

USER INTERFACE DESIGN

EXPERIMENT 3

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1.Command Line Interface

```
import random
```

```
options = ["rock", "paper", "scissors"]
```

```
system_choice = random.choice(options)
```

```
print("🎮 Rock Paper Scissors - CLI Version")
```

```
print("Choices: rock / paper / scissors")
```

```
user_choice = input("Enter your choice: ").lower()
```

```
if user_choice not in options:
```

```
    print("🔴 Invalid choice")
```

```
else:
```

```
    print(f"Computer chose: {system_choice}")
```

```

if user_choice == system_choice:
    print("🤝 It's a tie!")

elif(user_choice == "rock" and system_choice == "scissors") or \
(user_choice == "paper" and system_choice == "rock") or \
(user_choice == "scissors" and system_choice == "paper"):

    print("🎉 You win!")

else:
    print("😢 You lose!")

```

OUTPUT:

```

PS C:\Users\bivis\Downloads\UID_EXP3> & C:/Users/bivis/AppD
3/exp3_cli.py
🎮 Rock Paper Scissors - CLI Version
Choices: rock / paper / scissors
Enter your choice: rock
Computer chose: scissors
🎉 You win!
PS C:\Users\bivis\Downloads\UID_EXP3>

```

2.Graphical User Interface

```

import tkinter as tk
import random
from tkinter import messagebox

```

```
choices = ["rock", "paper", "scissors"]

defplay_game(user_pick):
    computer_pick = random.choice(choices)

    if user_pick == computer_pick:
        result = "It's a Tie!"
    elif(user_pick == "rock" and computer_pick == "scissors") or \
        (user_pick == "paper" and computer_pick == "rock") or \
        (user_pick == "scissors" and computer_pick == "paper"):
        result = "You Win!"
    else:
        result = "You Lose!"

    messagebox.showinfo(
        "Result",
        f"You chose: {user_pick}\nComputer chose:\n{computer_pick}\n\n{result}"
    )

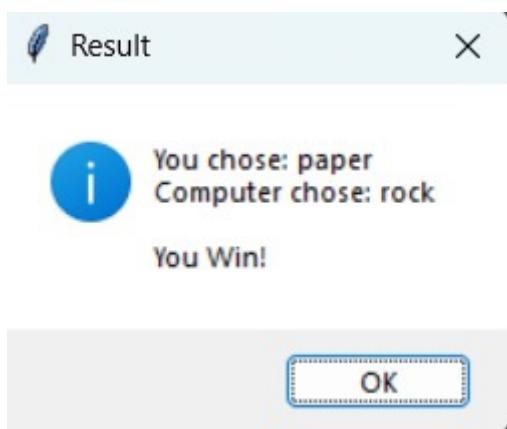
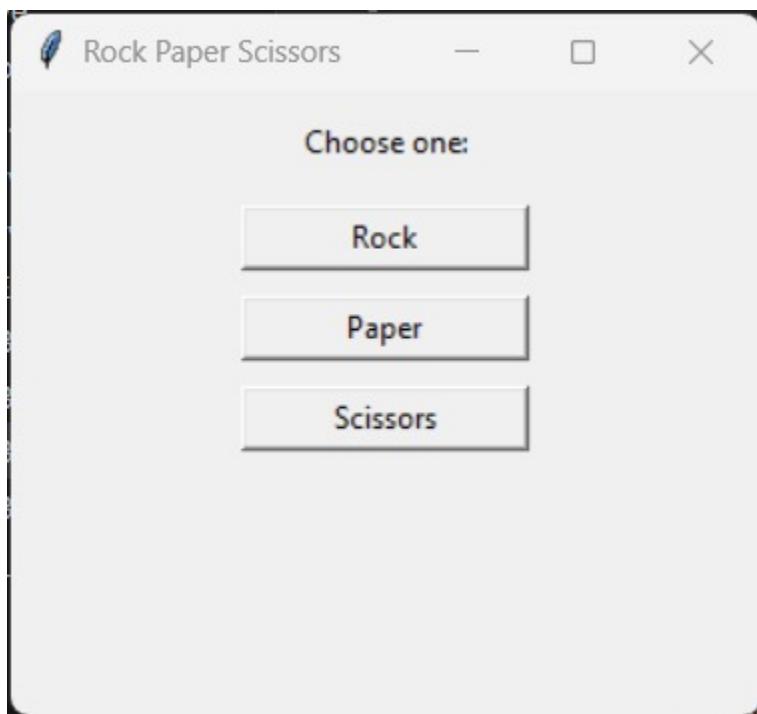
window = tk.Tk()
window.title("Rock Paper Scissors")
window.geometry("300x250")

tk.Label(window, text="Choose one:").pack(pady=10)

tk.Button(window, text="Rock", width=15, command=lambda:
play_game("rock")).pack(pady=5)
tk.Button(window, text="Paper", width=15, command=lambda:
play_game("paper")).pack(pady=5)
tk.Button(window, text="Scissors", width=15, command=lambda:
play_game("scissors")).pack(pady=5)

window.mainloop()
```

