

Task 3:- Rock-Paper-Scissors Game

Code:-

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import random
import tkinter as tk
from tkinter import messagebox
import winsound

def play_sound(sound_file):
    winsound.PlaySound(sound_file, winsound.SND_ASYNC)

def generate_computer_choice():
    return random.choice(["rock", "paper", "scissors"])

class RockPaperScissorsApp:
    def __init__(self, root):
        self.root = root
        self.root.title("Rock Paper Scissors")

        # Set initial background color
        self.root.configure(bg="#f0f0f0")

        # Title label
        self.title_label = tk.Label(root, text="Rock Paper Scissors", font=("Helvetica", 24, "bold"),
        bg="#f0f0f0", fg="#333333")
        self.title_label.pack(pady=10)

        # User's choice label
        tk.Label(root, text="Your Choice:", font=("Helvetica", 16), bg="#f0f0f0",
        fg="#333333").pack(pady=5)

        # Buttons for user's choice
        self.user_choice = tk.StringVar()
        self.user_choice.set("")

        choices_frame = tk.Frame(root, bg="#f0f0f0")
        choices_frame.pack(pady=5)

        tk.Radiobutton(choices_frame, text="Rock", variable=self.user_choice, value="rock",
        font=("Helvetica", 14), bg="#f0f0f0", fg="#333333").pack(side=tk.LEFT, padx=10)
        tk.Radiobutton(choices_frame, text="Paper", variable=self.user_choice, value="paper",
        font=("Helvetica", 14), bg="#f0f0f0", fg="#333333").pack(side=tk.LEFT, padx=10)
        tk.Radiobutton(choices_frame, text="Scissors", variable=self.user_choice,
        value="scissors", font=("Helvetica", 14), bg="#f0f0f0", fg="#333333").pack(side=tk.LEFT,
        padx=10)
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# Play button
tk.Button(root, text="Play", command=self.play_game, font=("Helvetica", 16),
bg="#4CAF50", fg="white", activebackground="#45a049").pack(pady=10)

# Result label
self.result_label = tk.Label(root, text="", font=("Helvetica", 16, "bold"), bg="#f0f0f0",
fg="#333333")
self.result_label.pack(pady=10)

def play_game(self):
    user_choice = self.user_choice.get()

    if user_choice == "":
        messagebox.showwarning("Invalid Choice", "Please select an option.")
        return

    computer_choice = generate_computer_choice()

    result = ""
    if user_choice == computer_choice:
        result = "It's a tie!"
        bg_color = "#f0f0f0"
        fg_color = "#333333"
    elif (user_choice == "rock" and computer_choice == "scissors") or \
        (user_choice == "paper" and computer_choice == "rock") or \
        (user_choice == "scissors" and computer_choice == "paper"):
        result = "You win!"
        bg_color = "#7CFC00"
        fg_color = "#FFFFFF"
        play_sound("win.wav")
    else:
        result = "You lose!"
        bg_color = "#FF6347"
        fg_color = "#FFFFFF"
        play_sound("lose.wav")

    self.result_label.config(text=f"Computer's Choice: {computer_choice.capitalize()}\n{result}")
    self.title_label.config(bg=bg_color, fg=fg_color)

if __name__ == "__main__":
    root = tk.Tk()
    app = RockPaperScissorsApp(root)
    root.mainloop()

```

Output:-

