

USER INTERFACE DESIGN

EXPERIMENT 3

NAME:ABITHA SHRI.P.S

ROLLNO:240701016

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"]
```

```
def play_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:
```

```
{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:
```

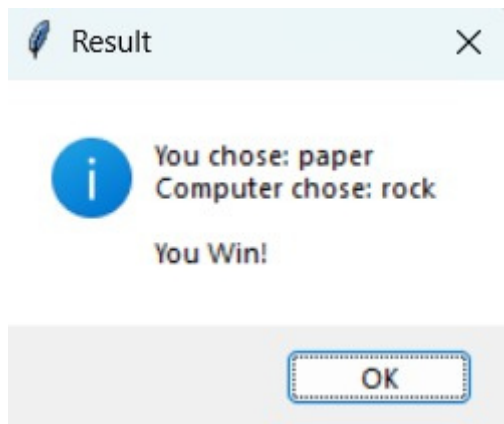
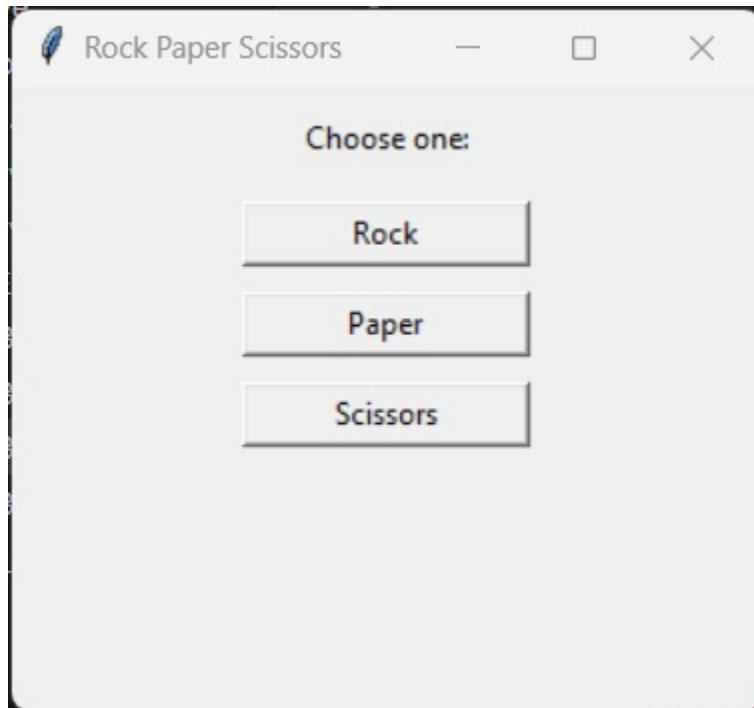
```
play_game("paper")).pack(pady=5)
```

```
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")
```

```
while True:
```

```
    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}")
```

```
if user == computer:
```

```
    print("🤝 System: It's a tie!")
```

```
elif (user == "rock" and computer == "scissors") or \
```

```
      (user == "paper" and computer == "rock") or \
```

```
      (user == "scissors" and computer == "paper"):
```

```
    print("🎉 System: You win!")
```

```
else:
```

```
    print("😓 System: You lose!")
```

```
break
```

OUTPUT:

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

4. User Satisfaction Comparison

```
def survey():
    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>
```