

INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR

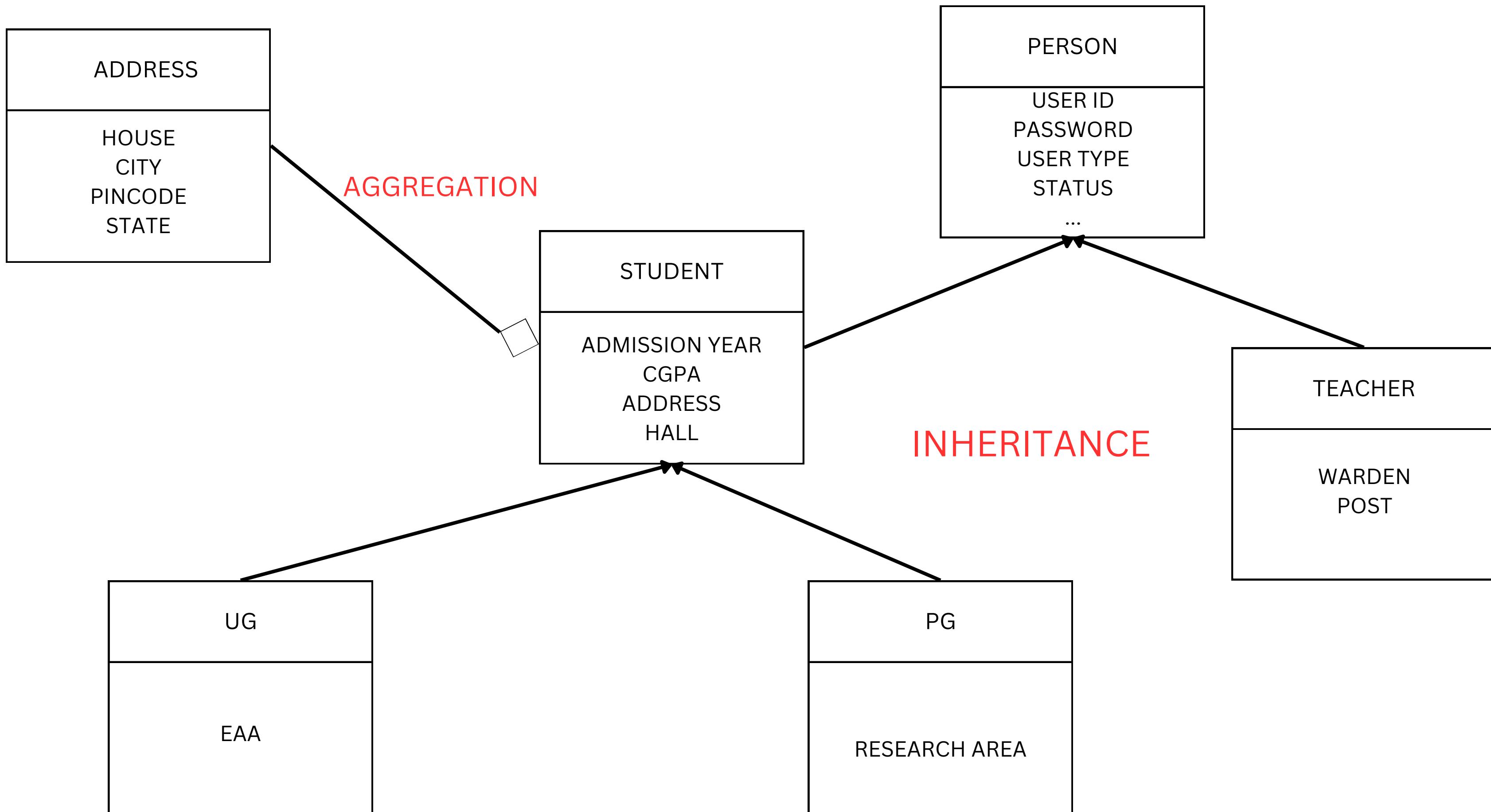
COMPTER SCIENCE DEPARTMENT

TITLE: SOFTWARE ENGINEERING LAB, ASSIGNMENT II DOCUMENTATION

