

~\Downloads\CSP PLTW UNIT-2 Mastery Project 2 - TKinter Color Guessing Game.py

```
1  import tkinter as tk
2  import random
3
4  root = tk.Tk()
5  root.wm_geometry("400x600")
6
7  colors = ["red", "green", "blue", "yellow", "orange", "
purple", "pink", "brown", "black", "white"]
8  variable = random.choice(colors)
9  remaining_time = 60
10 score = 0
11 game_active = True
12
13 def button(color):
14     global variable, score, game_active
15     if game_active:
16         if color == variable:
17             score += 1
18             score_label.config(text=f"Score: {score}")
19             variable = random.choice(colors)
20             canvas.config(background=variable)
21
22 def countdown(time_left):
23     global remaining_time, game_active
24     remaining_time = time_left
25     if remaining_time >= 0:
26         timer_label.config(text=f"Time left:
{remaining_time} seconds")
27         root.after(1000, countdown, remaining_time - 1)
28     else:
29         timer_label.config(text="Time's up!")
30         game_active = False
```

```
31
32 def center_text():
33     canvas_width = canvas.winfo_width()
34     canvas_height = canvas.winfo_height()
35     canvas.create_text(canvas_width / 2, canvas_height /
36 2, text="Guess the Color!", font=("Arial", 15), anchor="
37 center")
38
39
40 canvas = tk.Canvas(root, width=300, height=200,
41 background=variable)
42 canvas.pack(fill="x", padx=50, pady=2)
43
44 root.after(100, center_text)
45
46
47 timer_label = tk.Label(root, text=f"Time left:
48 {remaining_time} seconds")
49 timer_label.pack()
50
51
52 score_label = tk.Label(root, text=f"Score: {score}")
53 score_label.pack()
54
55
56 countdown(remaining_time)
57
58
59 for color in colors:
60     btn = tk.Button(root, text=color, background=color,
61 command=lambda c=color: button(c))
62     btn.pack(fill="x", padx=50, pady=2)
63
64
65 root.mainloop()
66
```