**Arduino Uno Code (Student ID 1801169, 1801171)**

int angle =0;

int dr=10;

void setup()

{

pinMode(11, OUTPUT); // Timer 2

pinMode(3, OUTPUT); // Timer 2

TCCR2A = B10110001;

TCCR2B = B00000101;

TIMSK2 = B00000001;

}

ISR(TIMER2\_OVF\_vect)

{

int duty = (255\*sin(angle\*3.1416/180)+255)/2;

OCR2A = duty;

if (duty==0){

dr=0;

}else{

dr=10;

}

int y= duty+dr;

if (y>=255){

y=255;

}

else{

y=y;

}

OCR2B=y;

angle = angle +5;

if (angle >360)

{

angle =0;

}

}

void loop()

{

}