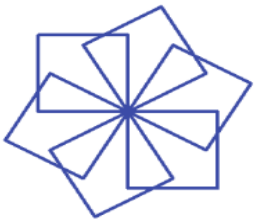
Ch 4. Python Graphics- Online class 12 (28. 09. 20)

1. The command used to give colour to the figures created in Python graphic window.

   color()

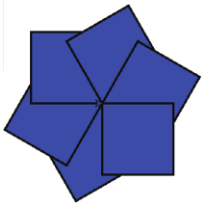
2. **To create geometric figures and patterns having different colours**

   To print the pattern in blue colour



```
from turtle import*
clear()
pensize(3)
for i in range(6):
    right(60)
    color("blue")
    for j in range(4):
        forward(100)
        right(90)
```

3. **Colour filling in the pattern**



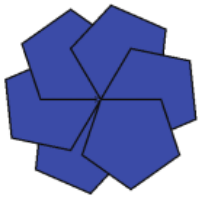
```
from turtle import*
clear()
pensize(3)
for i in range(6):
    right(60)
    color("black","blue")
    begin_fill()
    for j in range(4):
        forward(100)
        rt(90)
    end_fill()
```

The instruction is to fill the spaces in the pattern with blue colour and to draw the border in black

The instructions begin_fill() and end_fill() should be written in the same tab position

4. if we write the command **color("A","B")** , then the lines will be drawn in **colour A** and the space inside will be filled with **colour B**

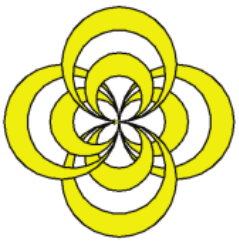
5. Create different patterns using colours as given below.



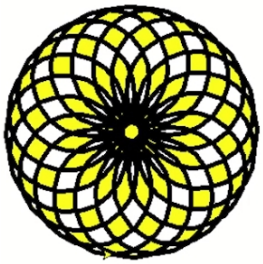
```
from turtle import*
clear()
pensize(3)
for i in range(6):
    right(60)
    color("black","blue")
    begin_fill()
    for j in range(5):
        forward(100)
        rt(72)
    end_fill()
```

```
from turtle import*
clear()
pensize(3)
for i in range(6):
    right(60)
    color("black","purple")
    begin_fill()
    for j in range(4):
        forward(100)
        rt(90)
    end_fill()
```

6. **More colour patterns**

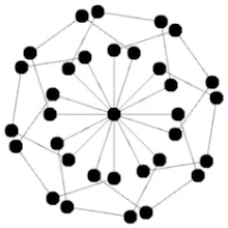


```
from turtle import*
pensize(3)
color("black","yellow")
for r in range(4):
    rt(90)
    begin_fill()
    for i in range(40,101,20):
        circle(i)
    end_fill()
```



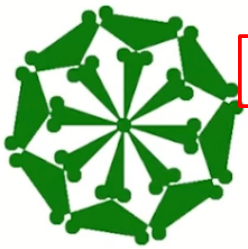
```
from turtle import*
pensize(5)
color("black","yellow")
begin_fill()
for i in range(20):
    circle(60)
    penup()
    forward(40)
    pendown()
    left(18)
end_fill()
```

7. Modify the program of the pattern given below and create patterns A, B, C and D.



```
from turtle import*
for j in range(8):
    right(45)
    for i in range(5):
        forward(90)
        dot(20)
        right(72)
```

The changes made are given in the red coloured box in the following programs



A

```
from turtle import*
color("green")
begin_fill()
for j in range(8):
    right(45)
    for i in range(5):
        forward(90)
        dot(20)
        right(72)
end_fill()
```

B

```
from turtle import*
color("green")
begin_fill()
for j in range(12):
    right(30)
    for i in range(5):
        forward(90)
        dot(20)
        right(72)
end_fill()
```


C

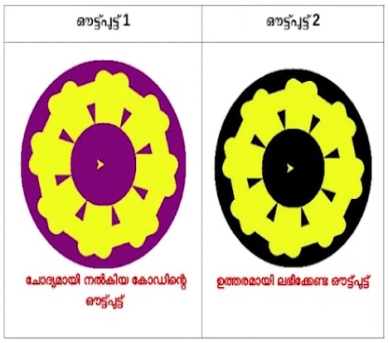
```
from turtle import*
color("yellow")
begin_fill()
for j in range(12):
    right(30)
    for i in range(5):
        forward(90)
        dot(20)
        right(72)
end_fill()
```

D

```
from turtle import*
dot(350,"black")
color("yellow")
begin_fill()
for j in range(12):
    right(30)
    for i in range(5):
        forward(90)
        dot(20)
        right(72)
end_fill()
```

8. A Python program and its output (output 1) are given. Modify this program to get a second output (output 2)

```
from turtle import*
color("yellow")
dot(250,"purple")
pensize(25)
for i in range(8):
      right(45)
      for i in range(3):
            forward(100)
            right(120)
dot(100,"purple")
```




```
from turtle import*
color("yellow")
dot(250,"black")
pensize(25)
for i in range(8):
      right(45)
      for i in range(3):
            forward(100)
            right(120)
dot(100,"black")
```

Modified program

Additional Information

Python language is used in Computer softwares such as **Blender, Openshot video editor** and **Inkscape.**

It is also used in **Instagram, You tube and Yahoo**

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