

# **COMP S350F**

## **Testing Plan Document**

### **Group 29**

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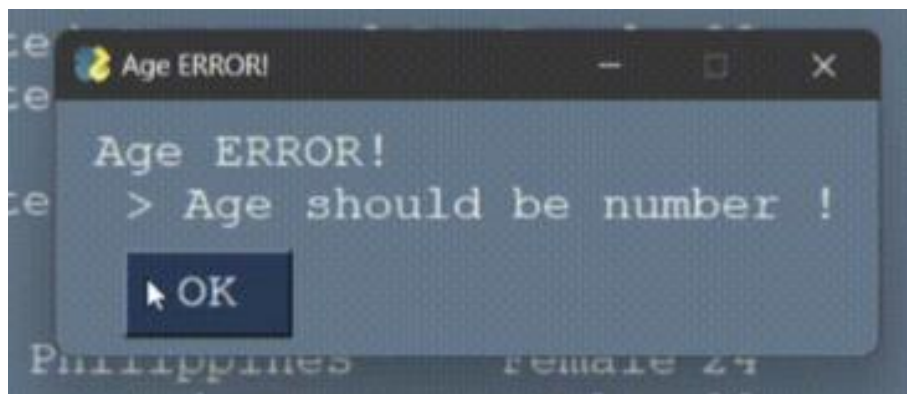
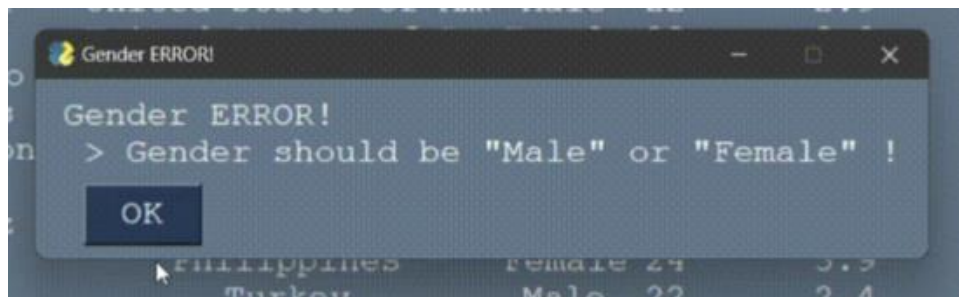
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## Validation Testing

Both login and record systems have data validation done by restricting each text box to be of a specific data type. For example, a GPA score should only be in floating point numbers of a specified length, genders need to be entered as “Male” or “Female” specifically and ages can only be an integer value amongst other things. Formats, length, range of data, and presence of fields are also checked. Here is an example of checking errors in the field of “Gender” and “Age.”



## Client Requirement

The client requirements contain four main functions: Login Function, Sorting Function, Searching Function and Editing Function. Those functions are executed properly.

### 1. Login Function

This function demonstrates the ability for users to log in and provide access privileges to the proper role. For example, a student cannot edit a record, but a teacher/IT can.



	Implementation	Expected output
Login system	Empty input and click Login button	Fail, output incorrect Account/Password and request user to enter the correct credentials.
	Using incorrect account and password to login	Fail, output incorrect Account/Password and request user to enter the correct credentials.
	Using different accounts to login to other pages/roles Student -> Teacher Teacher -> Student	Fail, output incorrect authentication and request user to enter the correct credentials.
	input correct account and password then login	Success, go to the Record page

	Click the exit button	Turn off the system
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## 2. Sorting Function

All users are allowed to sort the records. The example is demonstrated as a name sorted in ascending order. This is done by clicking the category on the white bar on top and will sort ascending order first, then descending order if clicked again.