NAME: HEMANT

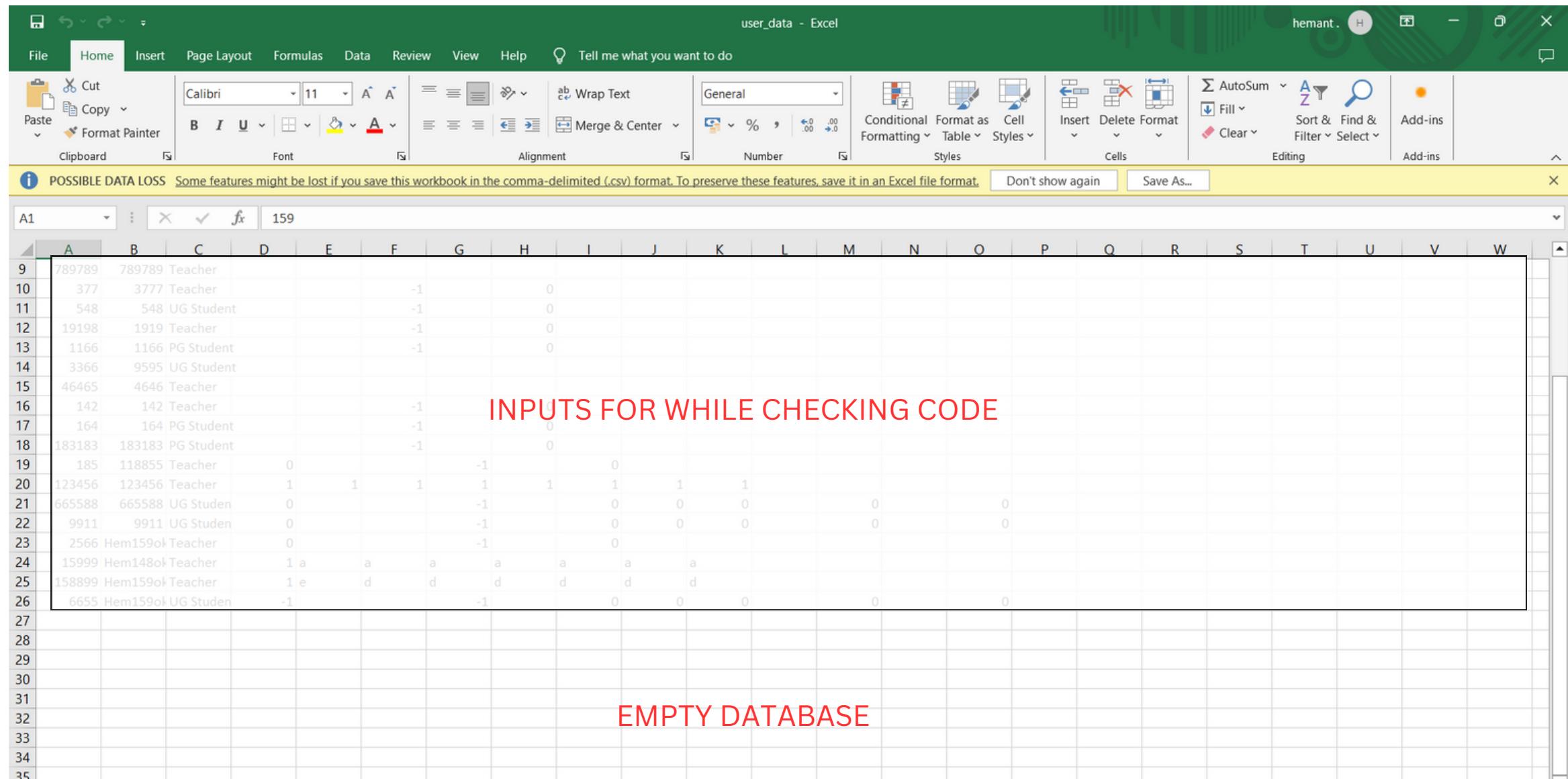
ROLLNO: 22CS30029

CLASSES STRUCTURE AND RELATION



IMPLEMENTATION

DATABASE BEFORE IMPLEMENTATION:



