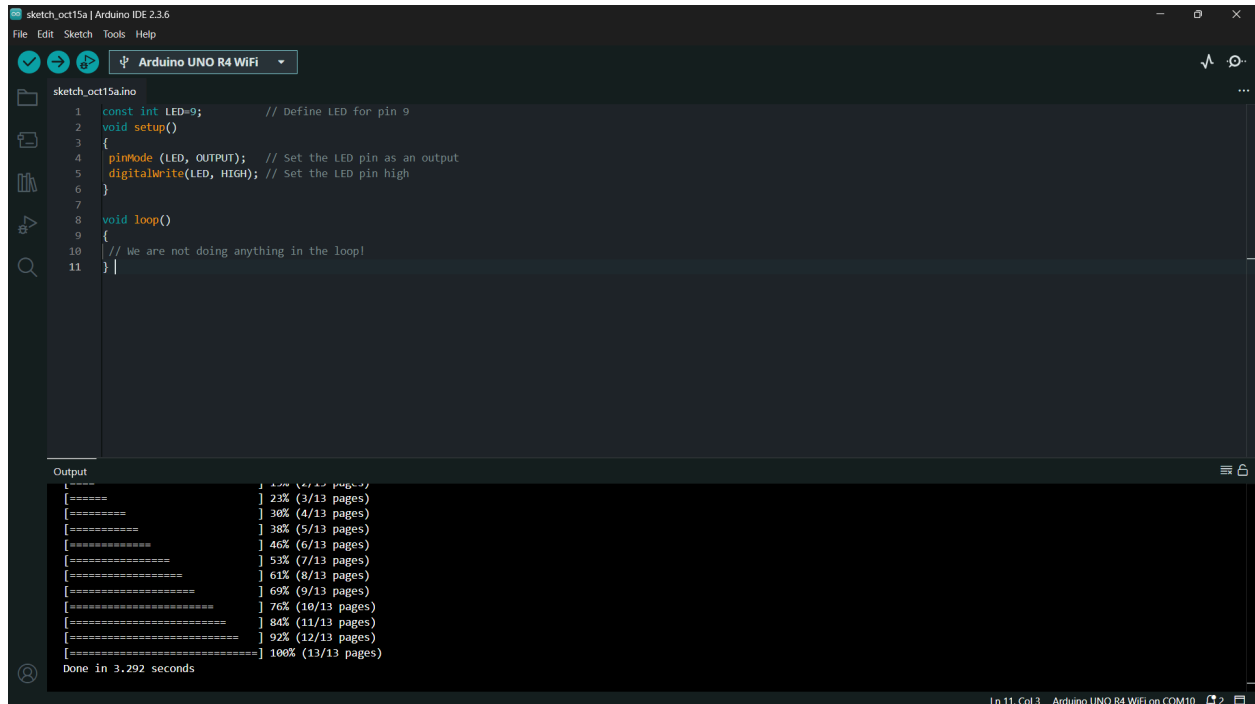


Arduino - Basic Digital Outputs - Physical Kit Version

LED



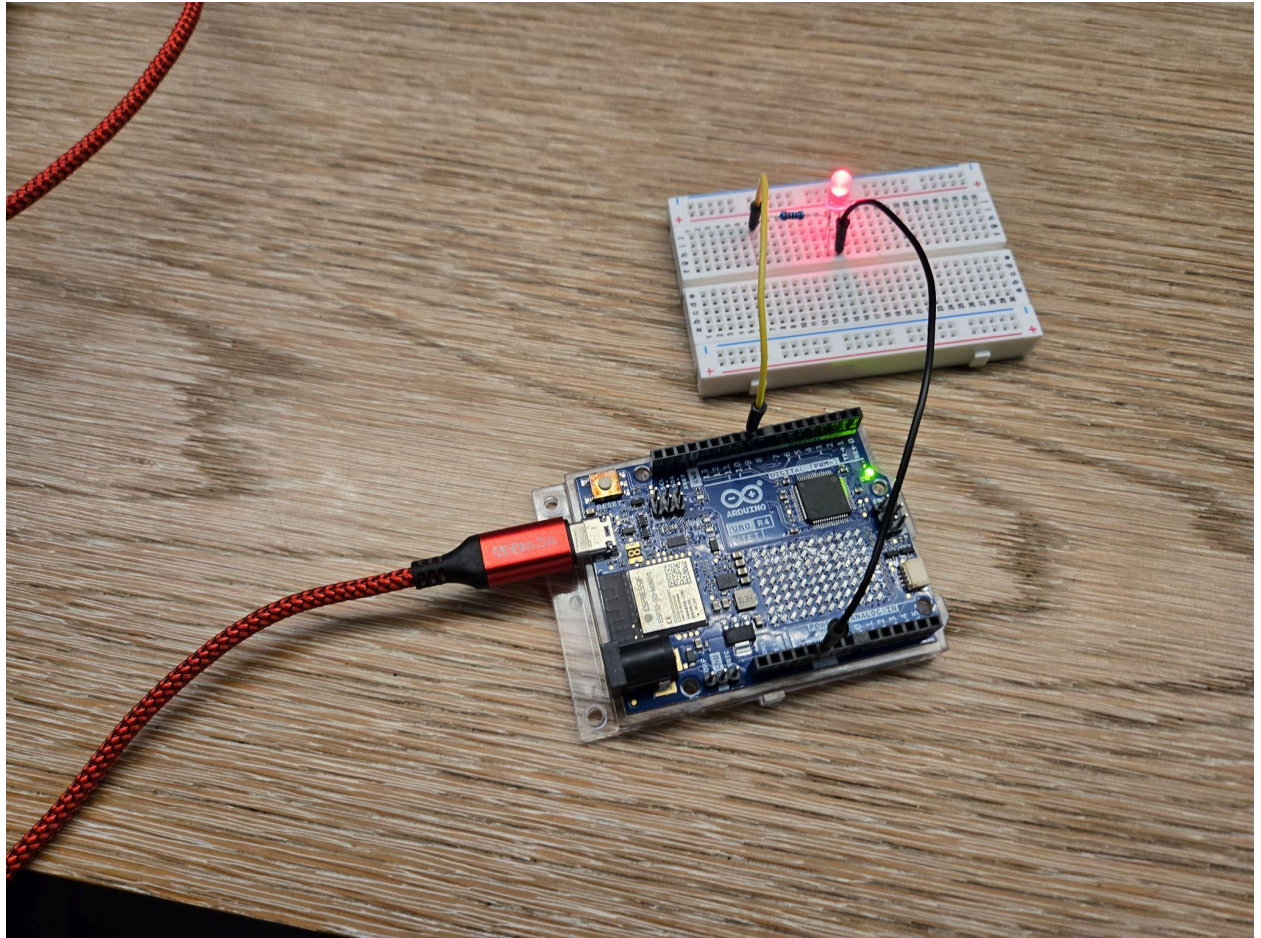
The screenshot shows the Arduino IDE interface. The main editor displays a sketch named `sketch_oct15a.ino` with the following code:

```
1 const int LED=9;      // Define LED for pin 9
2 void setup()
3 {
4   pinMode(LED, OUTPUT); // Set the LED pin as an output
5   digitalWrite(LED, HIGH); // Set the LED pin high
6 }
7
8 void loop()
9 {
10  // We are not doing anything in the loop!
11 }
```

