

EXPERIMENT 3-CLI, GUI AND VUI

◆ CLI (Command Line Interface)

CLI allows users to interact with the system using text commands typed in the terminal. It is fast, lightweight, and suitable for experienced users.

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:

```
Usage: python rename_file_cli.py <old_filename> <new_filename>
PS C:\Users\ADMIN\OneDrive\Desktop\UID> python rename_file_cli.py
final.txt old.txt
File renamed from final.txt to old.txt
```

HOW IT WORKS:

- User selects create / rename / exit from menu
- Program performs file operation using Python functions
- Output displayed in terminal

◆ GUI (Graphical User Interface)

GUI allows users to interact using graphical elements like buttons, text boxes, and windows. It is user-friendly and easy to use.

CODE:

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

def rename_file():
    old_name = old_entry.get()
    new_name = new_entry.get()
    try:
        os.rename(old_name, new_name)
```

```
    messagebox.showinfo("Success", f"Renamed {old_name} to  
{new_name}")
```

```
except FileNotFoundError:
```

```
    messagebox.showerror("Error", "File not found")
```

```
root = tk.Tk()
```

```
root.title("File Renamer")
```

```
tk.Label(root, text="Old Filename").grid(row=0, column=0)
```

```
tk.Label(root, text="New Filename").grid(row=1, column=0)
```

```
old_entry = tk.Entry(root)
```

```
new_entry = tk.Entry(root)
```

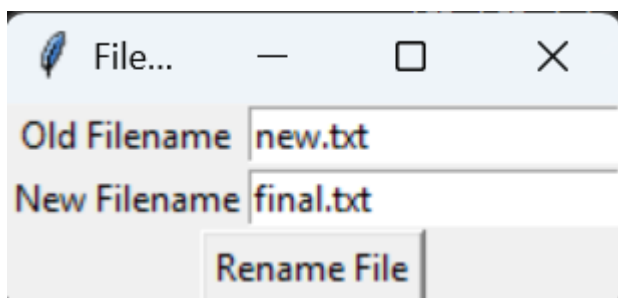
```
old_entry.grid(row=0, column=1)
```

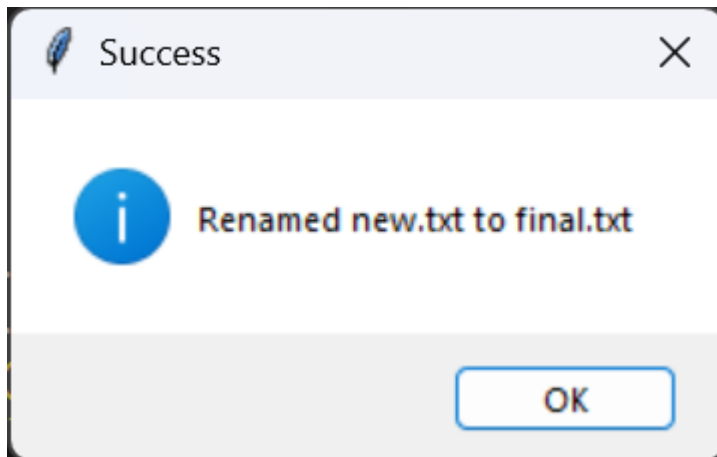
```
new_entry.grid(row=1, column=1)
```

```
tk.Button(root, text="Rename File", command=rename_file).grid(row=2,  
columnspan=2)
```

```
root.mainloop()
```

OUTPUT:





HOW IT WORKS:

- User enters file name in text box
- Click buttons (Create, Rename, Delete)
- Files shown in listbox
- Status bar shows result

◆ VUI (Voice User Interface)

VUI allows users to interact with the system using voice commands. It improves accessibility and provides hands-free operation.

CODE:

```
import speech_recognition as sr
import os
import sounddevice as sd
from scipy.io.wavfile import write

samplerate = 44100
```

```
def record(seconds=4):  
    print("Speak now...")  
    audio = sd.rec(int(seconds * samplerate), samplerate=samplerate,  
channels=1, dtype='int16')  
    sd.wait()  
    write("temp.wav", samplerate, audio)
```

```
def listen(prompt):  
    print(prompt)  
    record()
```

```
r = sr.Recognizer()  
with sr.AudioFile("temp.wav") as source:  
    audio_data = r.record(source)
```

```
try:  
    text = r.recognize_google(audio_data)  
    print("You said:", text)  
    return text.lower()  
except:  
    print("Could not understand. Try again.")  
    return None
```

```
def rename_file():  
    print("Welcome to the Voice-Controlled File Renamer!")
```

```
old_name = listen("Say the name of the file you want to rename  
(without .txt)")
```

```
if not old_name:
```

```
    return
```

```
new_name = listen("Say the new name for the file (without .txt)")
```

```
if not new_name:
```

```
    return
```

```
old_file = old_name + ".txt"
```

```
new_file = new_name + ".txt"
```

```
if not os.path.exists(old_file):
```

```
    print(f"Error: '{old_file}' not found.")
```

```
    return
```

```
os.rename(old_file, new_file)
```

```
print(f"\033[92m✅ File successfully renamed from '{old_file}' to  
'{new_file}'\033[0m")
```

```
rename_file()
```

OUTPUT:

```
Welcome to the Voice-Controlled File Renamer!  
Say the name of the file you want to rename (without .txt)  
Speak now...  
You said: final  
Say the new name for the file (without .txt)  
Speak now...  
You said: voice  
✅ File successfully renamed from 'final.txt' to 'voice.txt'
```

HOW IT WORKS:

- System listens to voice command
- User says create or rename
- Program performs operation
- System speaks result