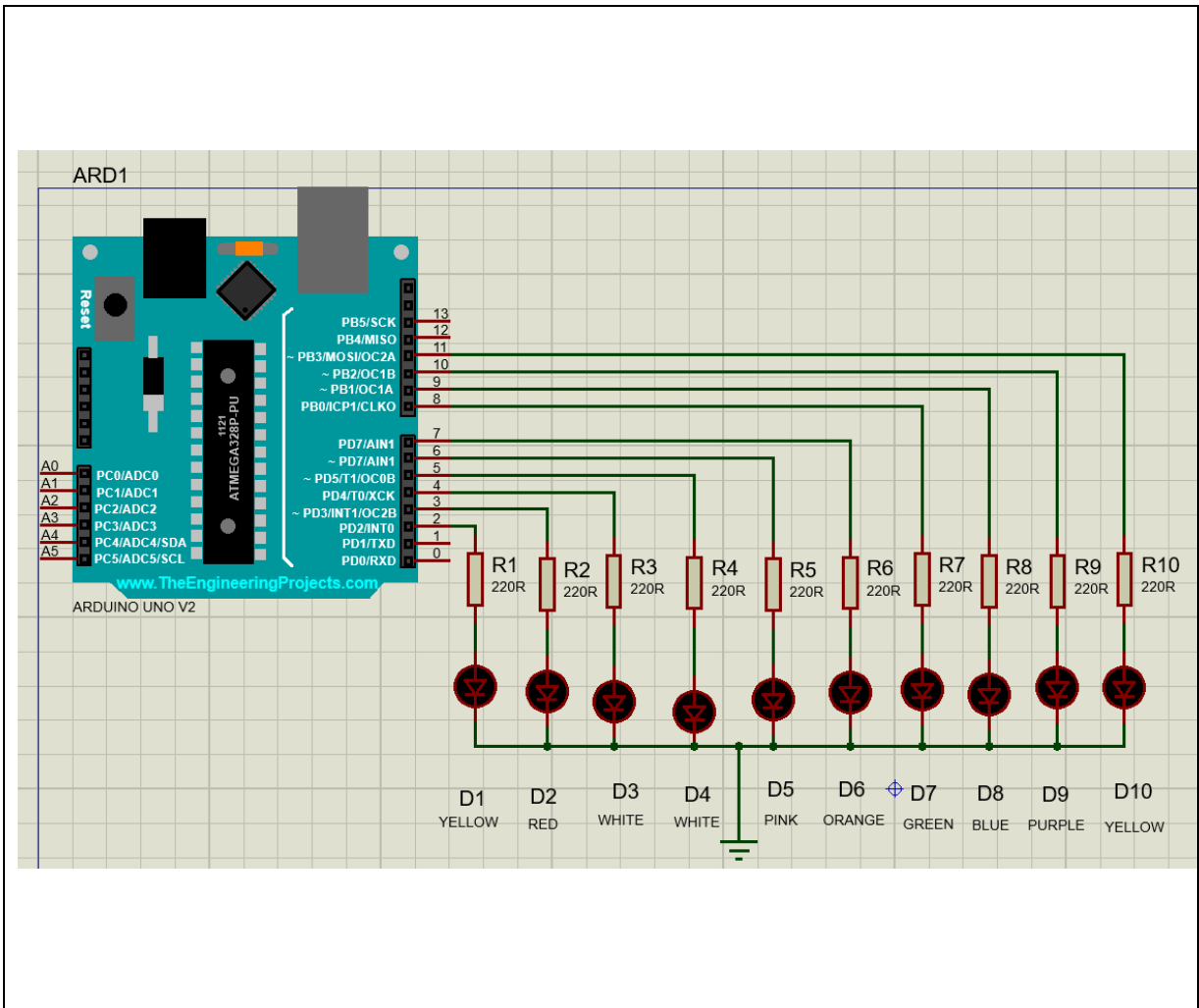


## RESULTS:

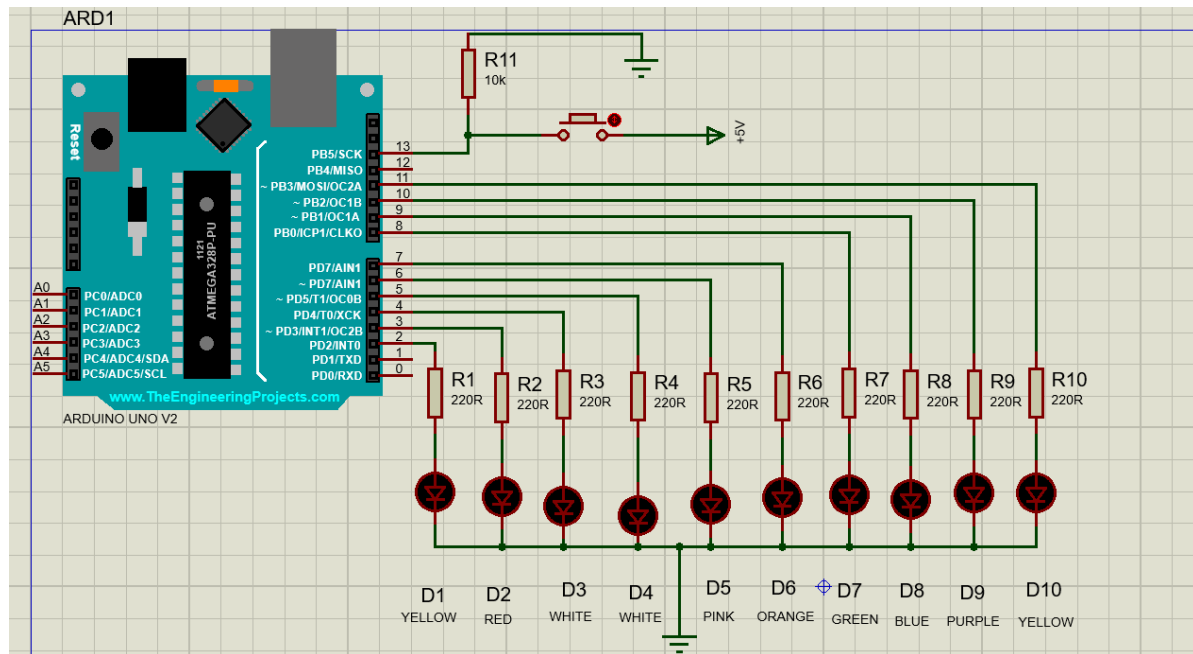
### TASK 1

1. Attach screen shot of LED circuit with LEDs chasing (any LED light up).



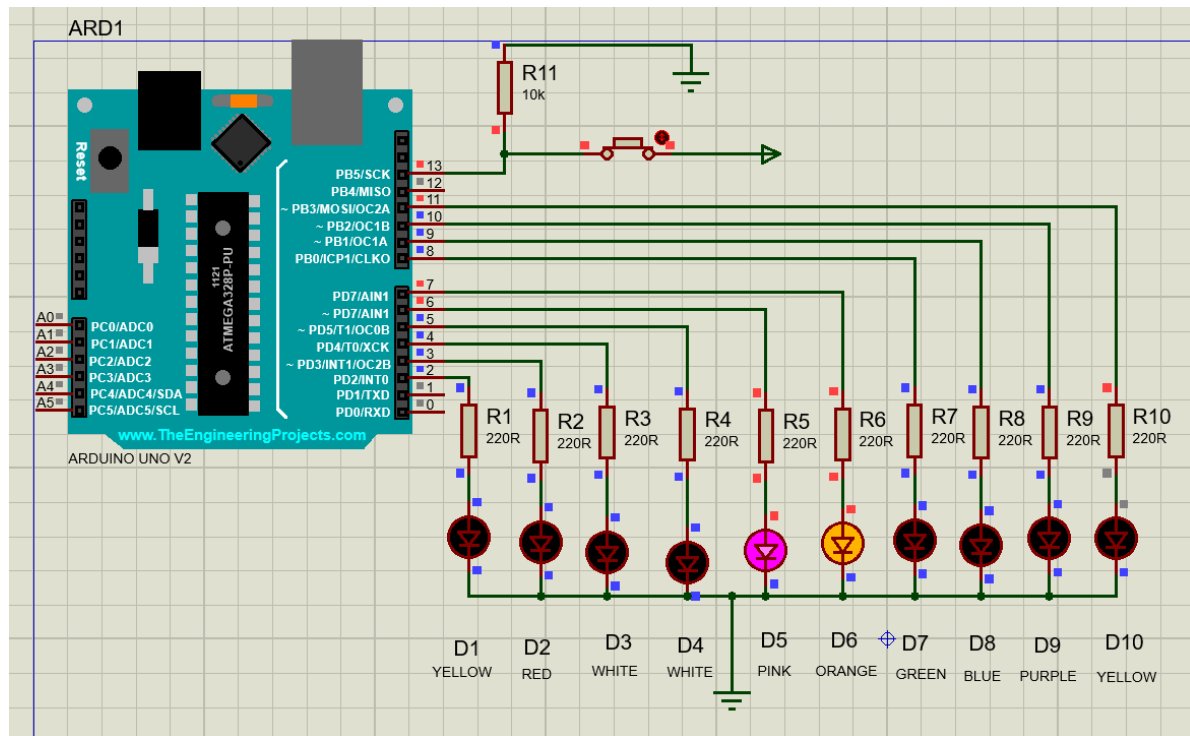
## TASK 2

1. Attach screen shot of new LED circuit.



2. Write modified program.

3. Attach screen shot of new LED circuit with LED 5 and 6 light up with push BUTTON is pressed.



**DISCUSSION:**

1. Explain the function of `for (int thisPin = 3; thisPin < 12; thisPin++)` in the program.

(4 marks)

Declare pin 3 until pin 12. This is used to arrange the sequence of lighting the LED starting from pin 3 until pin 12. The LED connected to the pins will light up individually for 500ms and then turn for 500ms starting from LED at pin 3 until LED at pin 12.

2. Write the function of `ledBlink()` if LED 1 and LED 10 used to blink ON and OFF for 300ms delay.

(7 marks)

3. Sketch a circuit of push BUTTON with PULL-UP resistor to any Arduino UNO pin (just 1 pin label) for trigger-LOW (Active LOW) function.

(5 marks)

4. Discuss your observation on this experiment and relate your finding to objectives. (10 marks)

There were 2 main functions that Arduino can read, which were **void setup ()** and **void loop ()**. The program placed in **void setup ()** would be read once and **void loop ()** would be repeated until the program ended. **If else** argument were used to determine the function of the switch. 2 more sub-function were added to control the switch action. When the pushbutton is pushed, the pull-up circuit activates LED 5 & LED 6. This occurs because when the pushbutton is pressed, Arduino will get **HIGH** input (**+5V**) and when released it will get **LOW** input (**0V**).

## **CONCLUSION:**

Conclude this experiment relates to result obtain.

Based on this experiment, Arduino '**blink**' program was compiled by using a function and '**if else**' statement. 10 LEDs were used to demonstrate the '**blink**' program the lights are lit in turn with the 500 milliseconds delay. For pull-up resistor switch was shown by using '**if else**' statement. Pull-up is used to eliminate the **GREY** area. When the button is pushed, it will send **HIGH** input and it will send **LOW** input when button released.