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from m5stack import *
from m5ui import *
from uiflow import *
import json

import time
from flow import ezdata
import wifiCfg
import unit
remotelnit()

setScreenColor(0x33ffff)
env3_0 = unit.get(unit.ENV3, unit.PORTA)
pir_0 = unit.get(unit.PIR, unit.PORTC)
ir_0 = unit.get(unit.IR, unit.PORTC)
rgb_0 = unit.get(unit.RGB, unit.PORTB)

switch_value = None
A = None
B = None
i = None
random2 = None

wifiCfg.autoConnect(lcdShow=False)

circle4 = M5Circle(55, 81, 20, 0xff9900, 0x33ffff)
circle2 = M5Circle(99, 132, 20, 0xFFFFFF, 0xFFFFFF)
circle0 = M5Circle(122, 120, 32, 0xFFFFFF, 0xFFFFFF)
circle9 = M5Circle(149, 132, 20, 0xFFFFFF, 0xFFFFFF)
circle3 = M5Circle(134, 120, 20, 0xFFFFFF, 0xFFFFFF)
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label0 = M5TextBox(216, 172, "T :", lcd.FONT_Default, 0x201616, rotate=0)
label1 = M5TextBox(215, 195, "P :", lcd.FONT_Default, 0x423535, rotate=0)
label2 = M5TextBox(214, 216, "H :", lcd.FONT_Default, 0x312828, rotate=0)
label3 = M5TextBox(257, 172, "Text", lcd.FONT_Default, 0x1e1212, rotate=0)
label4 = M5TextBox(257, 195, "Text", lcd.FONT_Default, 0x342727, rotate=0)
label6 = M5TextBox(0, 37, "Weather Condition", lcd.FONT_Default, 0x7e7777, rotate=0)
label5 = M5TextBox(257, 216, "Text", lcd.FONT_Default, 0x413636, rotate=0)
rect3 = M5Rect(111, 150, 1, 2, 0xFFFFFFFF, 0xFFFFFFFF)
label7 = M5TextBox(0, 224, "Date & Time", lcd.FONT_Default, 0x302727, rotate=0)
rect4 = M5Rect(124, 150, 1, 2, 0xFFFFFFFF, 0xFFFFFFFF)
label8 = M5TextBox(159, 61, "Movement", lcd.FONT_Default, 0xf31a08, rotate=0)
rect5 = M5Rect(140, 150, 1, 2, 0xFFFFFFFF, 0xFFFFFFFF)
rect6 = M5Rect(159, 150, 1, 2, 0xFFFFFFFF, 0xFFFFFFFF)
title0 = M5Title(title="Weather Station", x=3, fgcolor=0xFFFFFFFF, bgcolor=0x0000FF)
circle12 = M5Circle(134, 120, 20, 0xFFFFFFFF, 0xFFFFFFFF)

```

```
import random
```

```
# Describe this function...
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```

def rain():

    global switch_value, A, B, i, random2

    label6.setText('Its Raining, Please Carry Your Umbrella! ')
    circle4.setBgColor(0x33ffff)
    rgb_0.setColorAll(0x3366ff)
    rect4.setBorderColor(0x33ffff)
    rgb.setColorAll(0x000099)
    rect3.setBorderColor(0x3333ff)
    rect4.setBorderColor(0x3333ff)
    rect5.setBorderColor(0x3333ff)
    rect6.setBorderColor(0x3333ff)

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random2 = random.randint(2, 50)
rect3.setSize(height=random2)
random2 = random.randint(2, 50)
rect4.setSize(height=random2)
random2 = random.randint(2, 50)
rect5.setSize(height=random2)
random2 = random.randint(2, 50)
rect6.setSize(height=random2)
while True:
    speaker.setVolume(2)
    speaker.sing(247, 1/4)
    wait(1)
    wait_ms(2)

```

# Describe this function...

```

def SdCard():
    global switch_value, A, B, i, random2
    A = {'Humidity':(env3_0.humidity),'Temperature':(env3_0.temperature),'Pressure':(env3_0.pressure)}
    B = json.dumps(A)
    with open('/sd/WeatherData.json', 'w+') as fs:
        fs.write(str(B))

```

# Describe this function...

