EXCEED 14

HARDWARE

Sexy Pair

```
int i = 2;

void setup() {

  Serial.begin(9600);

}
```

```
boolean isPrime(int i){

  if(i<= 1)

    return false;

  for(int j=2;j<i;j++)

    if(i%j==0)

      return false;

  return true;

}
```

```
void loop() {

  boolean check = true;

  while(check){

    if(isPrime(i) && isPrime(i+6)){

      Serial.print("("); Serial.print(i);

      Serial.print(","); Serial.print(i+6);

      Serial.println(")"); check = false; }

    I++;  }

  delay(1000); }
```

Lecturer cost (1)

```
int cost = 0;

void setup() {
        Serial.begin(9600);
        char s [] = "i can't breathe without you but i have to";
        for(char c:s)
                cost += checkCost(c);
        cost -= 1;  Serial.print(cost);
}
```

```
int checkCost(char c);
    if(c >= 'A' && c <= 'Z')   return 5;
    else if(c >= 'a' && c <= 'z')   return 3;
    else if(c >= '0' && c<= '9')    return 7;
    else   return 1;
}
void loop() {}
```

Lecturer cost (2)

```
int cost = 0;

void setup() {
        Serial.begin(9600);
        char s [] = "i can't breathe without you but i have to";
        int i = sizeof(s) / sizeof(c) - 1;
        for(int j=0;j<i;j++)
                cost += checkCost(s[j]);
        Serial.print(cost);
}
```

```
int checkCost(char c);
    if(c >= 'A' && c <= 'Z')   return 5;
    else if(c >= 'a' && c <= 'z')   return 3;
    else if(c >= '0' && c<= '9')    return 7;
    else   return 1;
}
void loop() {}
```

Traffic light

```
#define bluePin 11
#define yellowPin 12
#define redPin 13
#define switchPin 8
#define buzzerPin 7
boolean status = false; //false แดง true ฟ้า
boolean isPress(){
  return digitalRead(switchPin);
}
```

```
void setup() {
  pinMode(bluePin,OUTPUT);
  pinMode(yellowPin,OUTPUT);
  pinMode(redPin,OUTPUT);
  pinMode(switchPin,INPUT);
  pinMode(buzzerPin,OUTPUT);
}
```

Traffic light (cons.)

```
void loop() {
 digitalWrite(buzzerPin,HIGH);
 if(!isPress()){
  if(status){
    digitalWrite(buzzerPin,LOW);
    digitalWrite(bluePin,LOW);
    digitalWrite(yellowPin,HIGH);
    delay(1000);
    digitalWrite(yellowPin,LOW);
    digitalWrite(redPin,HIGH);
   }else{
    digitalWrite(buzzerPin,HIGH);
    digitalWrite(redPin,LOW);
    digitalWrite(bluePin,HIGH);
   }
   status = !status;
   delay(500);
  }
}
```

Ultrasonic Sensor

```
#define trigPin 11
#define echoPin 12
void setup() {
        Serial.begin(9600);
        pinMode(trigPin,OUTPUT);
        pinMode(echoPin,INPUT);
}
```

```
void loop(){
        Long duration, distance;
        digitalWrite(trigPin, LOW);
        delayMicroseconds(2);
        digitalWrite(trigPin, HIGH);
        delayMicroseconds(10);
        digitalWrite(trigPin, LOW);
        duration = pulseIn(echoPin, HIGH);
        distance = (duration/2) / 29.1;
        Serial.println(distance);
        delay(50);
}
```