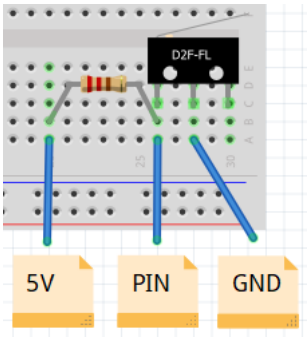
CHEAT SHEET (SENSOR)

Switch:

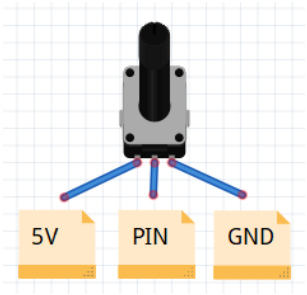
```
int switchPin = A5;             //the used pin
int switchValue;                //to store the value

void setup() {
  pinMode(switchPin, INPUT);    //set pin as INPUT
  Serial.begin(9600);           //enable serial
}

void loop() {
  //read and stores the value, then prints it
  switchValue = digitalRead(switchPin);
  Serial.println(switchValue);
}
```



*PIN: 2, 4-7, 10, A2-A5

Potentiometer:

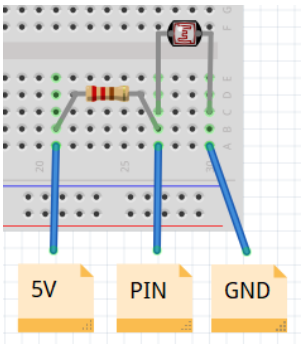
```
int PotPin = A5;                //the used pin
int PotValue;                   //to store the value

void setup() {
  pinMode(PotPin, INPUT);       //set pin as INPUT
  Serial.begin(9600);           //enable serial
}

void loop() {
  //read and stores the value, then prints it
  PotValue = analogRead(PotPin);
  Serial.println(PotValue);
}
```



*PIN: A2-A5

LDR: Light Dependent Resistor / Photoresistor

```
int LDRPin = A5;                //the used pin
int LDRValue;                   //to store the value

void setup() {
  pinMode(LDRPin, INPUT);       //set pin as INPUT
  Serial.begin(9600);           //enable serial
}

void loop() {
  //read and stores the value, then prints it
  LDRValue = analogRead(LDRPin);
  Serial.println(LDRValue);
}
```

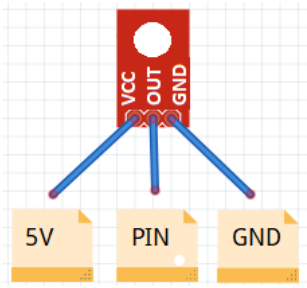


*PIN: A2-A5

CHEAT SHEET (SENSOR)

IR-Sensor: QRE1113 (Analog)

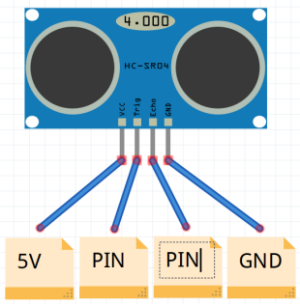
```
int IRPin = A5;                 //the used pin
int IRValue;                    //to store the value

void setup() {
  pinMode(IRPin, INPUT);        //set pin as INPUT
  Serial.begin(9600);           //enable serial
}

void loop() {
  //read and stores the value, then prints it
  IRValue = analogRead(IRPin);
  Serial.println(IRValue);
}
```



*PIN: A2-A5

Ultra-Sound Sensor: HC-RS04

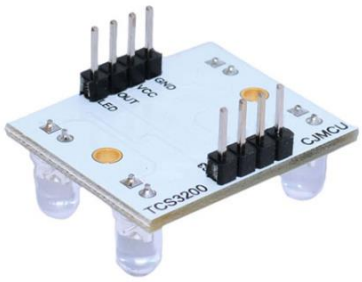
```
int trigPin = 2;                //the used trig pin
int echoPin = 4;                //the used echo pin
int distance;                   //to store the value

void setup() {
  pinMode(trigPin, OUTPUT);     //sets pin as OUTPUT
  pinMode(echoPin, INPUT);      //sets pin as INPUT
  Serial.begin(9600);           //enables serial
}

void loop() {
  //stores the returned value from the function
  distance = getDistance();

  //prints the stored value
  Serial.println(distance);
}

//function - returns the distance
int getDistance() {
  //sends out a trigger sound
  digitalWrite(trigPin, LOW);
  delayMicroseconds(10);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  //returns the received echo in centimeter
  return pulseIn(echoPin, HIGH)*0.034/2;
}
```



*PIN: 2, 4-7, 10, A2-A5

CHEAT SHEET (SENSOR)

Color-Sensor: TCS3200




```
//includes the library
#include <Color.h>

//the used pins
int S0 = 2;
int S1 = 4;
int S2 = 5;
int S3 = 6;
int OUT = 7;

//creates a new color-sensor object
Color color(S0, S1, S2, S3, OUT);

//used to store the color-value
String colorValue = "";

void setup() {
  setColors();
  Serial.begin(9600);  //enables serial
}

void loop() {
  //prints the R(ed), G(reen), B(lue) and W(hite) values from the
  //sensor.
  //write down these values for each color you want to identify
  //(red, green, blue, yellow) and insert them into the
  //setColors function.
  Serial.println(color.getRGBValues());

  //gets the color and prints it
  colorValue = color.getColor();
  Serial.println(colorValue);
}

//Defines the Colors
void setColors() {
  //color.setRed(R, G, B, W);
  color.setRed(40, 104, 22, 81);
  color.setBlue(46, 36, 14, 56);
  color.setGreen(89, 56, 16, 33);
  color.setYellow(29, 36, 12, 55);
}
```

READ ME NOTE: In order to enable the inclusion of the Color library, copy paste the entire "Color Library" folder, into the "Documents -> Arduino -> Libraries" folder.