Screenshots of Arduino Codes:

Lab 7:


La7_AL_Updated | Arduino IDE 2.0.1

File Edit Sketch Tools Help

Arduino Uno

La7_AL_Updated.ino

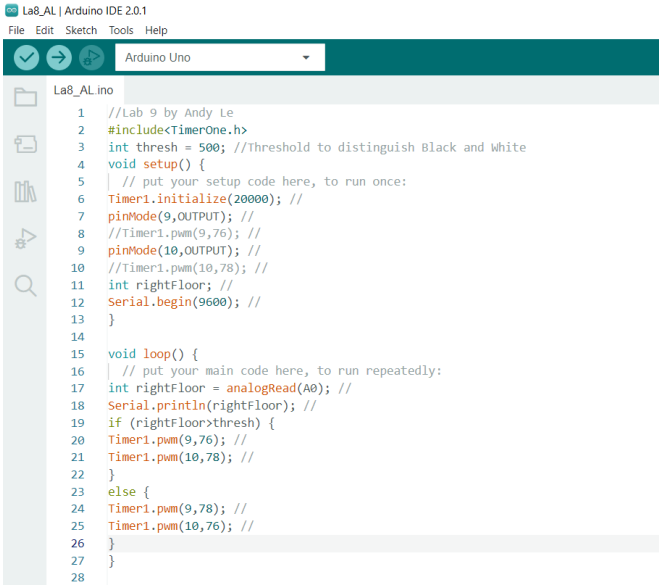
```
//Lab 8 by Andy Le
#include<TimerOne.h>
void setup() {
  // put your setup code here, to run once:
Timer1.initialize(20000); //
pinMode(9,OUTPUT); //
Timer1.pwm(9,76); //
pinMode(10,OUTPUT); //
Timer1.pwm(10,78); //
}

void loop() {
  // put your main code here, to run repeatedly:

}

```

Lab 8:


La8_AL | Arduino IDE 2.0.1

File Edit Sketch Tools Help

Arduino Uno

La8_AL.ino

```
//Lab 9 by Andy Le
#include<TimerOne.h>
int thresh = 500; //Threshold to distinguish Black and White
void setup() {
  // put your setup code here, to run once:
Timer1.initialize(20000); //
pinMode(9,OUTPUT); //
//Timer1.pwm(9,76); //
pinMode(10,OUTPUT); //
//Timer1.pwm(10,78); //
int rightFloor; //
Serial.begin(9600); //
}

void loop() {
  // put your main code here, to run repeatedly:
int rightFloor = analogRead(A0); //
Serial.println(rightFloor); //
if (rightFloor>thresh) {
Timer1.pwm(9,76); //
Timer1.pwm(10,78); //
}
else {
Timer1.pwm(9,78); //
Timer1.pwm(10,76); //
}
}

```

Lab 10:


```
//Lab 10 by Andy Le
#include<TimerOne.h>
int thresh = 500; //Threshold to distinguish Black and White
void setup() {
  // put your setup code here, to run once:
Timer1.initialize(20000); //
pinMode(9,OUTPUT); //
//Timer1.pwm(9,76); //
pinMode(10,OUTPUT); //
//Timer1.pwm(10,78);//
Serial.begin(9600); //
}

void loop() {
  // put your main code here, to run repeatedly:
int rightFloor = analogRead(A0); //
int leftFloor = analogRead(A1); //
Serial.println(rightFloor); //
if (rightFloor<thresh && leftFloor<thresh) {
Timer1.pwm(9,87); //
Timer1.pwm(10,67); //
}
else if(leftFloor>thresh && rightFloor<thresh) {
//Timer1.pwm(9,76); //
//Timer1.pwm(10,78); //
Timer1.pwm(9,87); //
Timer1.pwm(10,78); //
delay(1000); //

}
else if(rightFloor>thresh && leftFloor<thresh) {
Timer1.pwm(9,76); //
Timer1.pwm(10,67); //

delay(1000); //

}
else if(rightFloor>thresh && leftFloor<thresh) {
Timer1.pwm(9,76); //
Timer1.pwm(10,67); //
delay(1000); //

}
else {
Timer1.pwm(9,67); //
Timer1.pwm(10,87); //
delay(1000); //
Timer1.pwm(9,76); //
Timer1.pwm(10,67); //
delay(2000); //
}

}
```