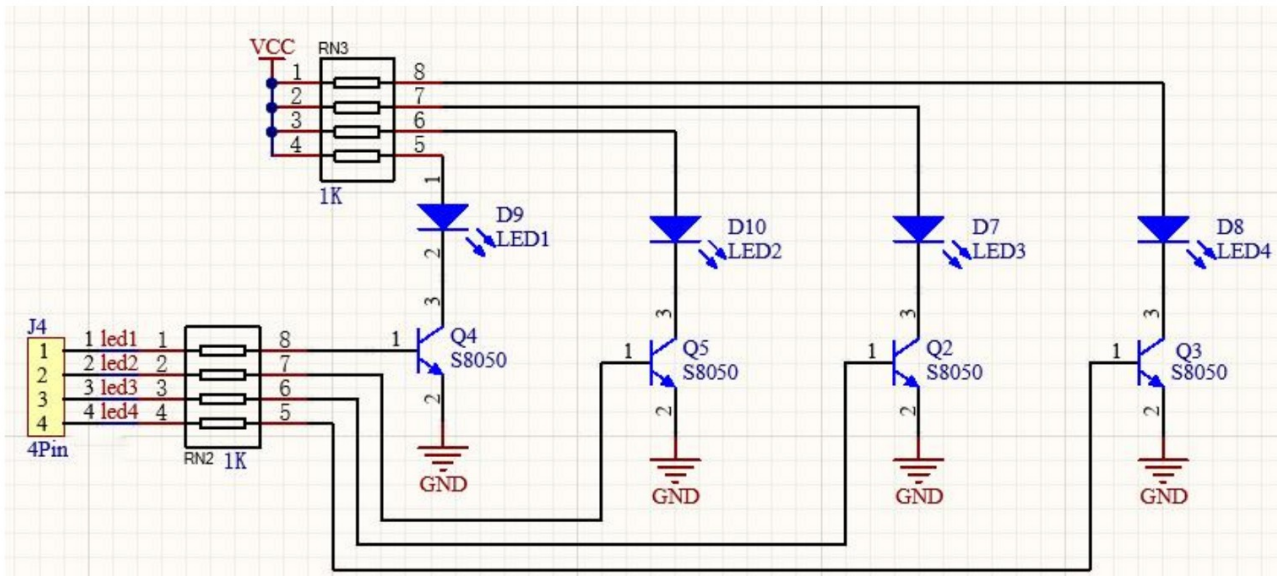
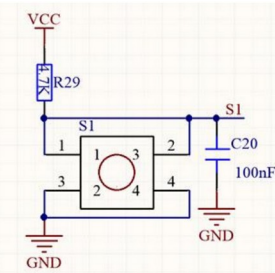


#4 LED's

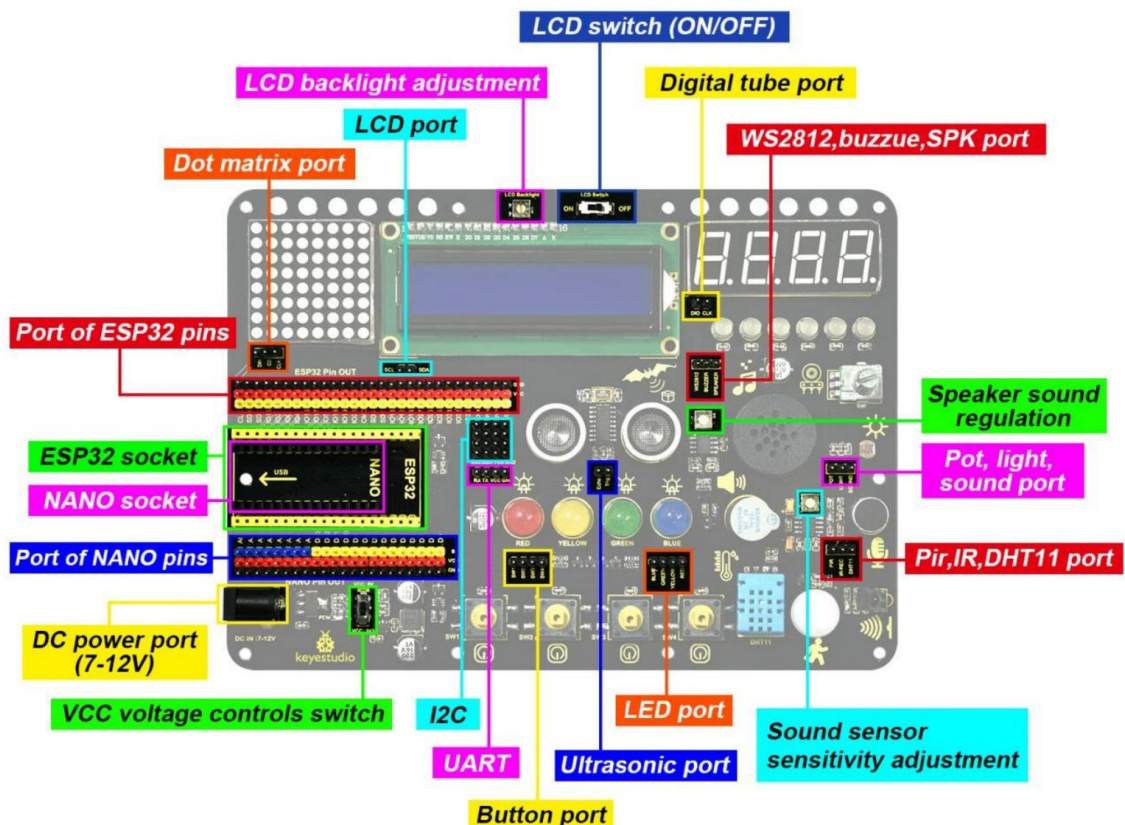
electric diagram Led's:



