Arduino Pins Code

1.

```
//defining LED pins
//(in C/C++, using the #define preprocessor directive
// replaces the first argument with the second, before compiling)
#define led1 12
#define led2 9

void setup()
{
  pinMode(led1, OUTPUT); // setting the pins as OUTPUT
  pinMode(led2, OUTPUT);
  digitalWrite(led1, HIGH); // turning the LED ON
  analogWrite(led2, 102); // 102 = 255 * 0.4
}

void loop()
{
}
```

2.

```
//defining LED pins
//(in C/C++, using the #define preprocessor directive
// replaces the first argument with the second, before compiling)
#define led1 12
#define led2 9
#define button 2

void setup()
{
  pinMode(button, INPUT); // set the button pin as input, pulled HIGH
  pinMode(led1, OUTPUT); // set the pins as OUTPUT
  pinMode(led2, OUTPUT);
  digitalWrite(led1, LOW); // turn the LED OFF
  analogWrite(led2, 102); // 102 = 255 * 0.4
}
```

```
void loop()
{
  if(digitalRead(button)){
    digitalWrite(led1, HIGH); // turn the LED ON
    analogWrite(led2, 204); // 204 = 255 * 0.8
  }else{
    digitalWrite(led1, LOW); // turn the LED ON
    analogWrite(led2, 102); // 204 = 255 * 0.8
  }
}
```

3.

```
//defining LED pins
//(in C/C++, using the #define preprocessor directive
// replaces the first argument with the second, before compiling)
#define led1 12
#define led2 9
#define button 2
#define pot 0

void setup()
{
  pinMode(button, INPUT); // set the button pin as input, pulled HIGH
  pinMode(led1, OUTPUT); // set the pins as OUTPUT
  pinMode(led2, OUTPUT);
  digitalWrite(led1, LOW); // turn the LED OFF
  analogWrite(led2, 0); // 102 = 255 * 0.4
}

void loop()
{
  digitalWrite(led1, digitalRead(button)); // set output of LED to the value of button input
  analogWrite(led2, analogRead(pot)/4); // set output of LED to the value of button input, divided by 4
                                  // analogRead() returns 10-bit value, while analogWrite() requires 8-bit value
}
```