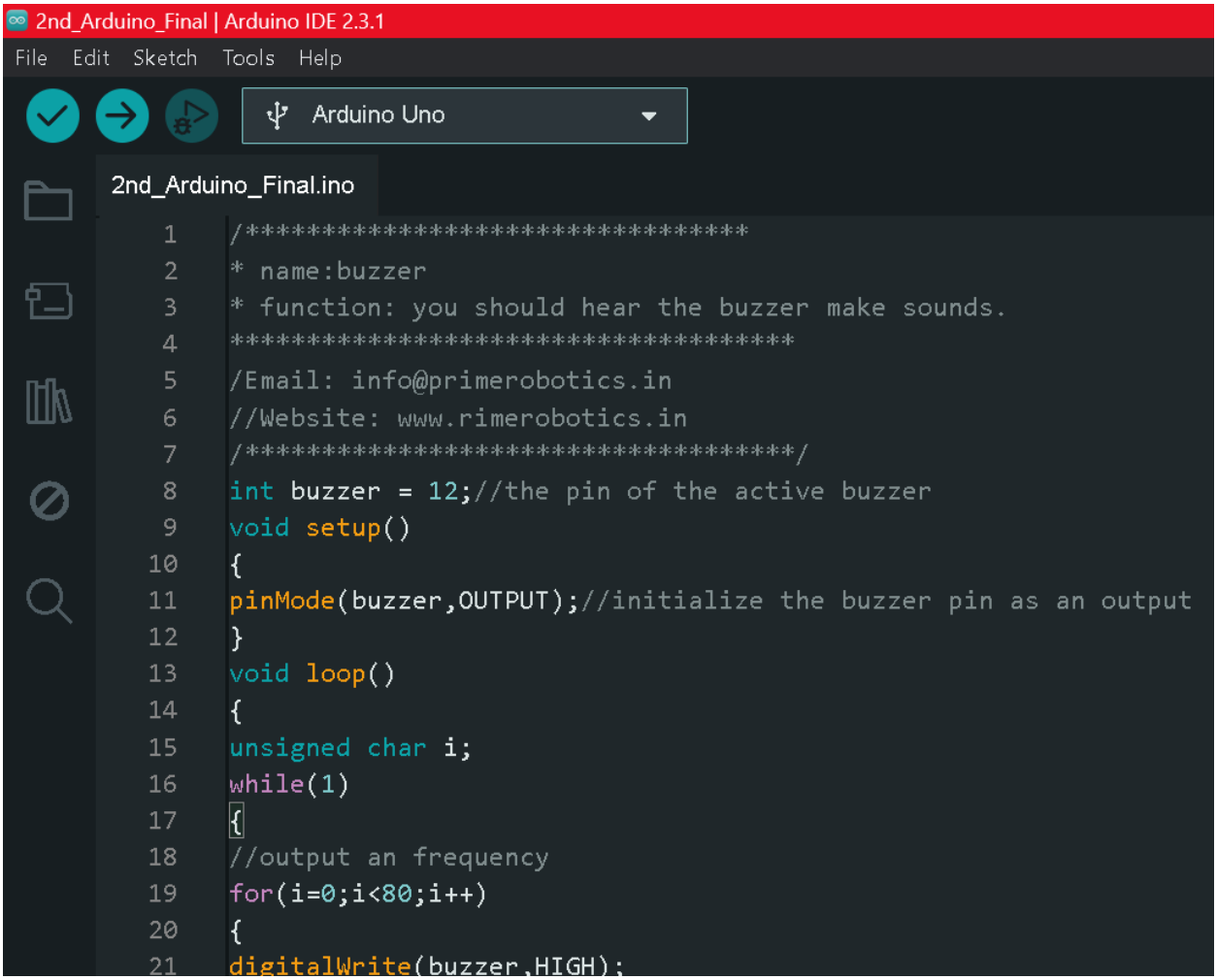
Download the code from https://github.com/primerobotics/Arduino