Teacher Version

Row	id	name	nationality	gender	age	english.grade	math.grade	sciences.g
0	s1311586	Aaqil el-Hashemi	India	Male	21	3.4	3.0	3.6
1	s1311691	Aaron Knott	United States of Am	Male	23	3.2	3.6	3.7
2	s1311528	Abdul Jabbaar el-Ab	Egypt	Male	20	1.5	3.5	3.2
3	s1311754	Abigail Gallegos	Brazil	Female	24	3.4	3.0	2.1
4	s1311835	Abigail Orgeron	United States of Am	Female	23	3.2	3.0	3.8
5	s1311634	Addie Villavicencio	United States of Am	Female	20	4.0	3.5	3.2
6	s1311715	Adolf Malik	Korea (Republic of)	Male	21	3.1	3.5	3.6
7	s1311640	Adrian Miguel-Gomez	Colombia	Male	22	3.7	3.3	2.2
8	s1311120	Afnaan el-Mohammed	India	Female	22	1.7	3.5	3.9
9	s1311384	Aimee Apelyan	United States of Am	Female	24	3.3	3.8	3.8

Search value:  Search clear

Logout

	Implementation	Expected output
Sorting Function	Click "name" column	Sort ascending order with "name"
	Click "name" column twice	Sort descending order with "name"
	Click data row	Nothing happens

## 3. Searching Function

All users are allowed to search for a specific data entry by typing in keywords or ids. For example, searching for the student sxxxxxxx or a certain nationality.

Teacher Version

Row	id	name	nationality	gender	age	english.grade	math.grade	sciences.g
0	s1311002	Kiana Lor	China	Female	22	3.5	3.7	3.1

Search value:  Lor Search clear

Logout

	Implementation	Expected output
Searching Function	Type "Lor"	Show the student which include "Lor"
	Type character e.g. "&","\$","^"	Invalid input, error window pops out
	Empty Input	Nothing happens

#### 4. Editing Function

Specified users like Teachers and IT Technician can update a data entry by writing in the text box provided. The data in the field then overwrites the original data and the data entry is updated and added in the database. The text boxes' order corresponds to the data's layout displayed along the white bar up top. An example of "Kiana Tet" is shown for updating the nationality to "Test".

id	name	nationality	gender	age	english.gra	math.gra	sciences.gra	language.gra	portfolio.rat	coverletter.rat	refletter.rat
s131100	Kiana Lor	China	Female	22	3.5	3.7	3.1	1.0	4	4.0	4

(Original Record)

IT Technician Version

Row	id	name	nationality	gender	age	english.grade	math.grade	sciences.grade
0	s131100	Kiana Tet	Test	Male	22	5.0	5.0	5.0
1	s131100	Joshua Lonaker	United States of Am	Male	22	2.9	3.2	3.6
2	s131100	Dakota Blanco	United States of Am	Female	22	3.9	3.8	3.2
3	s131100	Natasha Yarusso	United States of Am	Female	20	3.3	2.8	3.2
4	s131100	Brooke Cazares	Brazil	Female	21	3.7	2.6	3.4
5	s131101	Rochelle Johnson	United States of Am	Female	21	3.4	3.1	3.7
6	s131101	Joey Abreu	China	Male	22	3.7	3.9	3.6
7	s131101	Preston Suarez	Brazil	Male	22	3.8	3.7	3.6
8	s131101	Lee Dong	Philippines	Female	24	3.9	3.6	3.2
9	s131102	Maa'iz al-Dia	Turkey	Male	22	2.4	2.8	3.8

Search value:

(Modified Record)

id	name	nationality	gender	age	english.grade	math.grade	sciences.grade	language.grade	portfolio.rat	coverletter.rat	refletter.ra
s131100	Kiana Lor	China	Female	22	3.5	3.7	3.1	1.0	4	4.0	4

s1311002 Kiana Lor China Female

	Implementation	Expected output
Editing Function	Click the data in the table	Show that row data
	<u>Students</u> edit their personal information	Success, Update the change
	<u>Students</u> input symbol in their personal information	Fail, personal information can only be character or integer
	<u>Students</u> edit their academic records	Fail, Student cannot edit their academic records
	<u>Teacher</u> edits student's personal information	Fail, Teacher cannot edit student's personal information
	<u>Teacher</u> edits academic records	Success, Update the change
	<u>IT Technicians</u> student's personal information	Success, Update the change
	<u>IT Technicians</u> edits academic records	Success, Update the change
	<u>IT Technicians</u> edits ->Student ->Teacher account or password	Success, Update the change
	click logout button	go to the Login page