The screenshot shows an Excel spreadsheet titled "user_data - Excel". The table contains data from rows 9 to 26. The columns are labeled A through W. The data includes student numbers, names, and roles (Teacher or UG Student). Some entries have numerical values like -1 or 0, while others are text labels. A yellow bar at the top of the table area displays a warning about possible data loss if saved as CSV.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
9	789789	789789	Teacher																			
10	377	3777	Teacher		-1		0															
11	548	548	UG Student		-1		0															
12	19198	1919	Teacher		-1		0															
13	1166	1166	PG Student		-1		0															
14	3366	9595	UG Student																			
15	46465	4646	Teacher																			
16	142	142	Teacher		-1																	
17	164	164	PG Student		-1		0															
18	183183	183183	PG Student		-1		0															
19	185	118855	Teacher	0		-1		0														
20	123456	123456	Teacher	1	1	1	1	1	1	1	1											
21	665588	665588	UG Studen	0		-1		0	0	0		0										
22	9911	9911	UG Studen	0		-1		0	0	0		0										
23	2566	Hem159ok	Teacher	0		-1		0														
24	15999	Hem148ok	Teacher	1	a	a	a	a	a	a	a											
25	158899	Hem159ok	Teacher	1	e	d	d	d	d	d	d											
26	6655	Hem159ok	UG Studen	-1		-1		0	0	0		0										

