ASSIGNMENT 1

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```cpp
// C++ code #include
<Servo.h>int dist = 0;
long readUltrasonicDistance(int triggerPin, int echoPin)

{

   pinMode(triggerPin, OUTPUT); // Clear the triggerdigitalWrite(triggerPin, LOW);
delayMicroseconds(2);

   // Sets the trigger pin to HIGH state for 10 microsecondsdigitalWrite(triggerPin,
   HIGH);
   delayMicroseconds(10);
   digitalWrite(triggerPin, LOW);
   pinMode(echoPin, INPUT);
   // Reads the echo pin, and returns the sound wave traveltime in microseconds
   return pulseIn(echoPin, HIGH);

}
Servo servo_8;void
setup()
{

   servo_8.attach(8, 500, 2500);pinMode(2,
   INPUT); pinMode(12, OUTPUT);
   pinMode(A0, INPUT); pinMode(9, OUTPUT);
}

void loop()

{

   dist = 0.01723 * readUltrasonicDistance(7, 7);
   if (dist <= 100) {
      servo_8.write(90);
```

```
    delay(1000); // Wait for 1000 millisecond(s)
} else { servo_8.write(0);
    delay(1000); // Wait for 1000 millisecond(s)

}
if (digitalRead(2) == 1) { digitalWrite(12,
    HIGH);
    delay(1000); // Wait for 1000 millisecond(s)
} else {
    digitalWrite(12, LOW);
    delay(1000); // Wait for 1000 millisecond(s)

}
if (analogRead(A0) > 200) {
    digitalWrite(9, HIGH);
    delay(1000); // Wait for 1000 millisecond(s)
} else {
    digitalWrite(9, LOW);
    delay(1000); // Wait for 1000 millisecond(s)

}
```