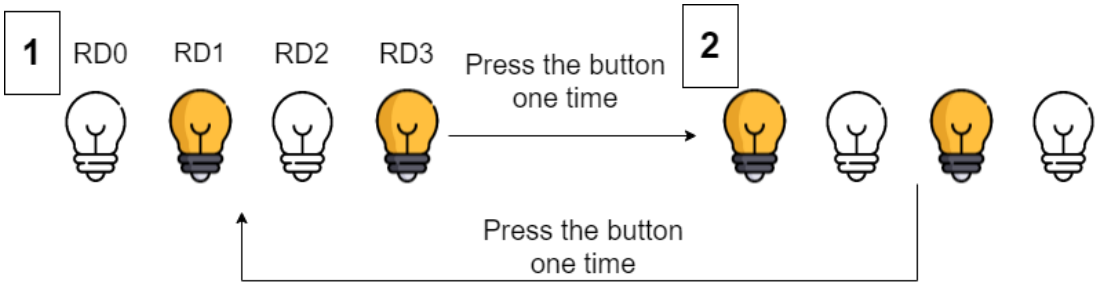
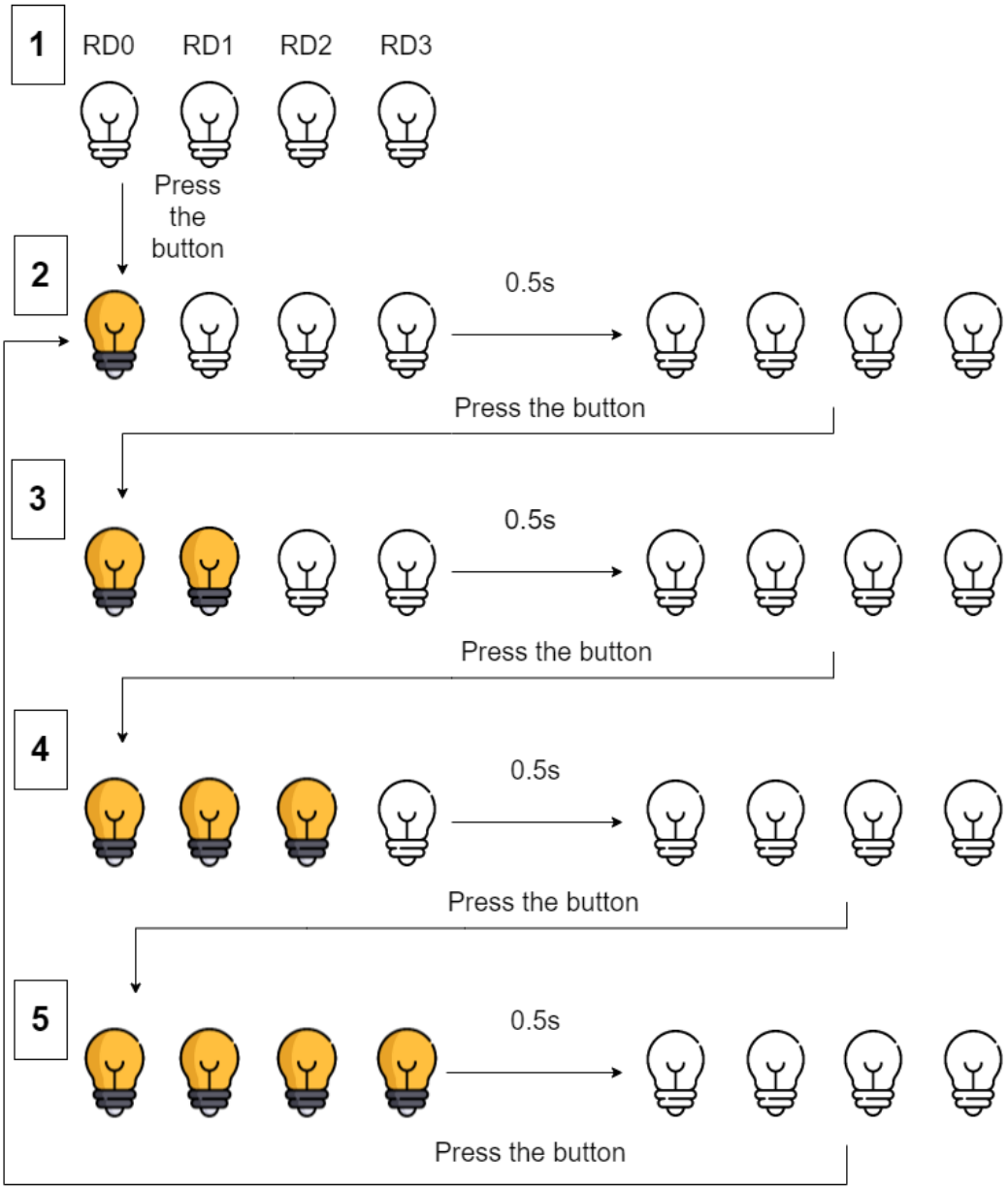
Lab 6: Requirement Description

- Macro & Subroutine
  - Video : https://youtu.be/dWUq3WEyYt0
- Basic(70%) :
  - Description: Connect a push-button at RA4 port with pull-up or pull-down resistor. Connect four LEDs at RD0 ~ RD3 port. Press the button to change the blinking pattern of LEDs, as in the figure below.