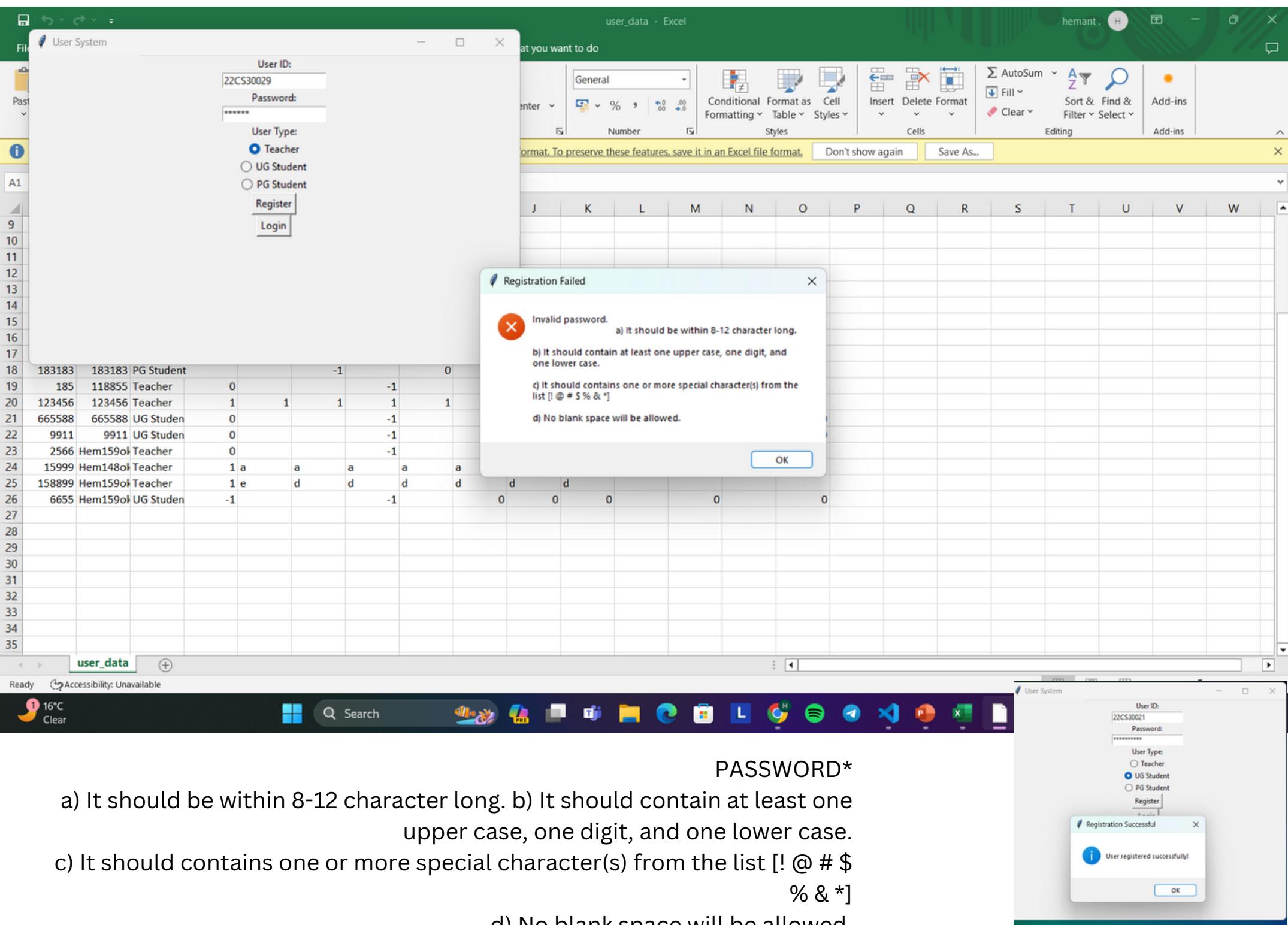
INPUTS FOR WHILE CHECKING CODE

EMPTY DATABASE

All the implementation of software is been carried by storing the user data in permanent memory using file handling in python(csv files). Before implementing the software, database is empty(except for those entries which were put in during testing).

USER REGISTRATION/ LOG IN WINDOW:

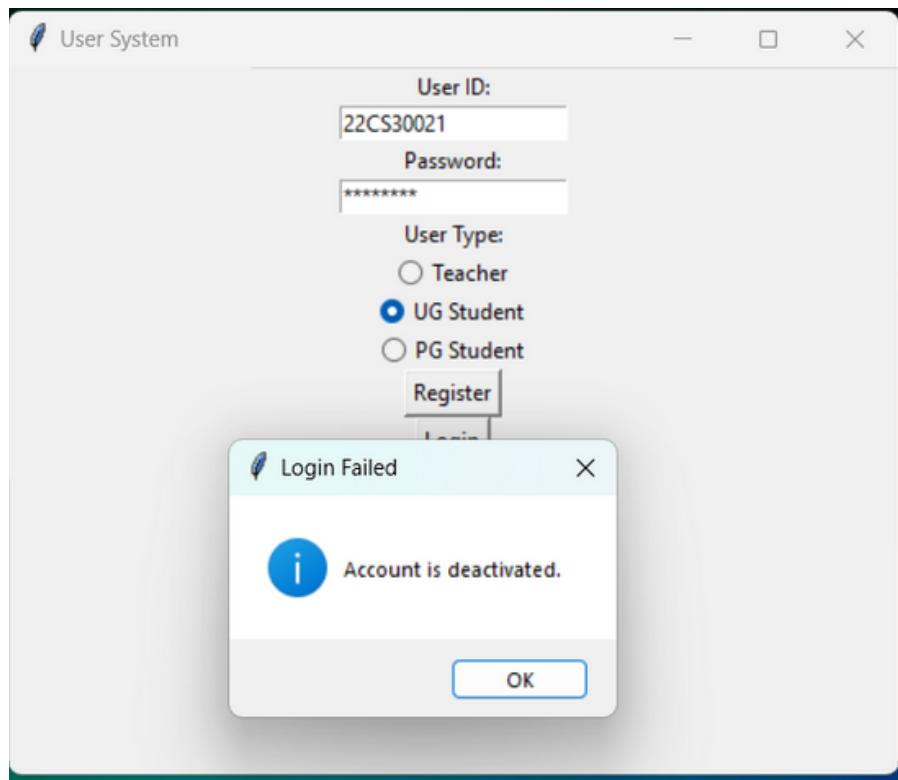
As shown in the snapshot of the window, right after running the program, window with Registration and login options shows for respective cases: Registration- for new users; Login- for already existing user



Show window is capable of following functions:

1. Showing Registration option for new user enrolments and login option for existing user, depending upon user inputs(UserID, Password(with limitations and type of user registration/login)).
2. It shows instructions for password*(only for registrations) and do not allow registration until user sets a string password.
3. If user is not registered and tried to login(or registered user tried to register again), it shows appropriate message.
4. **AUTHENTICATION:** If a registered user tries to login but fails to input correct password thrice, it leads to deactivation of account,(setting status attribute of account to -1 for checking if user is deactivated, in future).

