PROJECTS

• DC Motor
• Ultrasonic Sensor
<table>
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<th>DC MOTOR - COMPONENTS</th>
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<tbody>
<tr>
<td>1 * R3 Board</td>
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<tr>
<td>1 * L293D</td>
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<tr>
<td>1 * 104 Capacitor</td>
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<tr>
<td>1 * Small DC Motor</td>
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<tr>
<td>1 * Button</td>
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<tr>
<td>1 * Breadboard</td>
</tr>
<tr>
<td>1 * Fan</td>
</tr>
<tr>
<td>1 * Resistor (10kΩ)</td>
</tr>
<tr>
<td>1 * USB Cable</td>
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<tr>
<td>Several Jump Wires</td>
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DC MOTOR - SCHEMATIC
DC MOTOR – WIRING
// read the state of the switch into a local variable:
int reading = digitalRead(buttonPin);

if (reading != lastButtonState) // If the button state is different from last
{
    lastDebounceTime = millis(); // reset the debouncing timer
}

if ((millis() - lastDebounceTime) > debounceDelay)
{
    if (reading != buttonState)
    {
        buttonState = reading; // Store the state of the button in buttonState
        // only toggle if button in buttonState is HIGH
        if (buttonState == HIGH)
        {
            digitalWrite(ledPin, HIGH); // turn on the LED
        }

        stat = stat + 1;
        // When stat > 4, set it as 0.
        if (stat >= 4)
        {
            stat = 0;
        }
}

https://create.arduino.cc/editor/sunfounder01/d63a8af3-d1fe-4147-8333-fbf6c0bb6486/preview
DC MOTOR - EXIT CHALLENGE

You can also control the motor to rotate or not.

To do this, connect pin 1, 2EN of the L293D to I/O port 13 of the Arduino. Set 1, 2EN as High level, and the motor will start rotating; set it as Low level, it will stop the rotating.
ULTRASONIC SENSOR

Sends out sound waves at a frequency above the range of human hearing. The sensor receives the echo and calculates the distance between the sensor and the object based on time elapsed.
ULTRASONIC SENSOR – COMPONENTS
ULTRASONIC SENSOR – SCHEMATIC
ULTRASONIC SENSOR – WIRING
void loop()
{
  delay(100); // Wait 100ms between
  unsigned int us = sonar.ping();
  int distance = us / US_ROUNDTRIP_TIME;
  lcd.setCursor(0, 0); // Place 1
  lcd.print("Distance:"); // RX DISTANCE 400 // Maximum distance will
  lcd.setCursor(0, 1); // Set the
  lcd.print(distance); // print
  lcd.setCursor(12, 1); // Set the
  lcd.print("cm"); // print the u
  lcd.setCursor(16, 2); // Set the position on L

ULTRASONIC SENSOR – EXIT CHALLENGE
CONVERT THE CENTIMETER LCD READING INTO INCHES
MAKE ANY ARDUINO DEVICE MOBILE

Power supply cable
THANKS FOR JOINING US!

Please throw away any trash and push in your chairs