

SINE WAVE GENERATION CODE FOR ARDUINIO UNO

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/* Design & Deloped By Mr. Adeeb Raza
TESTED OK By Mr. Adeeb Raza
Note:- A single radian is just below 57.3 degrees
Ques. Convert 5/12 π radians into degree measure
ANS :- 5/12 = 0.416 x 3.142 = 1.309 x 57.3 = 75.01 degrees
FYI Radian (One Radian = 57.3 degrees)
90 = 1.571 = (pi)/2          ( 90 / 57.3 = 1.570 )
120 = 2.094                 ( 120 / 57.3 = 2.094 )
180 = 3.142 = pi            ( 180 / 57.3 = 3.141 )
270 = 4.712 = (pi)*1.5 or 3(pi)/2 ( 270 / 57.3 = 4.712 )
360 = 6.283 = 2 (pi)       ( 360 / 57.3 = 6.282 )
Range is 0 - 6.283
*/

int R = 9;          // Initialize arduino pin no. 9 as output for R Phase
int Y = 8;          // Initialize arduino pin no. 8 as output for Y Phase
int B = 7;          // Initialize arduino pin no. 7 as output for B Phase

void setup() {
  Serial.begin(9600);          // Serial Printer
  pinMode(9, OUTPUT);         // R Phase Output at pin no.11
  pinMode(8, OUTPUT);         // Y Phase Output at pin no.10
  pinMode(7, OUTPUT);         // B Phase Output at pin no.9
}

void loop() {
  for(int x=0;x<63;x++) { // Loop is 0 to 62 exit at 63
    float y = float(x)/10; //Make range 0 to 6.2
    delay(5);
    //Serial.println(sin(y)); // Range is -1 to 1
    Serial.println(sin(y)*2.5); // Range is -2.5 to 2.5
    //Serial.println(sin(y)* 100); // Range is -100 to 100
    // Serial.println(sin(y)* 200) ; // Range is 0 to 200
    // Serial.println(sin(y)* 100) ; // Range is 20 to 220
    digitalWrite(R, OUTPUT); // R Phase Output at pin no.11
    delay(6.666); // Delay 6.6 milli seconds 120 degree
    digitalWrite(Y, OUTPUT); // Y Phase Output at pin no.10
    delay(6.666); // Delay 6.6 milli seconds 120 degree
    digitalWrite(B, OUTPUT); // B Phase Output at pin no.9
    delay(6.666); // Delay 6.6 milli seconds 120 degree
  }
}
// End Of Code
```