electric diagram buttons:



FKS0001 connections:



Lamp test:

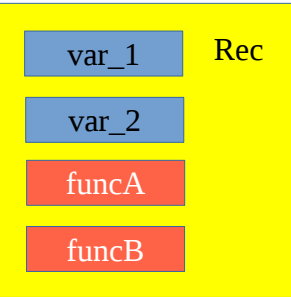
connect: SW1 → RED
 SW2 → YELLOW
 SW3 → GREEN
 SW4 → BLUE

Introduction to Classes:

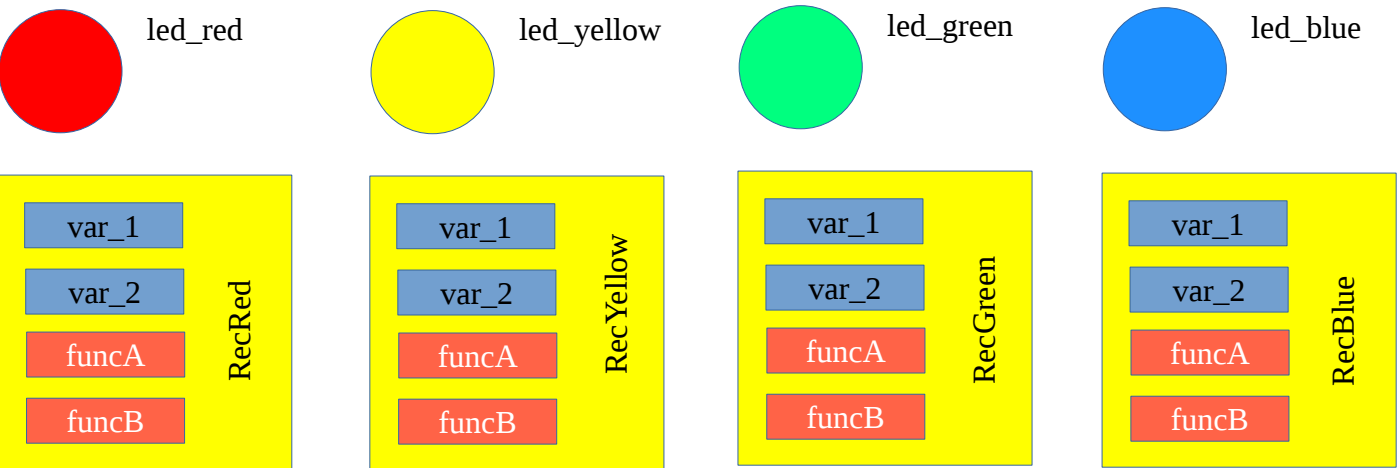
individual variables and functions



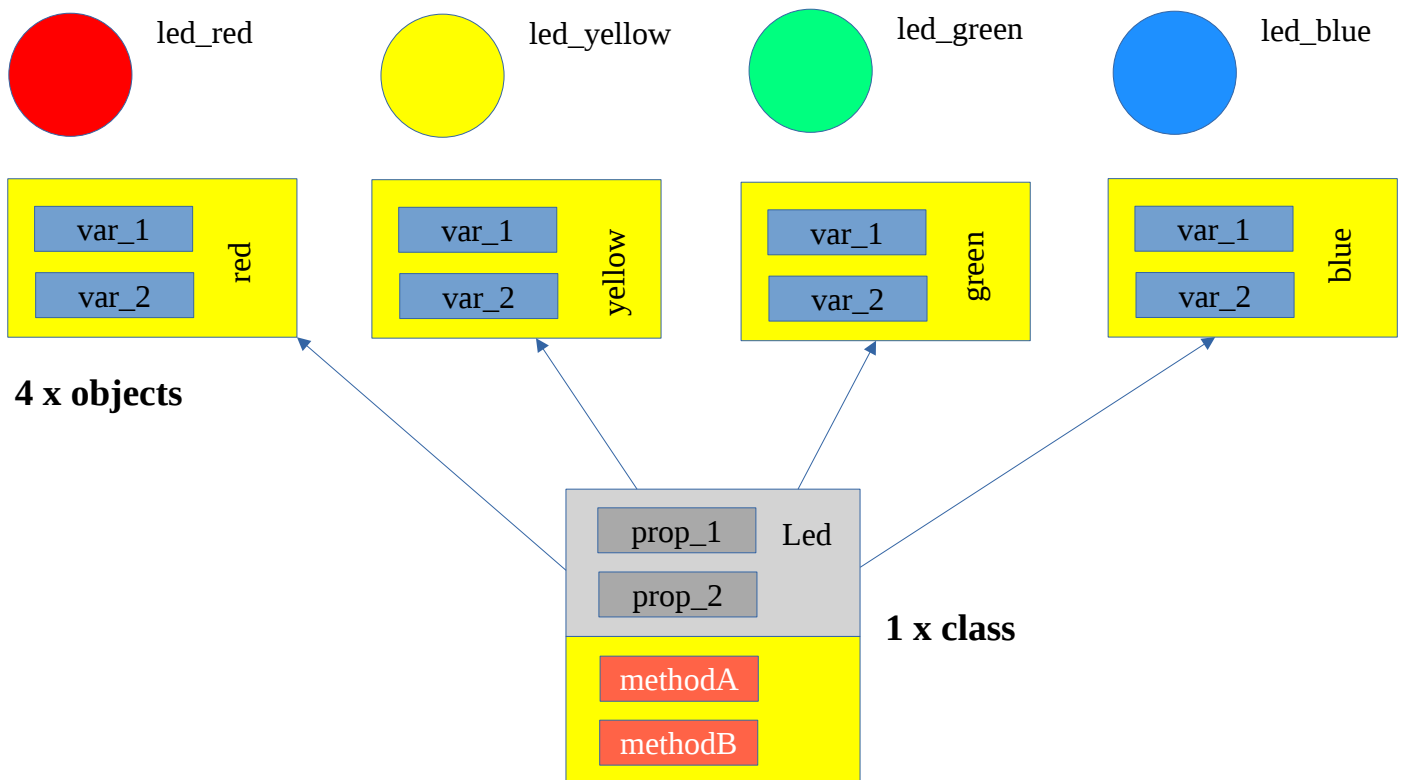
variables and functions in a container (Record, not available in Python)



records used to control leds



Objects to control leds



Python Led test

connect RED → IO32

```
Thonny - /home/ajv/work/python/programmeursleerlin...eystudio_fks0001/4_leds/1_led_test_lin.py @ 22 : 1
File Edit View Run Tools Help

Files
  This computer
    / home / ajv / work / python /
    programmeursleerling /
    keystudio_fks0001
      > 2_keystudio_lcd
      > 3_f_strings
      > 4_leds
        > img
        > 1_led_test.py
        > 1_led_test_lin.py
        > leds.odt
        > docs

MicroPython device
  > boot.py
  > fks_drivers_01.py

1_led_test_lin.py
1  # mPy - kit FKS0001 led test
2  # provided by Anthony Vogelaar, Perth UK
3  # rev 0.10  2025-05-14  initial release
4
5  from machine import Pin
6
7  # three flashes RED led connected to IO32
8  led_red = Pin(32, Pin.OUT)
9  led_red(True)
10 for i in range(200000): pass # approx 1 sec delay
11 led_red(False)
12 for i in range(200000): pass
13 led_red(True)
14 for i in range(200000): pass
15 led_red(False)
16 for i in range(200000): pass
17 led_red(True)
18 for i in range(200000): pass
19 led_red(False)
20
21 # ===== End =====
22

Shell
>>> %Run -c $EDITOR_CONTENT

MPY: soft reboot

>>>

MicroPython (ESP32) • CP2102 USB to UART Bridge Controller @ /dev/ttyUSB0
```

Python Led test (advanced)

connect RED → IO32
see: 2_led_test.py

Python Button test

connect:

RED → IO32
SW1 → IO33
SCL (LCD) → SCL (Esp32)
SDA (LCD) → SDA (Esp32)

uploaded in ESP32:

fks_drivers_01.py

see: 3_button_test.py