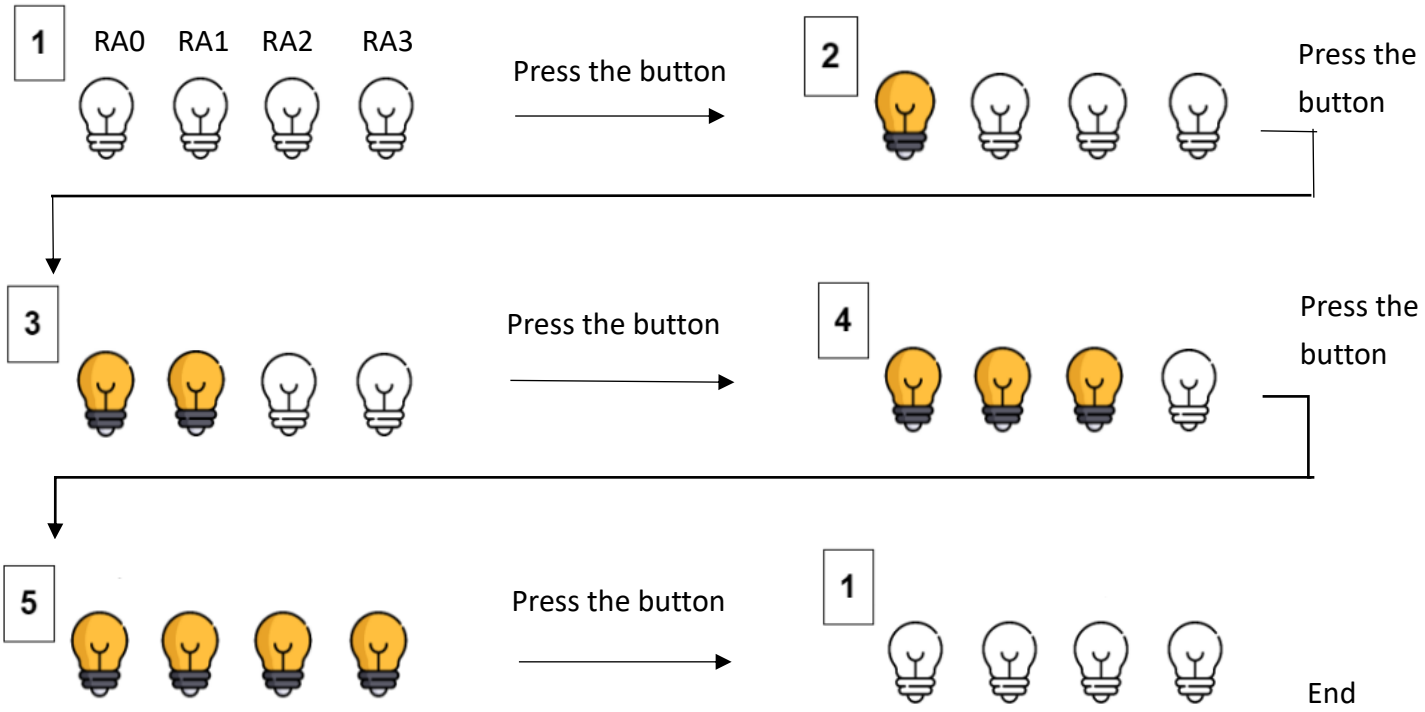
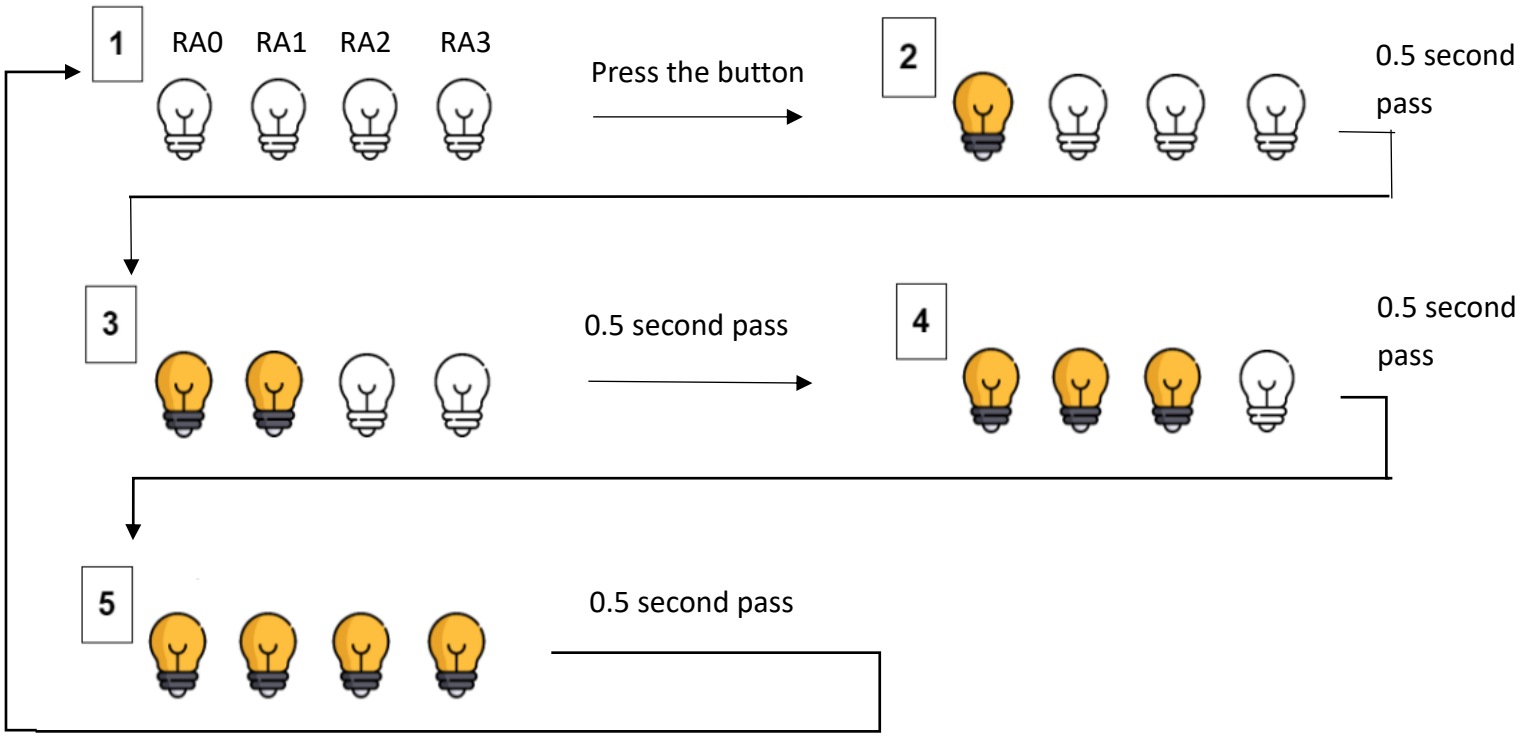
Lab 6: Requirement Description

