

ADVANCE

Random Colours Using Dictionary



INSTRUCTION:

Goal of the Project:

In class 155, we learned the concepts of Dictionary in python. And using the concept of a dictionary we created a GUI application for creating the technical dictionary.

Random colours using the dictionary:

In this project you are required to set the random background colors of the root window on click of a button, using the concept of random numbers you will be picking up random colours form the dictionary, and updating the background colors of the root window



***The above image is just for reference, we expect you to explore your creativity and make it look more beautiful by adding more colours.**

ADVANCE

Random Colours Using Dictionary



Getting Started:

1. For mac users - Open applications folder >> open anaconda >> spider. Then press command + s to **save as**, **select** the path, give the name to the file as **Adding_bg_using_dictionary.py** and click on **Save**.
2. For windows users - Go to **start >> anaconda >> spider**. Then go to **save as** and right click and create a folder **Python projects**, give the name to the file as **Adding_bg_using_dictionary.py** and click on **Save**.

Specific Tasks to complete the Project:

In this project you will be creating the function to change the background colour of the root window on a click of a button randomly. For this you need to add code for-

- 1) Write the basic template of tkinter.
- 2) Import the random package of python.
- 3) Define a dictionary by storing a key value pair in which-
 - Key = "Colours"
 - Value =list of colour

```
["maroon1","lawn green","magenta2","purple1","springgreen2","chocolate1",  
    "deep pink","cyan"]
```

-

For more colours you can refer to the colour chart as given in this [link](#).

- 4) Then create a function to change the background colour randomly, and inside the function write code for-
 - Generate a random number according to the length of the list using **random.randint()**, and store it inside a variable.
 - Then access the value present in the list of the dictionary by passing the key as colours and the random number generated as index, and store it inside a variable.
You are doing this, so that you will be passing the random number generated as the index to the list of colours present in the dictionary to get any random colours.
 - You can try printing this random color picked from dictionary on the console using the **print()** function

ADVANCE

Random Colours Using Dictionary



- Now write the code for setting the background color of the root window as per the random color picked from the dictionary.

Important : Here you need to store the color you got from the dictionary in the variable and pass this variable to the **background attribute** while setting the background of the root window.

Like -

```
root.configure(background =  
variable_name_that_holds_the_random_color_picked)
```

- 5) Now create Button to call the functions created in point 4, update the attributes of button by:
 - Giving appropriate text to the button
 - Giving command as the name of the function created at point 4
- 6) Place the button using the place() function on the root window.

Submitting the Project:

After you have completed coding do the following:

1. First create a folder on your google drive and rename it as project-C155
2. Then start screen recording and record the output using loom and upload the video in the folder which you have created. [Steps for screen recording](#)
3. Then upload **Adding_bg_using_dictionary.py** in which you have written python code in the folder which you have created in point 1.

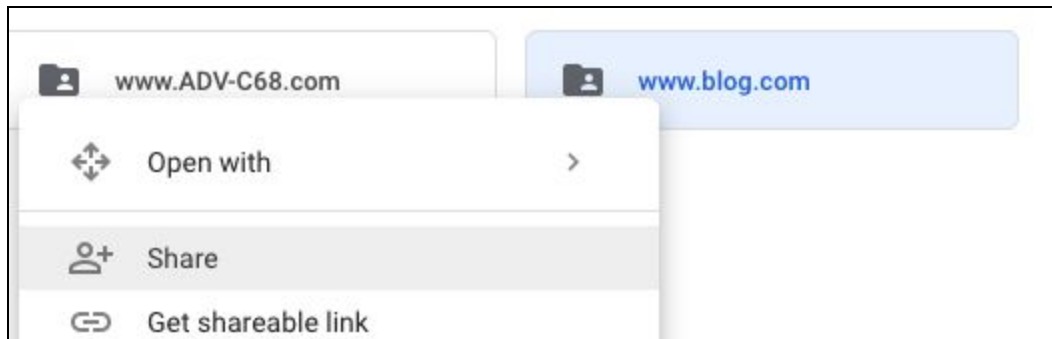
Then generate the link of the folder.