```

def motion():
    global switch_value, A, B, i, random2
    if (pir_0.state) == 1:
        rgb.setColorFrom(1, 5, 0xff0000)
        rgb.setColorFrom(6, 10, 0xff0000)
        speaker.tone(1800, 200)
        label8.setText('Movement Detected')

```

else:

rgb.setColorFrom(6, 10, 0x000099)

rgb.setColorFrom(6, 10, 0x000099)

label8.setText('No Movements ')

# Describe this function...

def Hot():

global switch\_value, A, B, i, random2

label6.setText('Stay At your House, Its really Hot out There!')

rgb.setColorAll(0xff0000)

speaker.setVolume(10)

# Describe this function...

def envData():

global switch\_value, A, B, i, random2

label3.setText(str(env3\_0.temperature))

label4.setText(str(env3\_0.pressure))

label5.setText(str(env3\_0.humidity))

wait(0.1)

# Describe this function...

def sunny():

global switch\_value, A, B, i, random2

label6.setText("Sunny Outside, Don't worry about the Rain!")

rgb\_0.setColorAll(0xff6600)

rect3.setBorderColor(0x33ffff)

rect4.setBorderColor(0x33ffff)

rect5.setBorderColor(0x33ffff)

rect6.setBorderColor(0x33ffff)

circle4.setBgColor(0xff6600)

rgb.setColorAll(0xff6600)

```
for i in range(20, 31):  
    lcd.circle(55, 81, i, color=0xff9900)  
    lcd.circle(55, 81, (i - 1), color=0x33ffff)  
    wait(0.05)  
lcd.circle(55, 81, 30, color=0x33ffff)
```

```
def switch_Stop_callback(switch_value):  
    global A, B, random2, i, env3_0, pir_0, ir_0, rgb_0, envData, Hot, motion, rain, SdCard, sunny  
    if switch_value == 0:  
        while True:  
            ir_0.txOn()  
            if (ir_0.rxStatus()) == 0:  
                print('Detected')  
                wait(0.1)  
            else:  
                print('Not detected')  
            label7.setText(str(ezdata.getCurrentISODateTime()))  
            if (env3_0.humidity) >= 60:  
                rain()  
            elif (env3_0.temperature) >= 35:  
                Hot()  
            else:  
                sunny()  
            motion()
```

```

    wait_ms(1)

    ezdata.setData('uhcZY8ciOvZHgfHRv7RqWMHvnNHZHsBA', 'Temperature', (env3_0.temperature))

    wait_ms(1)

    ezdata.setData('uhcZY8ciOvZHgfHRv7RqWMHvnNHZHsBA', 'Pressure', (env3_0.pressure))
    ezdata.setData('uhcZY8ciOvZHgfHRv7RqWMHvnNHZHsBA', 'Humidity', (env3_0.humidity))

    wait_ms(2)

    SdCard()

    envData()

    wait_ms(2)
else:
    setScreenColor(0x000000)

def button_2_callback():
    global A, B, switch_value, random2, i, env3_0, pir_0, ir_0, rgb_0, envData, Hot, motion, rain,
    SdCard, sunny

    for count in range(3):
        speaker.sing(880, 1)

        wait(1)

def button_3_callback():
    global A, B, switch_value, random2, i, env3_0, pir_0, ir_0, rgb_0, envData, Hot, motion, rain,
    SdCard, sunny

    label3.setText(str(env3_0.temperature))

    label4.setText(str(env3_0.pressure))

    label5.setText(str(env3_0.humidity))

    wait(0.1)

while True:
    ir_0.txOn()

    if (ir_0.rxStatus()) == 0:
        print('Detected')

        wait(0.1)

```

```
else:
    print('Not detected')
label7.setText(str(ezdata.getCurrentISODateTime()))
if (env3_0.humidity) >= 60:
    rain()
    rgb_0.setColorAll(0x3366ff)
elif (env3_0.temperature) >= 35:
    Hot()
    rgb_0.setColorAll(0xff0000)
else:
    sunny()
    rgb_0.setColorAll(0xff6600)
motion()
wait_ms(1)
ezdata.setData('uhcZY8ciOvZHgfHRv7RqWMHvnNHZHsBA', 'Humidity', (env3_0.humidity))
ezdata.setData('uhcZY8ciOvZHgfHRv7RqWMHvnNHZHsBA', 'Temperature', (env3_0.temperature))
wait_ms(1)
ezdata.setData('uhcZY8ciOvZHgfHRv7RqWMHvnNHZHsBA', 'Pressure', (env3_0.pressure))
wait_ms(2)
SdCard()
envData()
wait_ms(2)
```