- Data :https://docs.google.com/presentation/d/10ZMcQxYtCXkrXLtKLXVb12kVCReyMAF0/edit?fbclid=IwAR3pleVvyN-4VqH7BsrvsYb4qna0XRQa3WoiM30j5vhG9pdyCmiEZYeK_uU#slide=id.p1
- 影片 : https://youtu.be/fjocqiF3gZE
- 基本題 (70%):
  - 題目敘述: 請連接一個按鈕在 RB0 腳位作為開關，並分別連接四個燈泡在 RA0~RA3 腳位。燈泡的變化會如同下圖所示。



  - 評分標準:
    1. 請將按鈕與燈泡連接在題目要求的腳位上。

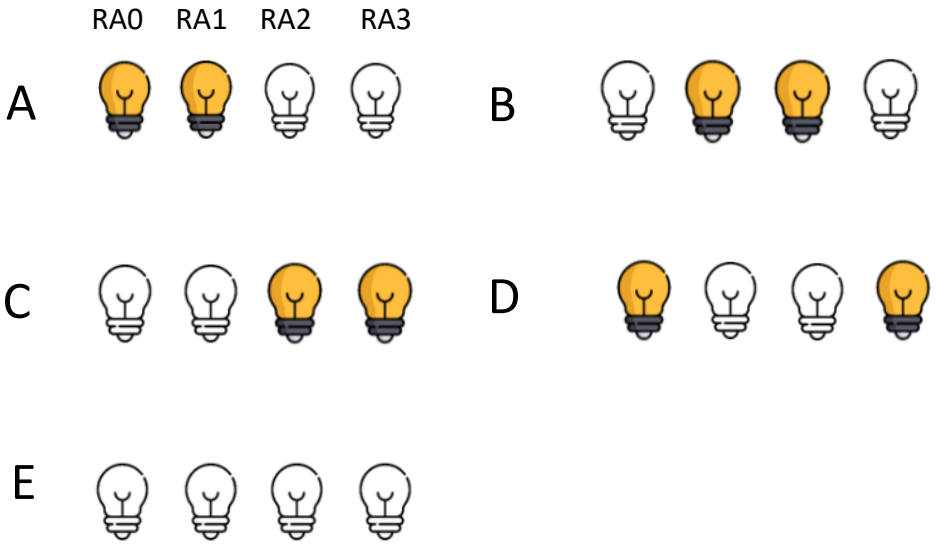
- 進階題 (30%):
  - 題目敘述: 請連接一個按鈕在 RB0 腳位作為開關，並分別連接四個燈泡在 RA0~RA3 腳位。燈泡的變化會如同下圖所示。



  - 評分標準:
    1. 請將按鈕與燈泡連接在題目要求的腳位。
    2. 請寫一個名為 delay 的 macro 去計算 0.5 秒。

- 加分題 (20%):
  - 題目敘述: 請連接一個按鈕在 RB0 腳位作為開關，並分別連接四個燈泡在 RA0~RA3 腳位。燈泡依照亮的狀態可以分為以下幾種狀態。並依據如下敘述按下按鈕的次數呈現不同順序的

