ECE-CT580 Spring 19-20
Homework/Reading Week 1

Please submit the filled in cover sheet as the first page of you HW submission.

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Students must indicate the status of each problem by:

- **C** completed,
- **P** Partially completed,
- **N** not attempted

Instructor Problem

Problem	Status	Grade/Comments
1- Dual blinking leds	C	
2 Potentiometer, A/D and serial monitor	C	
3 Analog voltage controlling LEDS	C	
4 Photo of setup	C	

Final Score:_(10 points)

Problem 1: Dual blinking LEDS

```
#define RED 5
#define GREEN 3

void setup() {
  // put your setup code here, to run once:
  pinMode(RED, OUTPUT);
  pinMode(GREEN, OUTPUT);
  digitalWrite(RED, 0);
  digitalWrite(GREEN, 0);
  Serial.begin(9600);
}

void loop() {
  // put your main code here, to run
repeatedly:
  digitalWrite(RED, HIGH);
  digitalWrite(GREEN, LOW);
  delay(100);
  digitalWrite(RED, LOW);
  digitalWrite(GREEN, HIGH);
  delay(100);
}
```

Problem 2: Potentiometer, A/D and serial monitor

```
#define VIN A0

void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  pinMode(VIN, INPUT);
}

void loop() {
  int reading = analogRead(VIN);
  float voltage = reading * 5.0f/1024;
  Serial.print(reading);
  Serial.print(" ~ ");
  Serial.print(voltage, 4);
  Serial.print("\n");
  delay(500);
}
```

Problem 3: Analog voltage controlling LEDS

```
#define VIN A0
#define RED 5
#define GREEN 3

void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  pinMode(VIN, INPUT);
  pinMode(RED, OUTPUT);
  pinMode(GREEN, OUTPUT);
  digitalWrite(RED, 0);
  digitalWrite(GREEN, 0);
}

void loop() {
  int reading = analogRead(VIN);
  float voltage = reading * 5.0f/1024;
  Serial.print(reading);
  Serial.print(" ~ ");
  Serial.print(voltage, 4);
  Serial.print("\n");

  if (voltage < 2) {
    digitalWrite(GREEN, LOW);
    digitalWrite(RED, HIGH);
    delay(500);
    digitalWrite(RED, LOW);
    delay(500);
  } else if (voltage <= 3) {
    digitalWrite(GREEN, LOW);
    digitalWrite(RED, LOW);
    delay(1000);
  } else {
    digitalWrite(RED, LOW);
    digitalWrite(GREEN, HIGH);
    delay(500);
    digitalWrite(GREEN, LOW);
    delay(500);
  }
}
```

Photo of the setup