AUTHENTICATION:



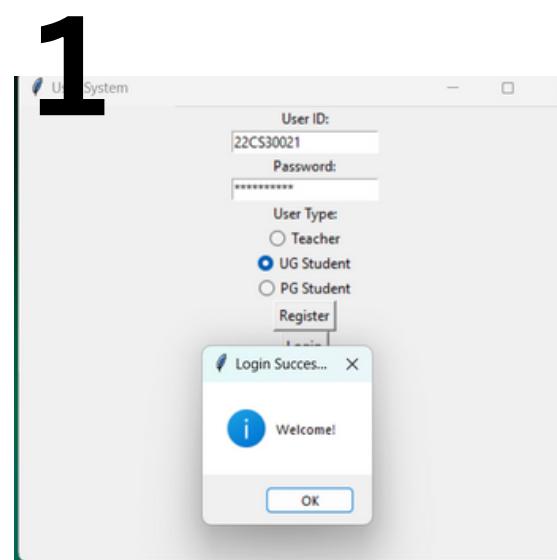
Developed Software, deactivates the account of user in permanently(data is not deleted but user cannot access anymore), authorized person should contact in order to retrieve.

2

The screenshot shows a "UG Student Profile Creation" form. It includes fields for Name, DOB (18-01-2003), Gender (Male), Department (CS), Phone (1234567890), Year of Admission (2022), CGPA (10), Hall (MMM), Address (South Delhi, Delhi), and EAA (weightlifting). There are "Save" and "Deregister" buttons at the bottom.

4

The screenshot shows a "User System" window with fields for "User ID" (22CS30021) and "Password" (*****). Under "User Type", the "UG Student" option is selected. A modal dialog box titled "Profile Update" displays the message "UG student profile updated successfully!" with an "OK" button.



3

The screenshot shows a "UG Student Profile Creation" form with the following data:
Name: Hemant
DOB: 18-01-2003
Gender: Male
Department: CS
Phone: 1234567890
Year of Admission: 2022
CGPA: 10
Hall: MMM
Address: South Delhi, Delhi
EAA: weightlifting

5

	29	22CS3002: Hemant	1590	UG Studen	1	Hemant	#####	Male	CS	1.23E+09	0	0	2022	10	MMM	South Deli	weightlifting
30																	
31																	
32																	
33																	
34																	
35																	
36																	
37																	
38																	
39																	

User details updated in data base!