狀態。

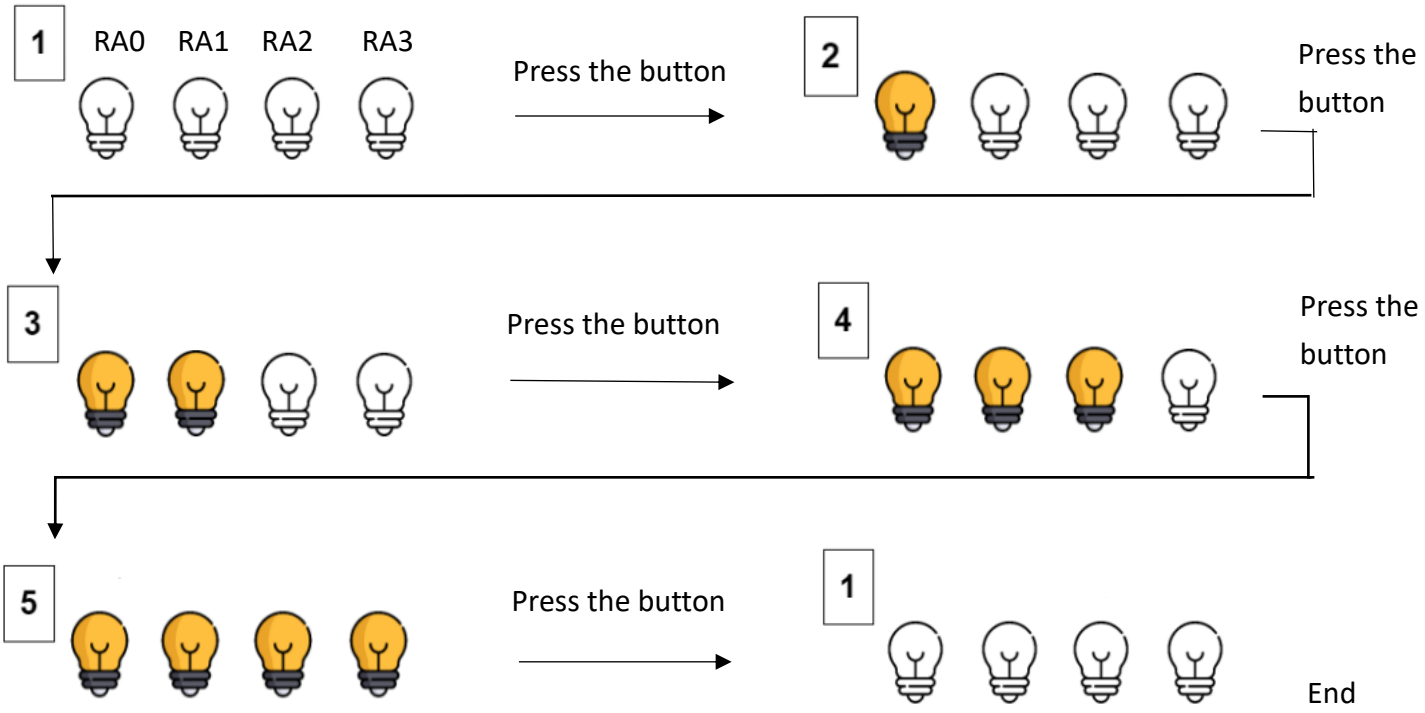


- 按下第一次 a -> 0.5 秒-> b -> 0.5 秒-> c -> 0.5 秒-> d -> 0.5 秒->e
- 按下第二次 b -> 0.5 秒-> c -> 0.5 秒-> d -> 0.5 秒-> a -> 0.5 秒->e
- 按下第三次 c -> 0.5 秒-> d -> 0.5 秒-> a -> 0.5 秒-> b -> 0.5 秒->e
- 按下第四次 d -> 0.5 秒-> a -> 0.5 秒-> b -> 0.5 秒-> c -> 0.5 秒->e
- 按下第五次 同第一次
- 按下第六次 同第二次 以此類推
- 程式不結束 回到一開始 可繼續判斷按鈕是否按下

■ 評分標準:

1. 請將按鈕與燈泡連接在題目要求的腳位。
2. 請寫一個名為 delay 的 macro 去計算 0.5 秒。

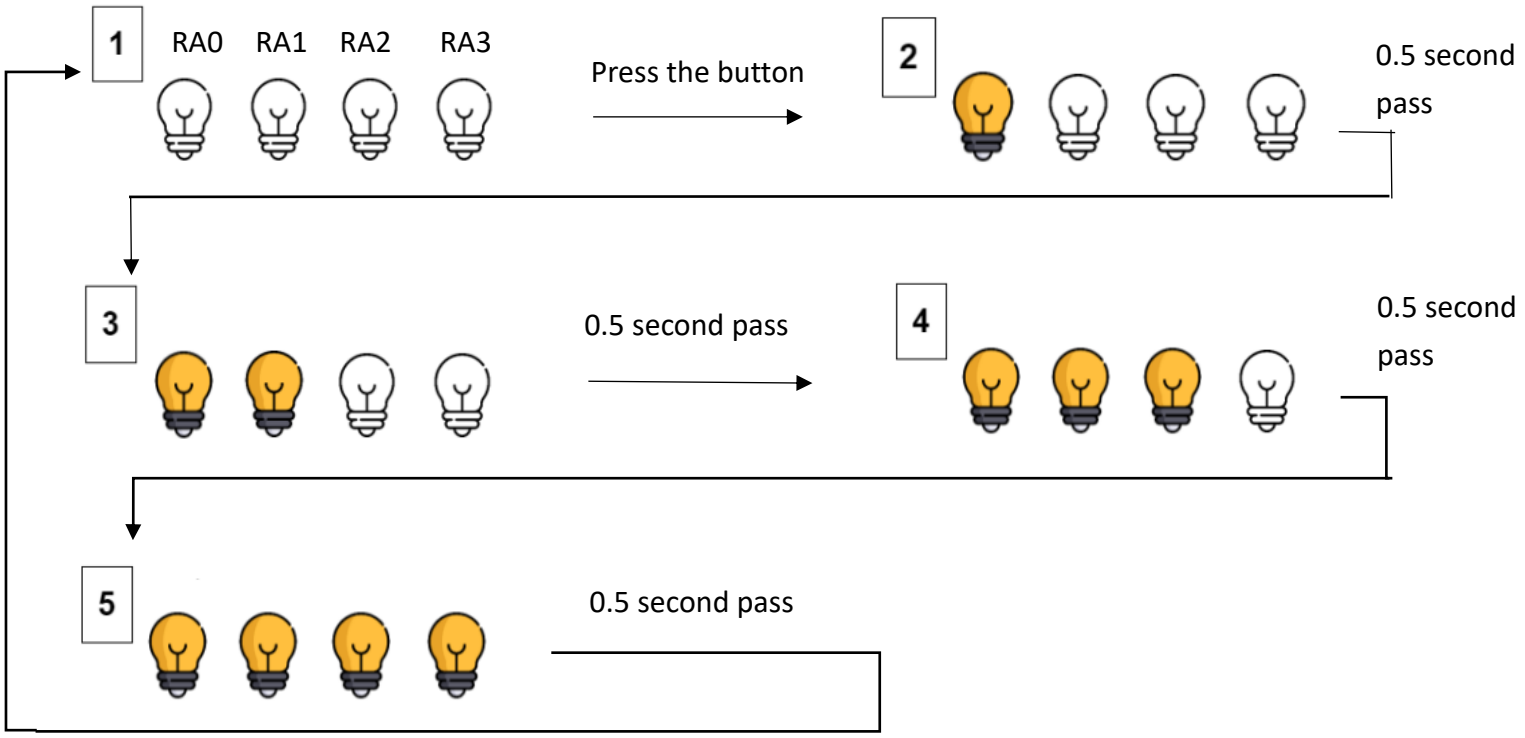
- Data :https://docs.google.com/presentation/d/10ZMcQxYtCXkrXLtKLXVb12kVCReyMAF0/edit?fbclid=IwAR3pleVvyN-4VqH7BsrvsYb4qna0XRQa3WoiM30j5vhG9pdyCmiEZYeK_uU#slide=id.p1
- Video: https://youtu.be/fjocqiF3gZE
- Basic(70%):
  - Description: Connect a push-button at RB0 port with pull-up or pull-down resistor. Connect four LEDs at RA0 ~ RA3 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(70%):
  - Description: Connect a push-button at RB0 port with pull-up or

