WEEK 1: EVALUATING USER INTERFACE: CLI, GUI AND VUI

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1. COMMAND LINE INTERFACE:

PYTHON CODE:

```
import os

import sys


def rename_file(old_name, new_name):
    try:
        os.rename(old_name,  new_name)
        print(f"File renamed from {old_name} to {new_name}")
    except FileNotFoundError:
        print(f"Error: {old_name} not
    found.")except Exception as e:
        print(f"An error occurred: {e}")


if __name___== "__main__":
    if len(sys.argv) != 3:
        print("Usage: python rename_file_cli.py <old_filename> <new_filename>")
    else:
        rename_file(sys.argv[1], sys.argv[2])
```

OUTPUT:

```
File renamed from demo.txt to shal.txt
```

2. GRAPHICAL USER INTERFACE:

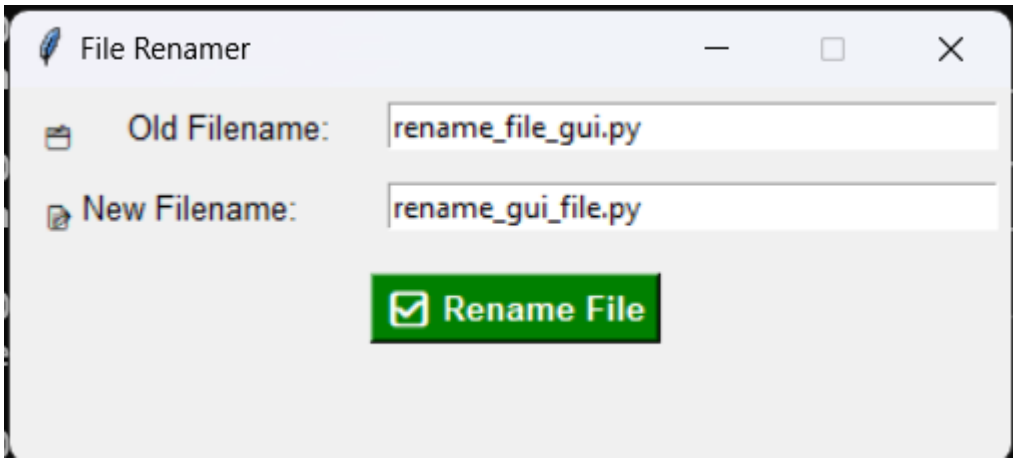
PYTHON CODE:

```
import tkinter as tk
from tkinter import messagebox
import os

# Function to rename the file
def rename_file():
    old_name = old_filename_entry.get().strip()
    new_name = new_filename_entry.get().strip()

    # Check if input fields are empty
    if not old_name or not new_name:
        messagebox.showwarning("Warning", "Please enter both filenames!")
        return

    # Check if the old file exists
    if not os.path.exists(old_name):
        messagebox.showerror("Error", f"File '{old_name}' not found.")
        return

    # Check if the new file already exists
    if os.path.exists(new_name):
        overwrite = messagebox.askyesno("Warning", f"'{new_name}' already exists. Overwrite?")
        if not overwrite:
            return

    try:
```

```
        os.rename(old_name, new_name)
        messagebox.showinfo("Success", f"File renamed from '{old_name}' to '{new_name}'")
    except Exception as e:
        messagebox.showerror("Error", f"An error occurred: {e}")

# Create main window
root = tk.Tk()
root.title("File Renamer")
root.geometry("400x150")
root.resizable(False, False)  # Fixed window size

# Labels
tk.Label(root, text="📁 Old Filename:", font=("Arial", 10)).grid(row=0, column=0, padx=10, pady=5, sticky="w")
tk.Label(root, text="📝 New Filename:", font=("Arial", 10)).grid(row=1, column=0, padx=10, pady=5, sticky="w")

# Entry fields
old_filename_entry = tk.Entry(root, width=40)
old_filename_entry.grid(row=0, column=1, padx=10, pady=5)

new_filename_entry = tk.Entry(root, width=40)
new_filename_entry.grid(row=1, column=1, padx=10, pady=5)

# Styled Button
rename_button = tk.Button(root, text="✅ Rename File", bg="green", fg="white", font=("Arial", 10, "bold"), command=rename_file)
rename_button.grid(row=2, column=0, columnspan=2, pady=10)

# Run the GUI event loop
root.mainloop()
```