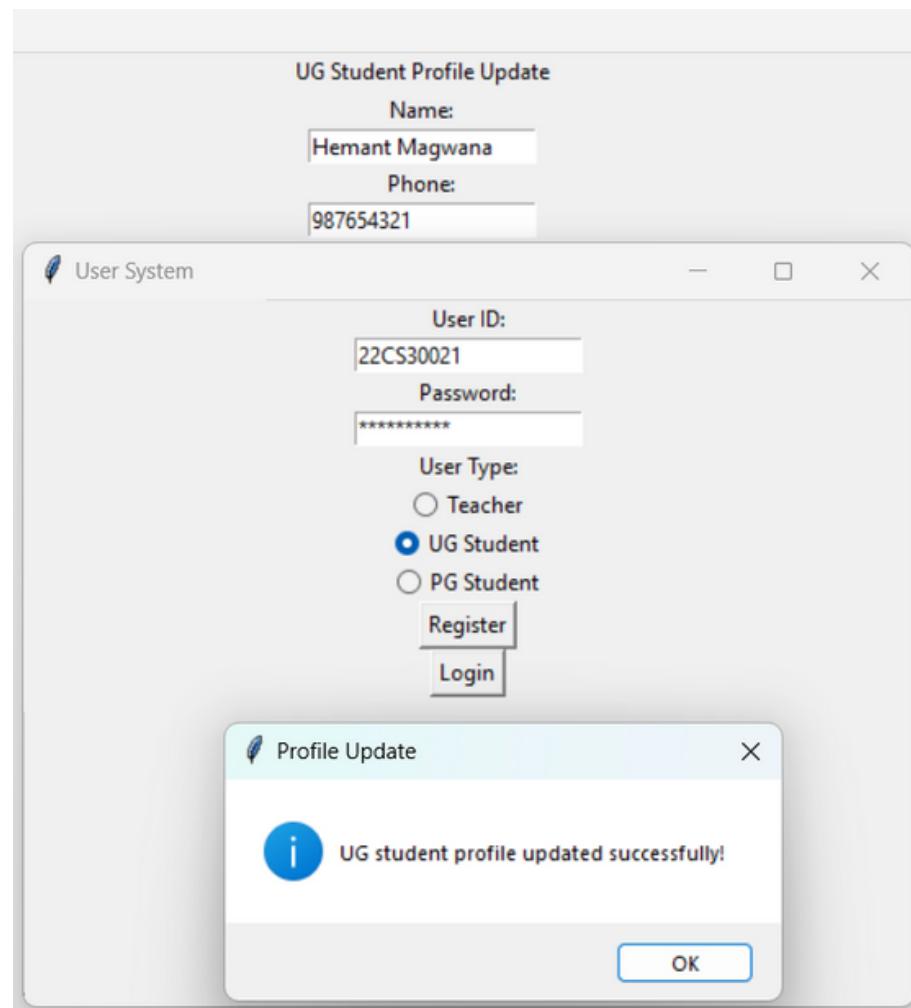
LOGIN

In the developed system, two different windows opens up customized base upon type of user log-in and user profile

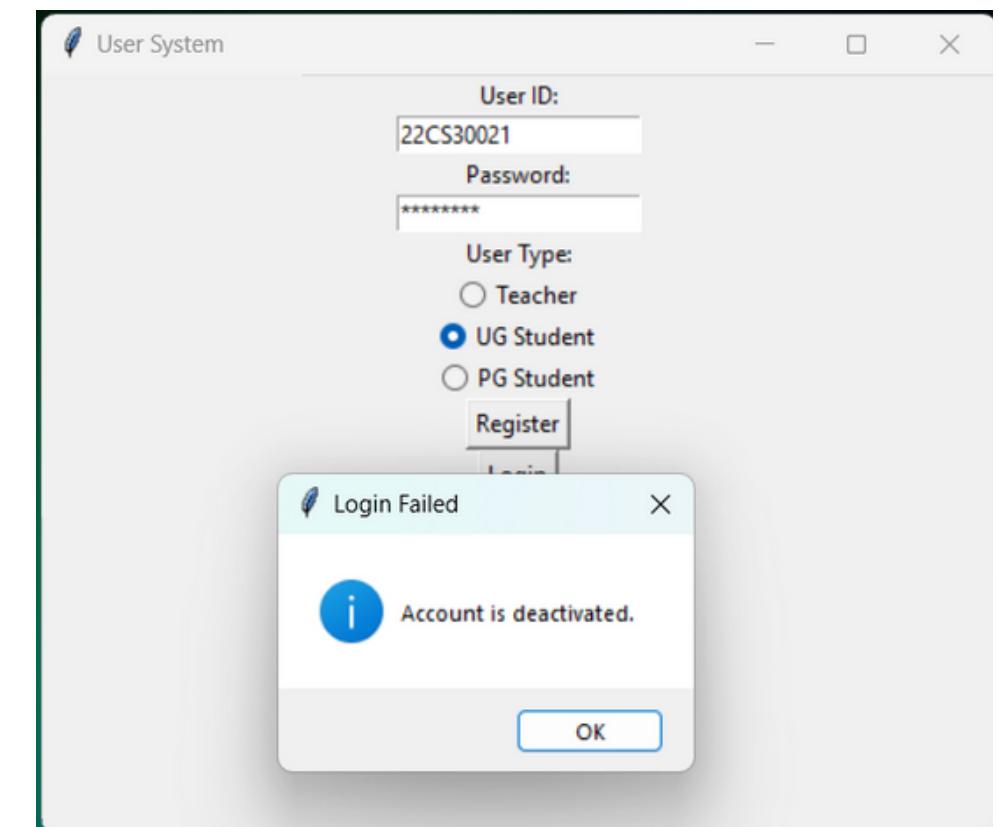
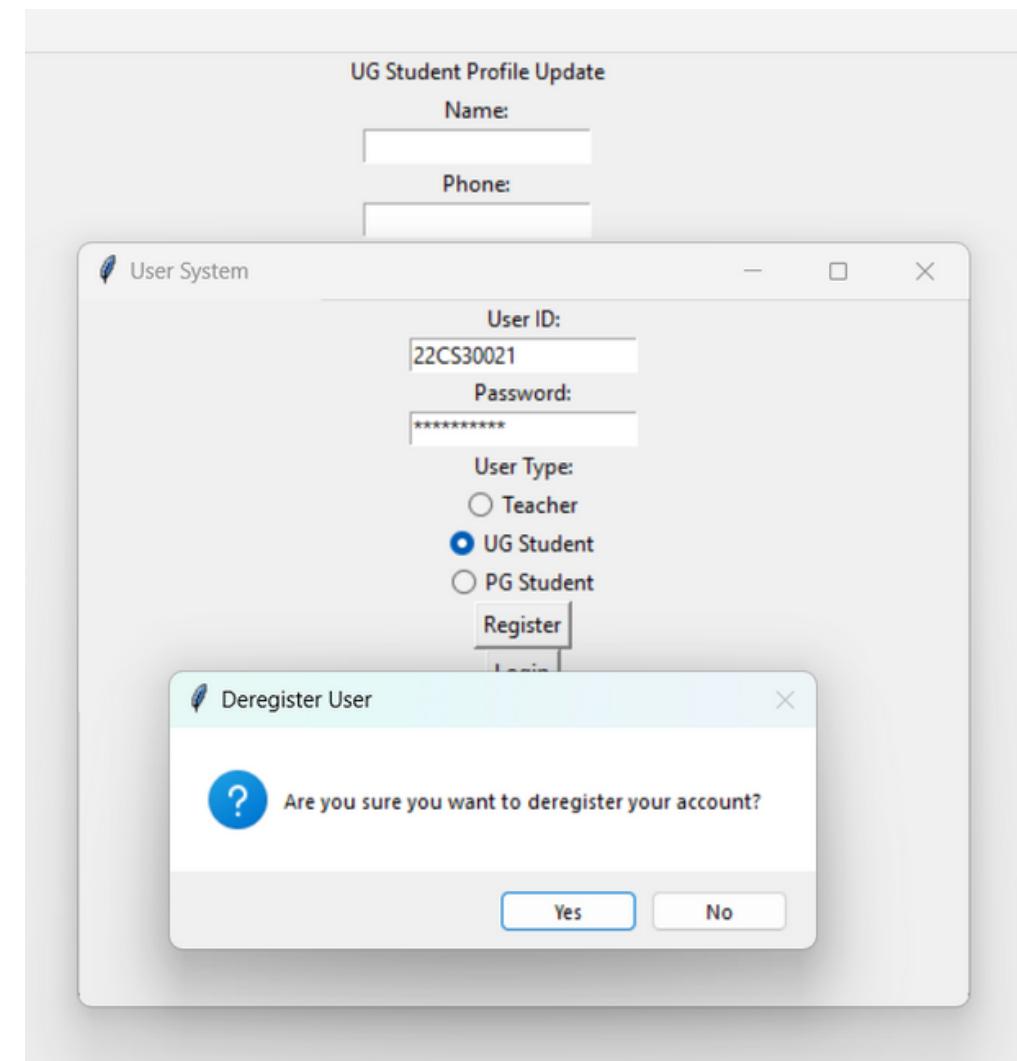
In the shown case, user(here UG) is logging in for the first time after registering and system is asking to set the profile, mandatorily.

In the backed, users' status attribute is playing the vital role(status =0 initialized during registration, and set to 1 right after setting the profile).

LOGIN



DEACTIVATION



Now for the same user, a different window is getting opened up since user has set the profile, now updating option should be displayed. Note that not all fields are available for updating, that is the condition set intentionally.

29 22CS30021 Hemant M UG Studen
30 fting
31
32
33 Fields updated, compare with previous page.

1. User should be logged in for deregistration.
2. Confirmation message to confirm Deregistration.
3. Deregistration leads to permanent deletion of user data.

NOTABLE POINTS:

1. Fields playing a role in working or platform rather than just storing the data:
user_id, user_password, user_type, user_status(all of which are part of a parent of all child classes i.e. Person).
2. system developed is inspired by existing software and is been developed in a meaningful way. Ex: Deregistration option only after successful login, etc.
3. All the necessary, as was mentioned in the assignment document are fulfilled and snapshots added.
4. This particular software stores/ modifies data gathered from the user in the backend server(here local computer) using CSV file handling using Python.
5. All of the GUI-related code is done using the Tkinter Tk GUI toolkit.
6. completion of assignment does not include and plagiarism or copy from internet.
However, learnings and help from internet resources played an important role.

THANK YOU!