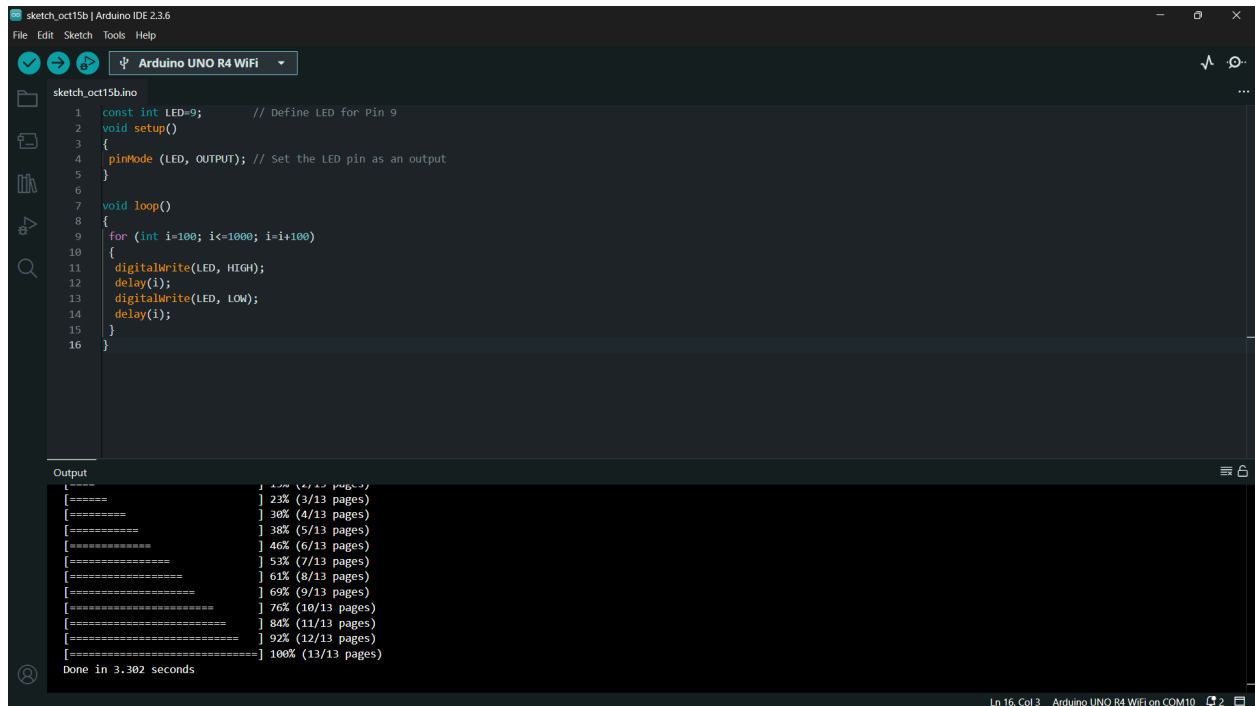
The bottom panel shows the 'Output' window with the following progress information:

```
Done in 3.292 seconds
[-----] 100% (13/13 pages)
[-----] 92% (12/13 pages)
[-----] 84% (11/13 pages)
[-----] 76% (10/13 pages)
[-----] 69% (9/13 pages)
[-----] 61% (8/13 pages)
[-----] 53% (7/13 pages)
[-----] 46% (6/13 pages)
[-----] 38% (5/13 pages)
[-----] 30% (4/13 pages)
[-----] 23% (3/13 pages)
```

The status bar at the bottom indicates 'Ln 11, Col 3' and 'Arduino UNO R4 WiFi on COM10'.