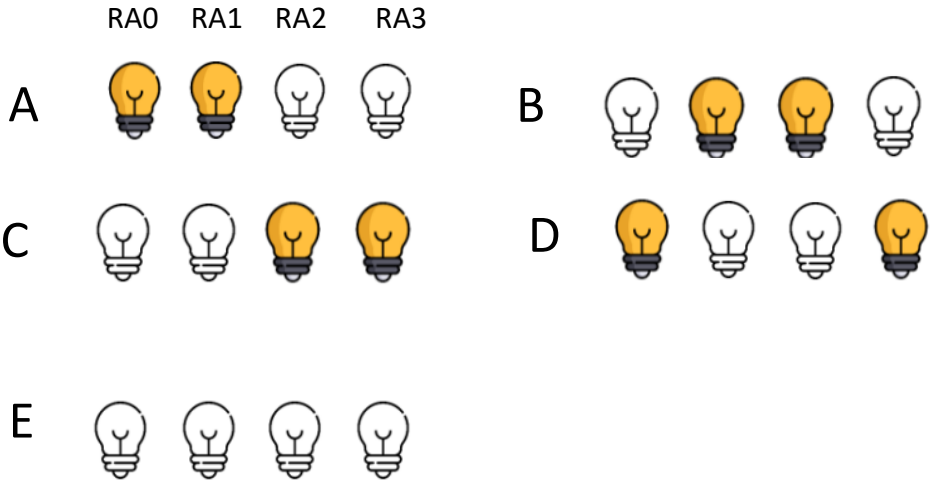
pull-down resistor. Connect four LEDs at RA0 ~ RA3 port. Press the button to change the blinking pattern of LEDs, as in the figure below.



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

● Bonus(20%):

- Description: Connect a push-button at RB0 port with pull-up or pull-down resistor. Connect four LEDs at RA0 ~ RA3 port. Press the button to change the blinking pattern of LEDs, as in the figure below.



- First press: a -> 0.5s-> b -> 0.5s-> c -> 0.5s-> d -> 0.5s->e
- Second press b -> 0.5s-> c -> 0.5s-> d -> 0.5s-> a -> 0.5s->e
- Third press c -> 0.5s-> d -> 0.5s-> a -> 0.5s-> b -> 0.5s->e
- Fourth press d -> 0.5s-> a -> 0.5s-> b -> 0.5s-> c -> 0.5s->e
- Fifth press: Same as the First press.
- Sixth press: Same as the Second press.

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