



Microcontroller Design Laboratory

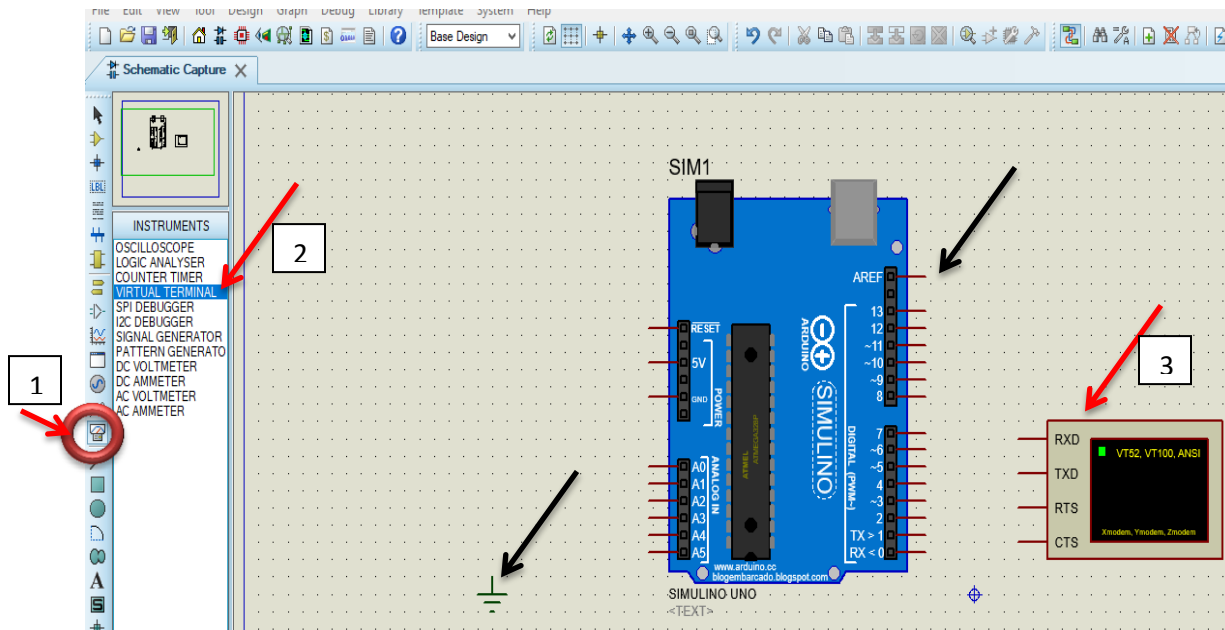
Lecturer: DR. Shaymaa Akram Yousif



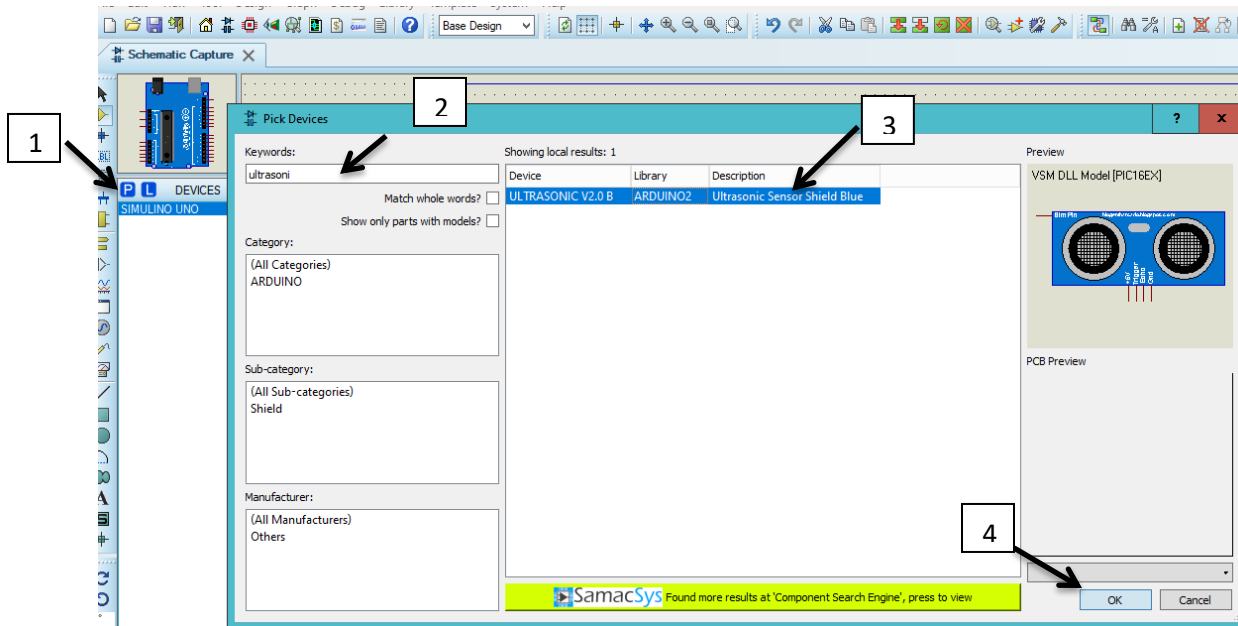
ULTRASONIC sensor with serial monitor

1-Add Arduino UNO and ground as you learned in previous lectures

2-Add a Virtual terminal which is work as the serial monitor in Arduino IDE



3- Add ULTRASONIC V2.0B sensor



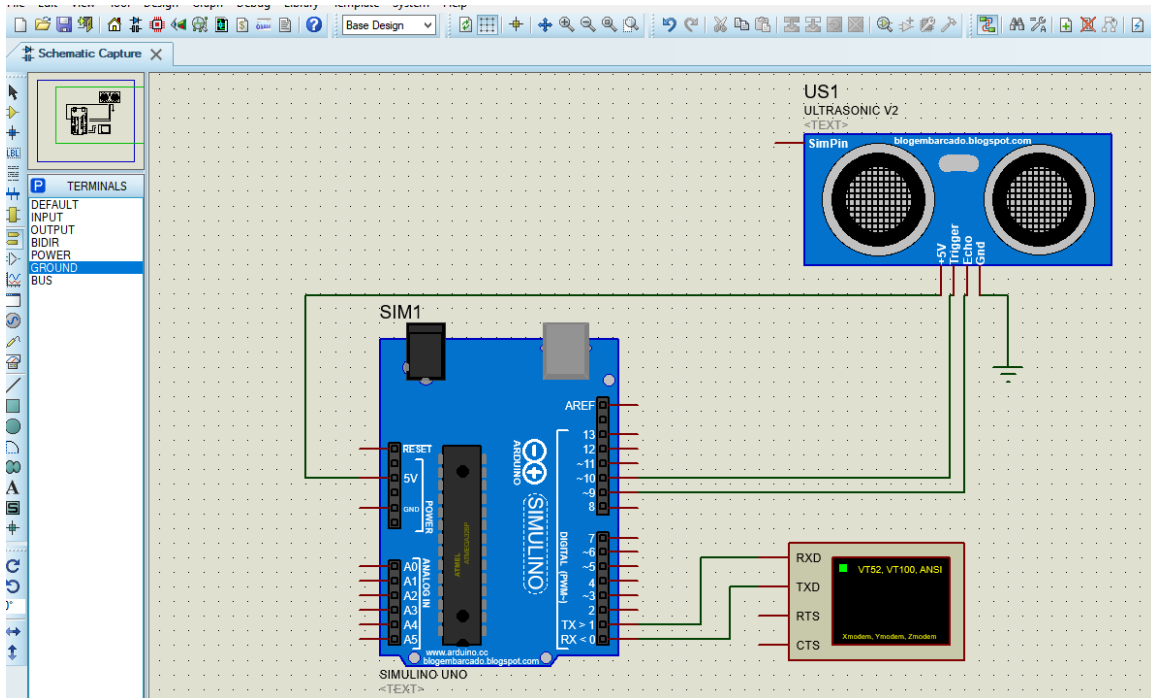


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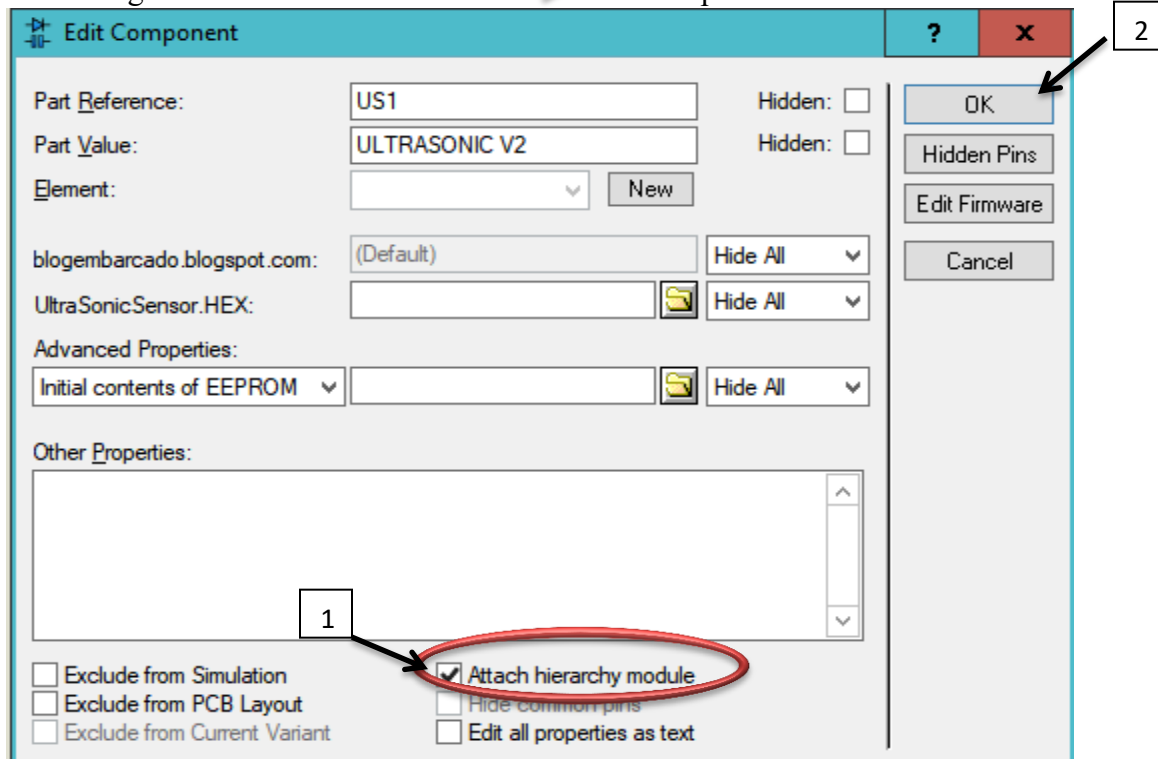
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4- Connect the circuit as shown.



5-Press right-click on ULTRASONIC → Edit Component





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6-upload the below code to your Arduino board by hex file

Code:-

```
const int trigPin = 10;
const int echoPin = 9;
long duration;
int distance;

void setup()
{
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  Serial.begin(9600);
}

void loop()
{
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);

  distance= duration*0.034/2;
  Serial.print("Distance: ");
  Serial.println(distance);
}
```

By:-

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