Blink

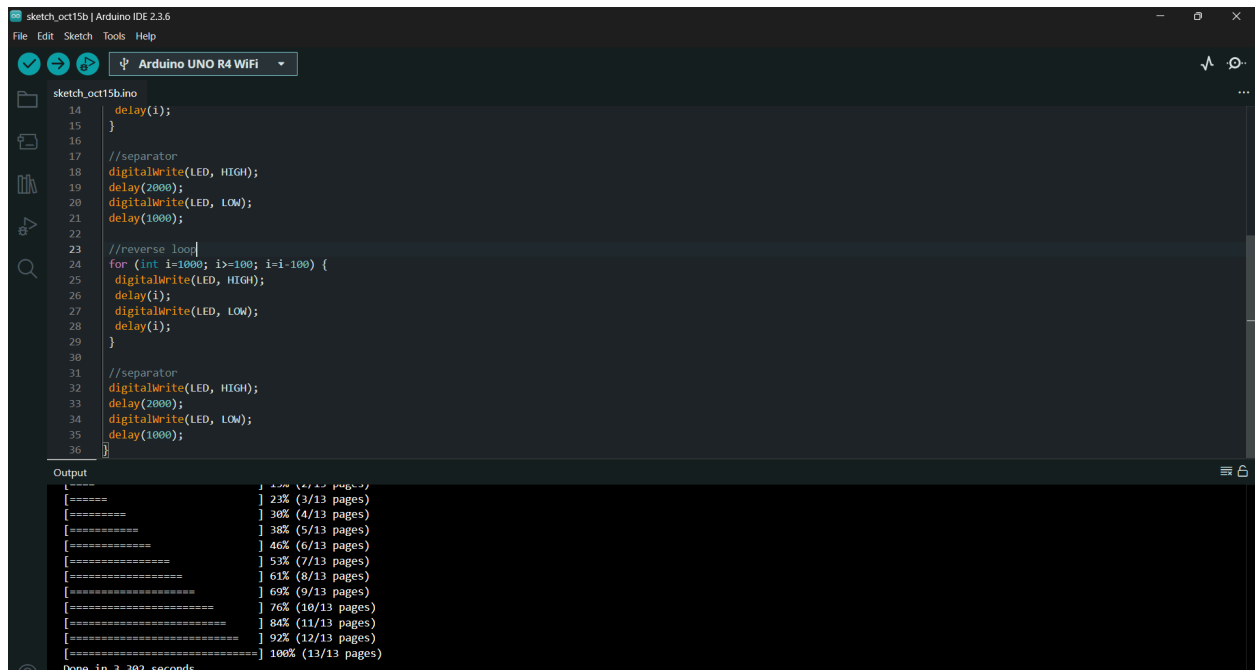


```
sketch_oct15b.ino
1  const int LED=9;      // Define LED for Pin 9
2  void setup()
3  {
4      pinMode (LED, OUTPUT); // Set the LED pin as an output
5  }
6
7  void loop()
8  {
9      for (int i=100; i<=1000; i=i+100)
10     {
11         digitalWrite(LED, HIGH);
12         delay(1);
13         digitalWrite(LED, LOW);
14         delay(1);
15     }
16 }
```

Output

```
[-----] 23% (3/13 pages)
[-----] 30% (4/13 pages)
[-----] 38% (5/13 pages)
[-----] 46% (6/13 pages)
[-----] 53% (7/13 pages)
[-----] 61% (8/13 pages)
[-----] 69% (9/13 pages)
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[-----] 84% (11/13 pages)
[-----] 92% (12/13 pages)
[-----] 100% (13/13 pages)
Done in 3.302 seconds
```