OUTPUT:



3.Voice User Interface

```
import random
```

```
import time

choices = ["rock", "paper", "scissors"]
computer = random.choice(choices)

print("🎤 Voice Assistant: Rock Paper Scissors")
time.sleep(0.5)

print("🔊 Please say rock, paper, or scissors")

whileTrue:
    user= input("🎧 You: ").lower()

    if user not in choices:
        print("⚠ System: Please say a valid option")
        continue

    print("⏳ System is thinking...")
    time.sleep(0.5)
```

```
print(f"💻 System chose: {computer}")\n\nif user== computer:\n    print("🤝 System: It's a tie!")\n\nelif(user == "rock" and computer == "scissors") or \\n\n    (user == "paper" and computer == "rock") or \\n\n    (user == "scissors" and computer == "paper"):\n\n    print("🎉 System: You win!")\n\nelse:\n    print("😢 System: You lose!")\n\nbreak
```

OUTPUT:

```
3/exp3_vui.py\n➤ Voice Assistant: Rock Paper Scissors\n➤ System: I am ready to play with you.\n➤ System: Please say rock, paper, or scissors\n➤ You: scissors\n➤ System: Processing your voice input...\n➤ System: I chose scissors\n➤ System: It's a tie!\nPS C:\Users\bivis\Downloads\UID_EXP3> █
```

4. User Satisfaction Comparison

```
defsurvey():
    try:
        print("Rate your satisfaction with the following interfaces (1-5):")

        cli_satisfaction = int(input("CLI (1-5): "))
        gui_satisfaction = int(input("GUI (1-5): "))
        vui_satisfaction = int(input("VUI (1-5): "))

        print("\nYour satisfaction ratings:")
        print(f"CLI: {cli_satisfaction}")
        print(f"GUI: {gui_satisfaction}")
        print(f"VUI: {vui_satisfaction}")

        #Calculate the average satisfaction
        avg_satisfaction = (cli_satisfaction + gui_satisfaction +
        vui_satisfaction) / 3
        print(f"\nAverage Satisfaction Score: {avg_satisfaction:.2f}")

    except ValueError:
        print("Invalid input! Please enter numbers between 1 and 5.")

#Run the survey function
if __name__ == "__main__":
    survey()
```

OUTPUT:

```
3/exp3_compare.py
Rate your satisfaction with the following interfaces (1-5):
CLI (1-5): 4
GUI (1-5): 5
VUI (1-5): 4
```

```
Your satisfaction ratings:
```

```
CLI: 4
GUI: 5
VUI: 4
```

```
Average Satisfaction Score: 4.33
```

```
PS C:\Users\bivis\Downloads\UID_EXP3> █
```