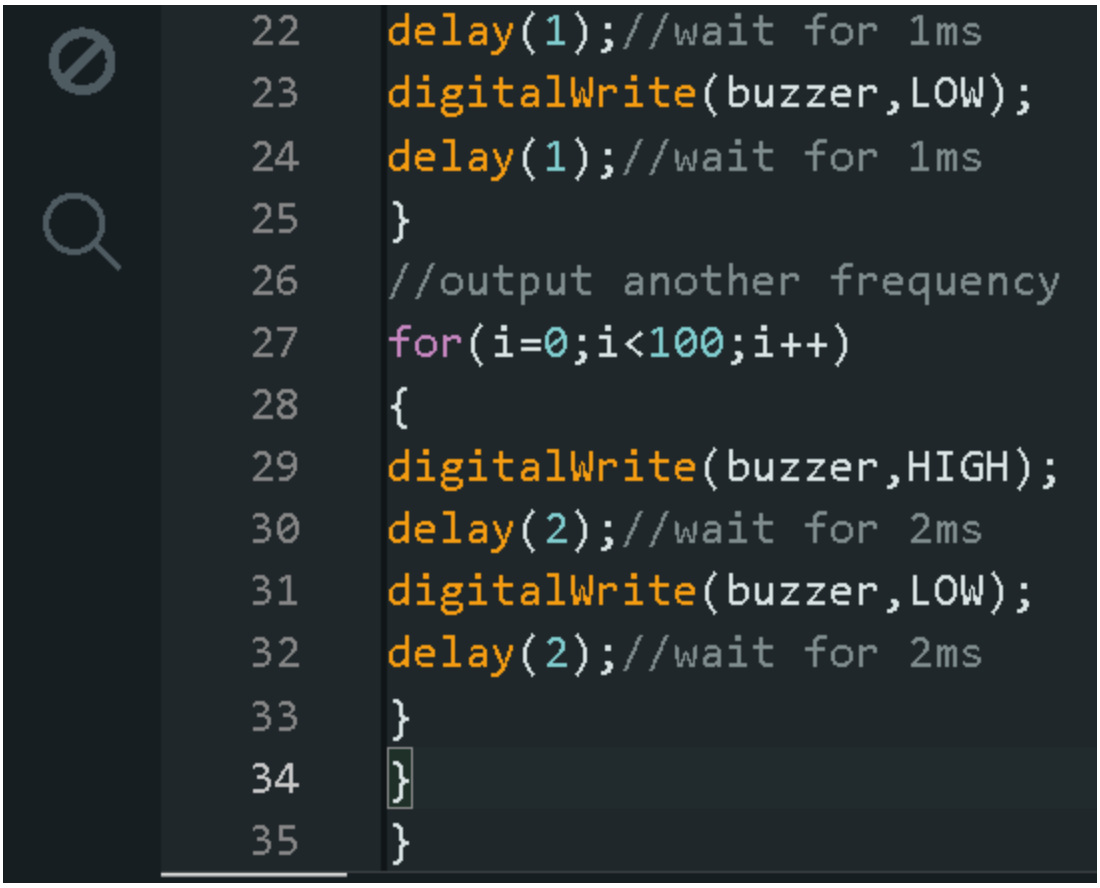
Step 3:

Upload the sketch to the Arduino Uno board Click the Upload icon to upload the code to the control board. If "Done uploading" appears at

the bottom of the window, it means the sketch has been successfully uploaded. You should now hear the buzzer beep.

CODE





```
22    delay(1);//wait for 1ms
23    digitalWrite(buzzer,LOW);
24    delay(1);//wait for 1ms
25    }
26    //output another frequency
27    for(i=0;i<100;i++)
28    {
29    digitalWrite(buzzer,HIGH);
30    delay(2);//wait for 2ms
31    digitalWrite(buzzer,LOW);
32    delay(2);//wait for 2ms
33    }
34    }
35    }
```

REFERENCE:

https://www.instructables.com/ACTIVE-BUZZER-WITH-ARDUINO-UNO-R3/