Ln 16, Col 3 Arduino UNO R4 WiFi on COM10

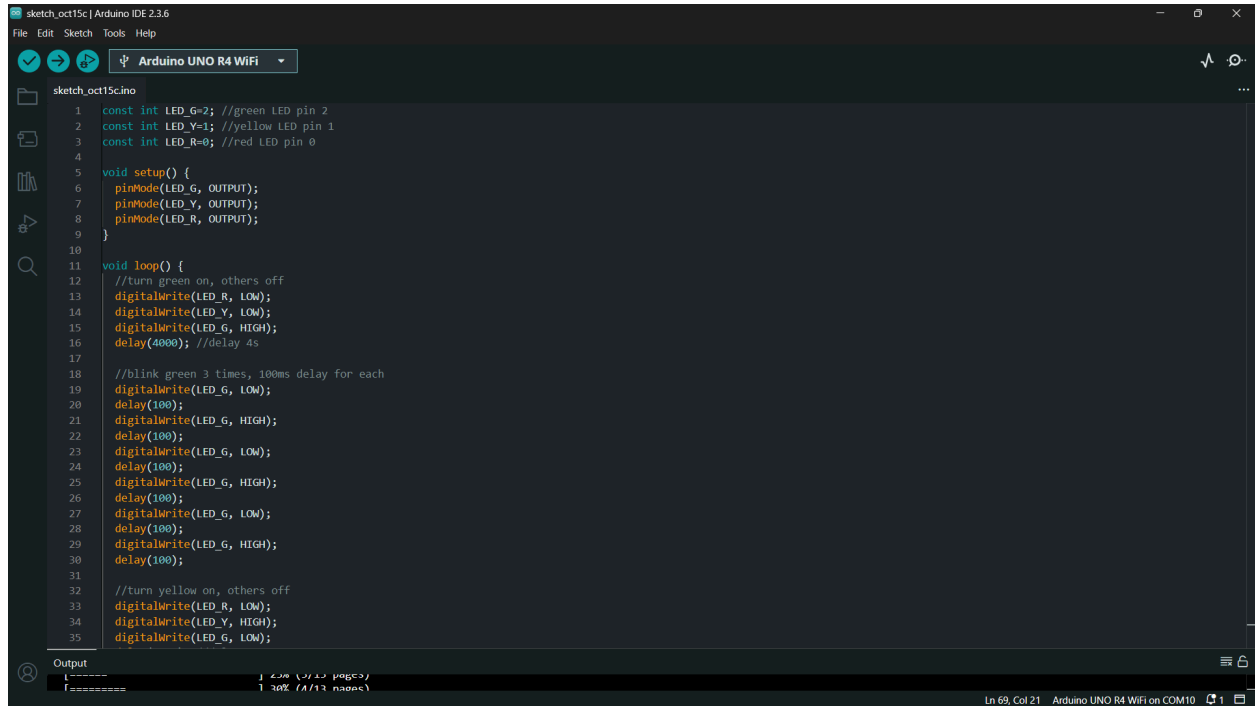


```
sketch_oct15b.ino
14     delay(1);
15 }
16
17 //separator
18 digitalWrite(LED, HIGH);
19 delay(2000);
20 digitalWrite(LED, LOW);
21 delay(1000);
22
23 //reverse loop
24 for (int i=1000; i>=100; i=i-100) {
25     digitalWrite(LED, HIGH);
26     delay(1);
27     digitalWrite(LED, LOW);
28     delay(1);
29 }
30
31 //separator
32 digitalWrite(LED, HIGH);
33 delay(2000);
34 digitalWrite(LED, LOW);
35 delay(1000);
36 }
```

Output

```
[-----] 23% (3/13 pages)
[-----] 30% (4/13 pages)
[-----] 38% (5/13 pages)
[-----] 46% (6/13 pages)
[-----] 53% (7/13 pages)
[-----] 61% (8/13 pages)
[-----] 69% (9/13 pages)
[-----] 76% (10/13 pages)
[-----] 84% (11/13 pages)
[-----] 92% (12/13 pages)
[-----] 100% (13/13 pages)
Done in 3.302 seconds
```