Steps for generating a link of the folder:

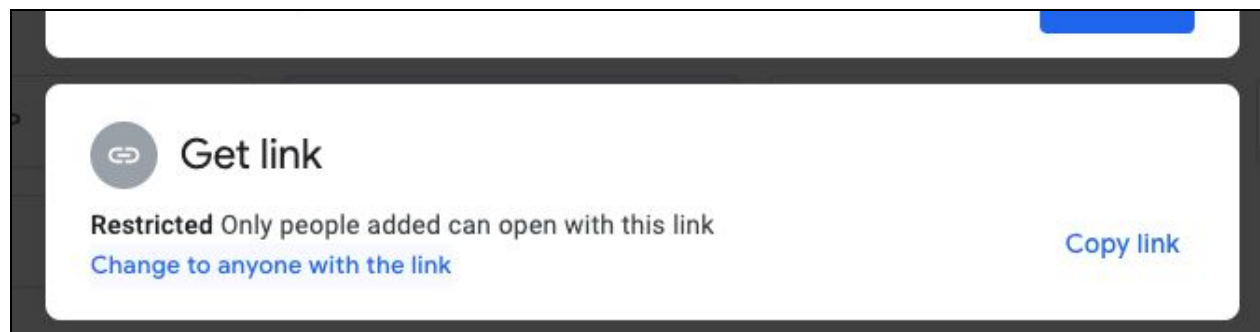
1. Right click on the folder and click share.

ADVANCE

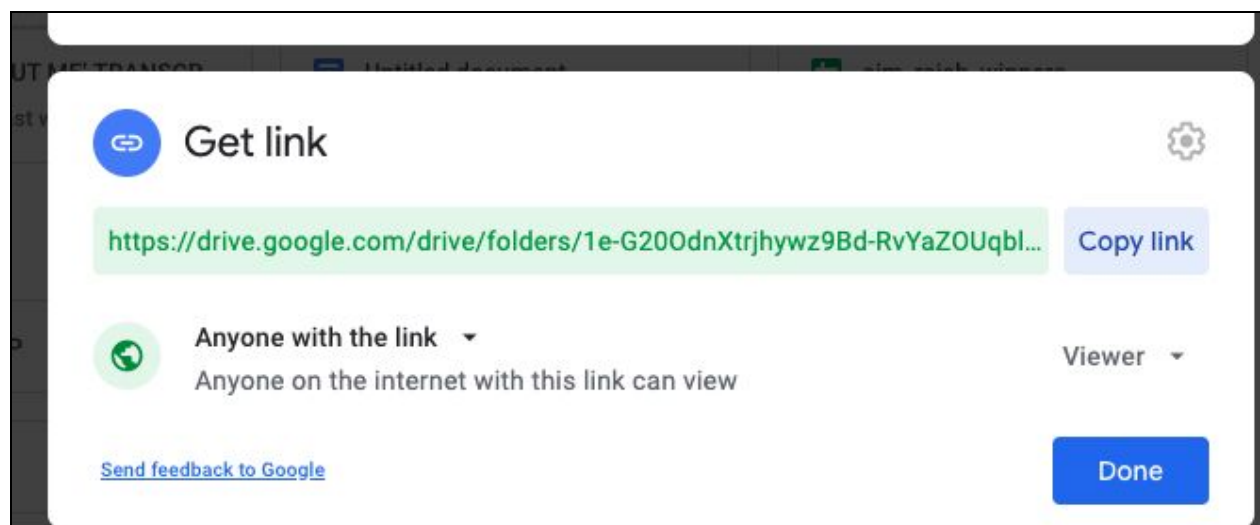
Random Colours Using Dictionary



2. Then click on [Change to anyone with the link](#).



3. Then the setting will change so anyone can view it.



ADVANCE

Random Colours Using Dictionary



4. Now click on the copy link to copy the link.
5. Now share and submit this copied link in the Student Dashboard Projects panel against the correct class number.

Hints:

1. Creating basic template of tkinter window.
 - Import * from tkinter - import all the packages of tkinter
 - Create a root window(Create a variable named "root" and assign it "Tk()" class. This will create a root window for us)
 - Set the title of your root window.
 - Set the dimensions of the root window using the geometry() function.
 - End the application by calling mainloop()
2. For generate the random number according to the length of the list we need to -
 - Count the number of colours mentioned in the list starting from 0
 - So the starting index will be 0, and the ending index will be as per your count.
 - After concluding the starting and ending index, pass the indexes inside **random.randint()** function for generating the random number according.
3. For accessing the colours from the colour list present in the dictionary.
Reference code -

```
dictionary["colour"][random_no]
```
4. You have to add a minimum of 10 colours in the list of the dictionary.
5. To set the background of the root window pass the colour obtained from the dictionary and random number to the **background attribute** of the **configure()** function..

```
dictionary["colour"][random_no]
```

ADVANCE

Random Colours Using Dictionary



REMEMBER... Try your best, that's more important than being correct.
After submitting your project your teacher will send you feedback on your work.

————— xxx ————— xxx ————— xxx ————— xxx ————— xxx —————