  - Standard of Grading:
    1. Connect all the LEDs and button to the proper ports.
    2. The LEDs should change the state after pressing the button.
- Advanced(30%):
  - Description: Connect a push-button at RA4 port with pull-up or pull-down resistor. Connect four LEDs at RD0 ~ RD3 port. Press the button to change the blinking pattern of LEDs. The LEDs must blink for half a second and then turn off. You have to use a macro to do it. See the figure below.

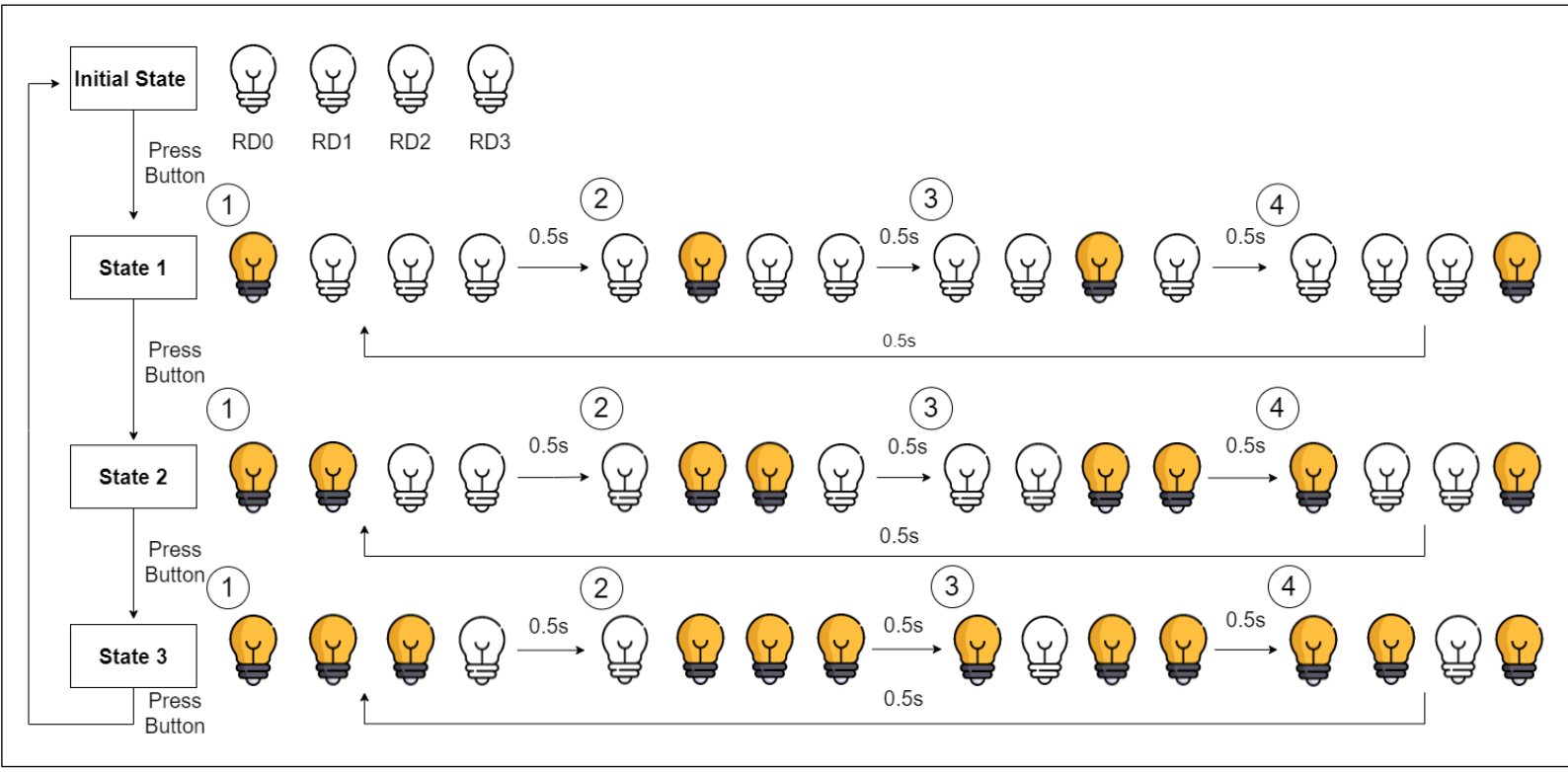


○ Standard of grading :

1. Connect all the LEDs and button to the proper ports.
2. Write a macro named “delay” for blinking for 0.5s.
3. The LEDs must work, as the figure shows above.

- Bonus(20%)

  ○ Description: Connect a push-button at RA4 port with pull-up or pull-down resistor. Connect four LEDs at RD0 ~ RD3 port. Press the button to change the blinking state of LEDs. In-state 1, there is only one LED RD0 blinking. After 0.5s, RD0 turns into black and RD1 blinking, and so on. When pressing the button, it goes to state 2. There are 2 LEDs blinking. Similarly, in state 3, there are 3 LED blinking. See the detail in the figure below.



○ Standard of grading：

1. Connect all the LEDs and button to the proper ports.
2. Write a macro named “delay” for blinking for 0.5s.
3. The LEDs must work, as the figure shows above.