Assignment 1:

```
// C++ code
//
int dchigh = 13;
int dclow = 12;
int echo = 3;
int trig = 2;
int ledred = 5;//rgb led
int ledgreen = 4;//rgb led
void setup()
{
  Serial.begin(9600);
  pinMode(dchigh, OUTPUT);
  pinMode(dclow, OUTPUT);
  pinMode(trig, OUTPUT);
  pinMode(ledred, OUTPUT);
  pinMode(ledgreen, OUTPUT);
  pinMode(echo, INPUT);
}

void loop()
{
  digitalWrite(trig, LOW);
  digitalWrite(trig, HIGH);
  delayMicroseconds(10);
  digitalWrite(trig, LOW);
  float duration = pulseIn(echo, HIGH);
  float distance = (duration * 0.0343)/2;

  /*Motor and Green led is on when distance between ultrasonic sensor
  water level is more than 15 centimeters*/

  if(distance > 15)
```

```
 {
  Serial.println("Water Level is Low");
  digitalWrite(dchigh, HIGH);
  digitalWrite(dclow, LOW);
  digitalWrite(ledgreen, HIGH);
  digitalWrite(ledred, LOW);
 }

 /*Motor is off and red led is on when distance between ultrasonic sensor
 water level is less than 15 centimeters*/

 else
 {
  Serial.println("Tank is Full");
  digitalWrite(dchigh, LOW);
  digitalWrite(ledgreen, LOW);
  digitalWrite(ledred, HIGH);
 }
 delay(2000);
}
```