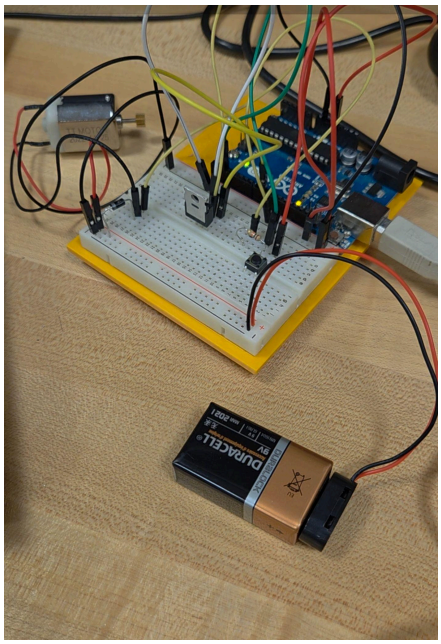
Project #9: The Motorized Pinwheel

This project aims to have a motor spin upon the pressing of a push button.

Required Items: A Motor, Transistor, Push Button, Resistor, 9V Battery, and a Diode are required to complete this project.

Optional Items: CD Hub, Paper Disk, CD, Glue (Only needed to beautify the project)

Breadboard Diagram



As seen in the diagram, the 9V is connected to the right terminal while the left terminal is activated by the arduino. The motor is then connected to the diode and the middle pin of the transistor which is what allows it to be toggled on and off. We then read the push button and trigger the motor whenever it is clicked.

Arduino IDE Code

```
void setup() {
pinMode(9, OUTPUT); //set pin 9, which is the motor pin to OUTPUT, meaning we can control whether it is on or off
pinMode(2, INPUT); // set pin 2 to input to read whether the push button is being clicked or not
}

void loop() {
switch (digitalRead(2)) { //switch is similar to an if else statement, I prefer to use this in my code as it seems easier to read for me. In this case, we are checking whether the pushbutton is giving a HIGH or LOW i.e being clicked or not
  case HIGH: {
    digitalWrite(9, HIGH); // if the push button is being clicked, make the motor turn on
    break;

  }
  case LOW: {
    digitalWrite(9, LOW); // if the push button isn't being clicked, make the motor turn off
    break;
  }
}
}
```

Final Working Proof

Video Link