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***COURSE:*** *COMPUTER ARCHITECTURE* ***(LAB)***

***TASK #:*** *4*

***SUBMITTED TO:*** *SIR ABUZAR ZAFAR*

***CODE:***

*const int pingPin = 10;*

*int red = 11;*

*void setup() {*

*Serial.begin(9600);*

*pinMode(red, OUTPUT);*

*}*

*void loop() {*

*long duration, inches, cm;*

*pinMode(pingPin, OUTPUT);*

*digitalWrite(pingPin, LOW);*

*delayMicroseconds(2);*

*digitalWrite(pingPin, HIGH);*

*delayMicroseconds(5);*

*digitalWrite(pingPin, LOW);*

*pinMode(pingPin, INPUT);*

*duration = pulseIn(pingPin, HIGH);*

*inches = microsecondsToInches(duration);*

*cm = microsecondsToCentimeters(duration);*

*Serial.print(inches);*

*Serial.print("in, ");*

*Serial.print(cm);*

*Serial.print("cm");*

*Serial.println();*

*delay(100);*

*if (inches < 47)*

*{*

*digitalWrite(red,HIGH);*

*}*

*else*

*{*

*digitalWrite(red,LOW);*

*}*

*}*

*long microsecondsToInches(long microseconds) {*

*return microseconds / 74 / 2;*

*}*

*long microsecondsToCentimeters(long microseconds) {*

*return microseconds / 29 / 2;*

*}*