

AP CSP Python with CodeX From Flowcharts to Code Activity Guide

Name:

Activity : From Flowcharts to Code Paste your code for each flowchart in the space provided.

Python Code #1.

```
...  
  
Flowchart #1  
...  
  
from codex import *  
from random import randrange  
  
red = randrange(256)  
green = randrange(256)  
blue = randrange(256)  
  
color = (red, blue, green)  
  
pixels.set(0, color)  
pixels.set(1, color)  
pixels.set(2, color)  
pixels.set(3, color)
```

Python Code #2

```
...  
  
Flowchart #2  
...  
  
from codex import *  
from random import randrange  
  
if buttons.was_pressed(BTN_A):  
    red = randrange(256)  
    green = randrange(256)  
    blue = randrange(256)  
    color = (red, green, blue)  
    pixels.set(0, color)  
    pixels.set(1, color)  
    pixels.set(2, color)  
    pixels.set(3, color)  
  
if buttons.was_pressed(BTN_B):  
    pixels.set(0, WHITE)  
    pixels.set(1, WHITE)  
    pixels.set(2, WHITE)  
    pixels.set(3, WHITE)
```

Python Code #3

```
...  
  
Flowchart #3  
...  
  
from codex import *  
from time import sleep  
  
delay = 1  
count = 0  
  
display.show("Press B")  
sleep(delay)  
  
if buttons.was_pressed(BTN_B):  
    pixels.set(0, GREEN)  
    sleep(delay)  
    count = count + 1  
else:  
    pixels.set(0, RED)  
    sleep(delay)  
  
display.show("Press A")  
sleep(delay)  
  
if buttons.was_pressed(BTN_A):  
    pixels.set(1, GREEN)  
    sleep(delay)  
    count = count + 1  
else:  
    pixels.set(1, RED)  
    sleep(delay)  
  
display.show(str(count))
```

Python Code #4

```
...  
  
Flowchart #4  
...  
  
from codex import *  
from random import randrange  
  
while True:  
  
    if buttons.was_pressed(BTN_A):  
        red = randrange(256)  
        green = randrange(256)  
        blue = randrange(256)  
        color = (red, blue, green)  
        pixels.set(0, color)  
        pixels.set(1, color)  
        pixels.set(2, color)  
        pixels.set(3, color)  
  
    if buttons.was_pressed(BTN_B):  
        break
```

Python Code #5

```
...  
Flowchart #5  
...  
from codex import *  
from time import sleep  
  
count = 0  
  
while count < 3:  
    display.show("Press A")  
    sleep(1)  
    if buttons.was_pressed(BTN_A):  
        pixels.set(count, GREEN)  
        count = count + 1  
  
# Ending message--not indented  
display.show("The END")
```

Python Code #6

```
...  
Flowchart #6  
...  
from codex import *  
from time import sleep  
  
while True:  
    display.show(pics.HEART)  
    sleep(delay)  
    display.show(pics.HEART_SMALL)  
    sleep(delay)  
  
    if buttons.was_pressed(BTN_A):  
        delay = delay + 0.2  
    if buttons.was_pressed(BTN_B):  
        delay = delay - 0.2  
    if delay < 0.2:  
        delay = 0.2  
  
    if buttons.was_pressed(BTN_U):  
        break
```