Stoplight

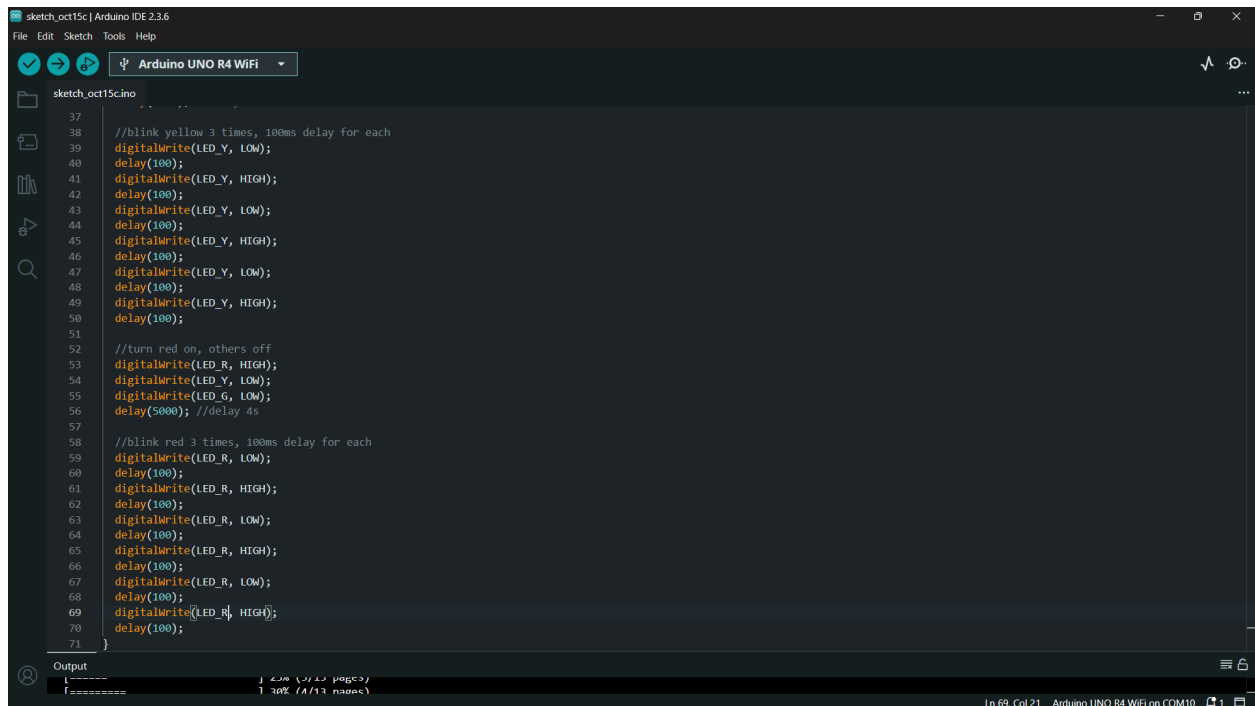


```
sketch_oct15c.ino
1  const int LED_G=2; //green LED pin 2
2  const int LED_Y=1; //yellow LED pin 1
3  const int LED_R=0; //red LED pin 0
4
5  void setup() {
6      pinMode(LED_G, OUTPUT);
7      pinMode(LED_Y, OUTPUT);
8      pinMode(LED_R, OUTPUT);
9  }
10
11 void loop() {
12     //turn green on, others off
13     digitalWrite(LED_R, LOW);
14     digitalWrite(LED_Y, LOW);
15     digitalWrite(LED_G, HIGH);
16     delay(4000); //delay 4s
17
18     //blink green 3 times, 100ms delay for each
19     digitalWrite(LED_G, LOW);
20     delay(100);
21     digitalWrite(LED_G, HIGH);
22     delay(100);
23     digitalWrite(LED_G, LOW);
24     delay(100);
25     digitalWrite(LED_G, HIGH);
26     delay(100);
27     digitalWrite(LED_G, LOW);
28     delay(100);
29     digitalWrite(LED_G, HIGH);
30     delay(100);
31
32     //turn yellow on, others off
33     digitalWrite(LED_R, LOW);
34     digitalWrite(LED_Y, HIGH);
35     digitalWrite(LED_G, LOW);
```

Output

```
-----
-----
-----
```

Ln 69, Col 21 Arduino UNO R4 WiFi on COM10



```
sketch_oct15c.ino
37
38 //blink yellow 3 times, 100ms delay for each
39 digitalWrite(LED_Y, LOW);
40 delay(100);
41 digitalWrite(LED_Y, HIGH);
42 delay(100);
43 digitalWrite(LED_Y, LOW);
44 delay(100);
45 digitalWrite(LED_Y, HIGH);
46 delay(100);
47 digitalWrite(LED_Y, LOW);
48 delay(100);
49 digitalWrite(LED_Y, HIGH);
50 delay(100);
51
52 //turn red on, others off
53 digitalWrite(LED_R, HIGH);
54 digitalWrite(LED_Y, LOW);
55 digitalWrite(LED_G, LOW);
56 delay(5000); //delay 4s
57
58 //blink red 3 times, 100ms delay for each
59 digitalWrite(LED_R, LOW);
60 delay(100);
61 digitalWrite(LED_R, HIGH);
62 delay(100);
63 digitalWrite(LED_R, LOW);
64 delay(100);
65 digitalWrite(LED_R, HIGH);
66 delay(100);
67 digitalWrite(LED_R, LOW);
68 delay(100);
69 digitalWrite(LED_R, HIGH);
70 delay(100);
71 }
```

Output

```
-----
-----
-----
```

Ln 69, Col 21 Arduino UNO R4 WiFi on COM10

