Q1 :

```
int led = 9;
void setup() {
  pinMode(led , OUTPUT);
}

void loop() {
  analogWrite(led , 0);
  delay(1000);
  analogWrite(led , 65);
  delay(1000);
  analogWrite(led , 128);
  delay(1000);
  analogWrite(led , 255);
  delay(1000);
}
```

Q3 :

```
int buzzer = 9;
int potPin = A0;

void setup() {
  pinMode(buzzer, OUTPUT);
}

void loop() {
  int potValue = analogRead(potPin);
  int frequency = map(potValue, 0, 1023, 100, 2000);

  tone(buzzer, frequency);
}
```

Q3 :

```
int RED_LED =  8;
int GREEN_LED  = 9;
int YELLOW_LED = 10;
int BUZZER = 11;

void setup() {
    Serial.begin(9600);
    pinMode(RED_LED, OUTPUT);
    pinMode(GREEN_LED, OUTPUT);
    pinMode(YELLOW_LED, OUTPUT);
    pinMode(BUZZER, OUTPUT);
}

void loop() {
    if (Serial.available()) {
        char command = Serial.read();
        digitalWrite(RED_LED, LOW);
        digitalWrite(GREEN_LED, LOW);
        digitalWrite(YELLOW_LED, LOW);
        digitalWrite(BUZZER, LOW);

        if (command == 'r') {
            digitalWrite(RED_LED, HIGH);
            delay(2000);
            Serial.println("Red LED ON");
```

```
        }
        else if (command == 'g') {
            digitalWrite(GREEN_LED, HIGH);
            delay(2000);
            Serial.println("Green LED ON");
        }
        else if (command == 'y') {
            digitalWrite(YELLOW_LED, HIGH);
            delay(2000);
            Serial.println("Yellow LED ON");
        }
        else if (command == 'z') {
            Serial.println("Buzzer ON for 2 sec");
            digitalWrite(BUZZER, HIGH);
            delay(2000);
            digitalWrite(BUZZER, LOW);
        }

    }
}
```