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a7_mnoel2018.py X
python > A7 > a7_mnoel2018.py > ...
1  """Makenson Noel
2  |A7: Color addition and subtraction
3  """
4  colors = { "red" : (1,0,0),
5             "green" : (0,1,0),
6             "blue" : (0,0,1),
7             "cyan" : (0, 1, 1),
8             "magenta" : (1,0,1),
9             "yellow" : (1,1,0),
10            "black" : (0,0,0),
11            "white" : (1,1,1) }
12
13 class Color(object):
14     def __init__(self, r, g, b):
15         self.r = self.checkRange(r)
16         self.g = self.checkRange(g)
17         self.b = self.checkRange(b)
18
19     def checkRange(self,color_component):
20         if color_component < 0:
21             return 0
22
23         elif color_component > 1:
24             return 1
25
26         else:
27             return color_component
28
29     def __add__(self, x):
30         return Color(self.r + x.r, self.g + x.g, self.b + x.b)
31
32     def __sub__(self, x):
33         return Color(self.r - x.r, self.g - x.g ,self.b - x.b)
34
35     def __str__(self):
36         return "{} , {} , {}".format(self.r , self.g , self.b)
37
38     def __repr__(self):
39         return self.__str__()
40
41 # Test Code
42 red = Color(1,0,0)
43 green = Color (0,1,0)
44 blue = Color (0,0,1)
45 cyan = Color (0, 1, 1)
46 magenta = Color (1,0,1)
47 yellow = Color (1,1,0)
48 black = Color (0,0,0)
49 white = Color (1,1,1)

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a7_mnoel2018.py X
python > A7 > a7_mnoel2018.py > ...
49  white = Color (1,1,1)
50
51  print("\n\na simple program for performing addition and subtraction using colors.\n\n")
52
53  print("Enter two colors by name or (r,g,b) values\n")
54
55  print("\nInvalid names are: \nred (1, 0, 0) \ngreen (0, 1, 0) \nblue (0, 0, 1) \ncyan (0, 1, 1) \nmagenta (1, 0, 1) \nyellow (1, 1, 0) \nblack (0, 0, 0) \nwhite (1, 1, 1)\n\n")
56
57  color_one = input("Enter Color 1: ")
58  #cases for first input
59
60  if color_one == "red": color_one = red
61  elif color_one == "green": color_one = green
62  elif color_one == "blue": color_one = blue
63  elif color_one == "cyan": color_one = cyan
64  elif color_one == "magenta": color_one = magenta
65  elif color_one == "yellow": color_one = yellow
66  elif color_one == "black": color_one = black
67  elif color_one == "white": color_one = white
68  else : print("Error")
69
70  color_two = input("Enter Color 2: ")
71
72  #cases for second input
73  if color_two == "red": color_two = red
74  elif color_two == "green": color_two = green
75  elif color_two == "blue": color_two = blue
76  elif color_two == "cyan": color_two = cyan
77  elif color_two == "magenta": color_two = magenta
78  elif color_two == "yellow": color_two = yellow
79  elif color_two == "black": color_two = black
80  elif color_two == "white": color_two = white
81  else : print("Error")
82
83  c1 = color_one + color_two
84  c2 = color_one - color_two
85
86  print("Color 1 + Color 2 =", c1)
87  print("Color 1 - Color 2 =", c2)

```

a simple program for performing addition and subtraction using colors.

Enter two colors by name or (r,g,b) values

Valid names are:

red (1, 0, 0)  
green (0, 1, 0)  
blue (0, 0, 1)  
cyan (0, 1, 1)  
magenta (1, 0, 1)  
yellow (1, 1, 0)  
black (0, 0, 0)  
white (1, 1, 1)

Enter Color 1: red

Enter Color 2: blue

Color 1 + Color 2 = (1, 0, 1)

Color 1 - Color 2 = (1, 0, 0)

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a simple program for performing addition and subtraction using colors.

Enter two colors by name or (r,g,b) values

Valid names are:

red (1, 0, 0)  
green (0, 1, 0)  
blue (0, 0, 1)  
cyan (0, 1, 1)  
magenta (1, 0, 1)  
yellow (1, 1, 0)  
black (0, 0, 0)  
white (1, 1, 1)

Enter Color 1: green

Enter Color 2: white

Color 1 + Color 2 = (1, 1, 1)

Color 1 - Color 2 = (0, 0, 0)

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a simple program for performing addition and subtraction using colors.

Enter two colors by name or (r,g,b) values

Valid names are:

red (1, 0, 0)  
green (0, 1, 0)  
blue (0, 0, 1)  
cyan (0, 1, 1)  
magenta (1, 0, 1)  
yellow (1, 1, 0)  
black (0, 0, 0)  
white (1, 1, 1)

Enter Color 1: blue

Enter Color 2: green

Color 1 + Color 2 = (0, 1, 1)

Color 1 - Color 2 = (0, 0, 1)

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a simple program for performing addition and subtraction using colors.

Enter two colors by name or (r,g,b) values

Valid names are:

red (1, 0, 0)  
green (0, 1, 0)  
blue (0, 0, 1)  
cyan (0, 1, 1)  
magenta (1, 0, 1)  
yellow (1, 1, 0)  
black (0, 0, 0)  
white (1, 1, 1)

Enter Color 1: yellow

Enter Color 2: red

Color 1 + Color 2 = (1, 1, 0)

Color 1 - Color 2 = (0, 1, 0)

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a simple program for performing addition and subtraction using colors.

Enter two colors by name or (r,g,b) values

Valid names are:

red (1, 0, 0)  
green (0, 1, 0)  
blue (0, 0, 1)  
cyan (0, 1, 1)  
magenta (1, 0, 1)  
yellow (1, 1, 0)  
black (0, 0, 0)  
white (1, 1, 1)

Enter Color 1: cyan

Enter Color 2: magenta

Color 1 + Color 2 = (1, 1, 1)

Color 1 - Color 2 = (0, 1, 0)

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