OUTPUT:

```
python rename_gui.py
```

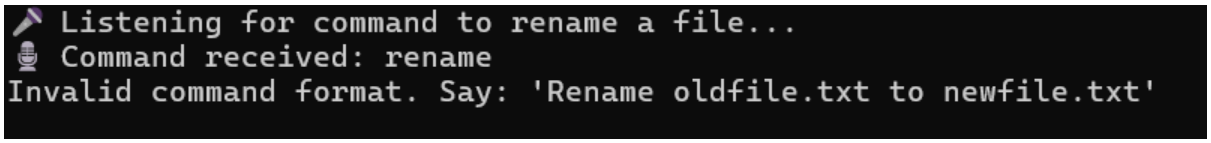


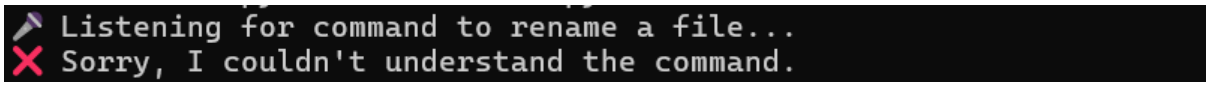
3. VOICE USER INTERFACE:

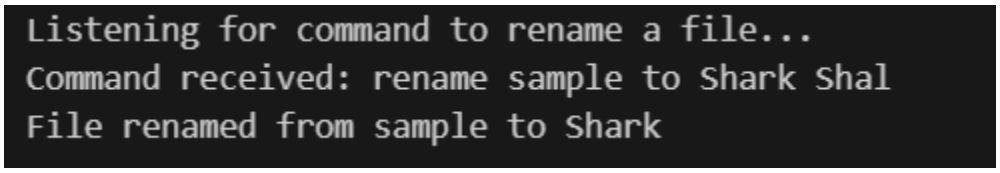
PYTHON CODE:

```
import speech_recognition as sr
import os


def rename_file_from_voice_command(command):
    try:
        words = command.lower().split(" ")
        if "rename" in words and "to" in words:
            rename_index = words.index("rename")
            to_index = words.index("to")

            # Extract old and new filenames
            old_name = words[rename_index + 1]
            new_name = words[to_index + 1]

            # Check if file exists
            if not os.path.exists(old_name):
                print(f"Error: File '{old_name}' not found.")
                return
```

```
            # Rename file
            os.rename(old_name, new_name)
            print(f"✅ File renamed from '{old_name}' to '{new_name}'")

        else:
            print("Invalid command format. Say: 'Rename oldfile.txt to newfile.txt'")

    except Exception as e:
        print(f"Error: {e}")

def listen_for_command():
    recognizer = sr.Recognizer()
    mic = sr.Microphone()

    print("🎤 Listening for command to rename a file...")
    with mic as source:
        recognizer.adjust_for_ambient_noise(source)
        audio = recognizer.listen(source)

    try:
        command = recognizer.recognize_google(audio) print(f"🎙️
        Command received: {command}")
        rename_file_from_voice_command(command)
    except sr.UnknownValueError:
        print("❌ Sorry, I couldn't understand the command.")
    except sr.RequestError as e:
        print(f"⚠️ Could not request results from Google Speech Recognition service; {e}")

if __name___== "__main__":
    listen_for_command()
```







4. USER SATISFACTION COMPARISON:

PYTHON CODE:

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


    # Get user input for each interface
    try:
        cli_satisfaction = int(input("CLI (1-5): "))
        gui_satisfaction = int(input("GUI (1-5): "))
        vui_satisfaction = int(input("VUI (1-5): "))


        # Ensure valid ratings
        if not (1 <= cli_satisfaction <= 5 and 1 <= gui_satisfaction <= 5 and 1 <= vui_satisfaction <= 5):
            print("Please enter ratings between 1 and 5 only.")
            return


        # Display the ratings
        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()
```