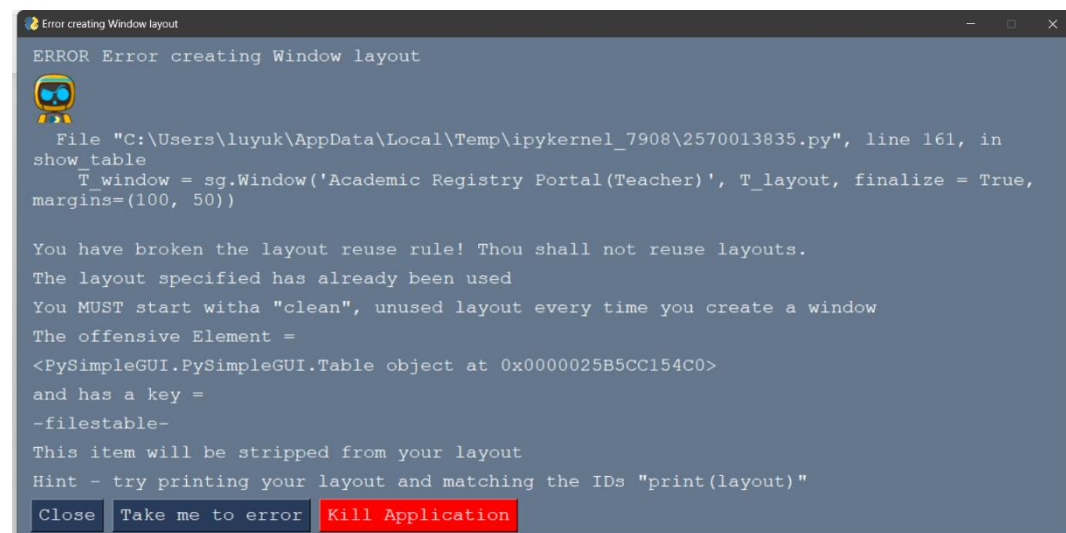
## Defect Testing

### Layout reuse rule bug

When a user logs out of a teacher or IT Technician account and logs back into the Teacher or IT Technician account again, it will crash the whole system.

We assumed it was caused by the presence of a loop in the GUI that keeps detecting the events, then not breaking the loop when logging out, and then breaking the layout reuse rule when logging in again.

According to this idea, changes should be made to the logout event. When the user clicks logout, it will break the loop first, and call the Login GUI. However, it was normal for the student account to log in after logging out, but the bug still existed in the teacher and IT technician.



```
ERROR Error creating Window layout

File "C:\Users\luyuk\AppData\Local\Temp\ipykernel_7908\2570013835.py", line 161, in
show_table
    T_window = sg.Window('Academic Registry Portal(Teacher)', T_layout, finalize = True,
                    margins=(100, 50))

You have broken the layout reuse rule! Thou shall not reuse layouts.
The layout specified has already been used
You MUST start with a "clean", unused layout every time you create a window
The offensive Element =
<PySimpleGUI.PySimpleGUI.Table object at 0x0000025B5CC154C0>
and has a key =
-filestable-
This item will be stripped from your layout
Hint - try printing your layout and matching the IDs "print(layout)"

[Close] [Take me to error] [Kill Application]
```

### Filtered record edit bug

After a filtered record is modified, the clear button is clicked and functioned to return data to an unfiltered record, the record will return to its original state.

We believe the occurrence of this bug is because the original data frame was complicated and filtered when we did the searching.