**Iteration 3**

import tkinter as tk

import hashlib

import json

# File to store user data

user\_data\_file = "user\_data.json"

def hash\_password(password):

    # Use a strong hashing algorithm like bcrypt or Argon2

    # Here, we'll use a simple hashing function for demonstration purposes.

    # In a real-world application, use a more secure hashing library.

    salt = "your\_salt\_here"  # Replace with a strong, random salt

    hashed\_password = hashlib.sha256((password + salt).encode()).hexdigest()

    return hashed\_password

# Load existing user data or create a new file

try:

    with open(user\_data\_file, 'r') as f:

        user\_data = json.load(f)

except FileNotFoundError:

    user\_data = {"admin": {"password\_hash": hash\_password("admin\_password")}}

def create\_account():

    username = username\_entry.get()

    password = password\_entry.get()

    hashed\_password = hash\_password(password)

    user\_data[username] = {"password\_hash": hashed\_password}

    with open(user\_data\_file, 'w') as f:

        json.dump(user\_data, f)

    message\_label.config(text="Account created successfully!")

def login():

    username = username\_entry.get()

    password = password\_entry.get()

    hashed\_password = hash\_password(password)

    if username in user\_data and user\_data[username]["password\_hash"] == hashed\_password:

        main\_window.destroy()

        user\_window = tk.Tk()

        user\_window.title("User Dashboard")

        logout\_button = tk.Button(user\_window, text="Logout", command=user\_window.destroy)

        delete\_account\_button = tk.Button(user\_window, text="Delete Account", command=lambda: delete\_account(username))

        logout\_button.pack()

        delete\_account\_button.pack()

        user\_window.mainloop()

    else:

        message\_label.config(text="Invalid username or password.")

def delete\_account(username):

    del user\_data[username]

    with open(user\_data\_file, 'w') as f:

        json.dump(user\_data, f)

    message\_label.config(text="Account deleted successfully.")

# Create the main window

main\_window = tk.Tk()

main\_window.title("Login/Signup")

# Create the UI elements

username\_label = tk.Label(main\_window, text="Username:")

username\_entry = tk.Entry(main\_window)

password\_label = tk.Label(main\_window, text="Password:")

password\_entry = tk.Entry(main\_window, show="\*")

create\_account\_button = tk.Button(main\_window, text="Create Account", command=create\_account)

login\_button = tk.Button(main\_window, text="Login", command=login)

message\_label = tk.Label(main\_window, text="")

# Arrange the elements on the window

username\_label.pack()

username\_entry.pack()

password\_label.pack()

password\_entry.pack()

create\_account\_button.pack()

login\_button.pack()

message\_label.pack()

main\_window.mainloop()