

Test Results

FOR

University

Department

Information

System

Group - 58

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Testing tasks

Black Box Tests

As discussed in the test suite, black box testing requires us to do identify & test for equivalence classes . We'll be doing the same here.

#1 : Login Testing

The software has only one actor – that is the Department Secretary .

Input : Password(String)

Class	Input	Expected Output	Actual Output
Incorrect Password	As in image 1	Error message	Password Error message displayed
Correct password(refer README)	As in image 2	Open Home tab	Home tab displayed

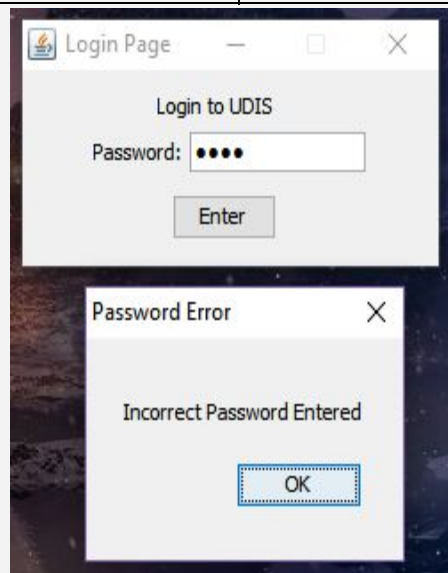


Image 1 : Incorrect login

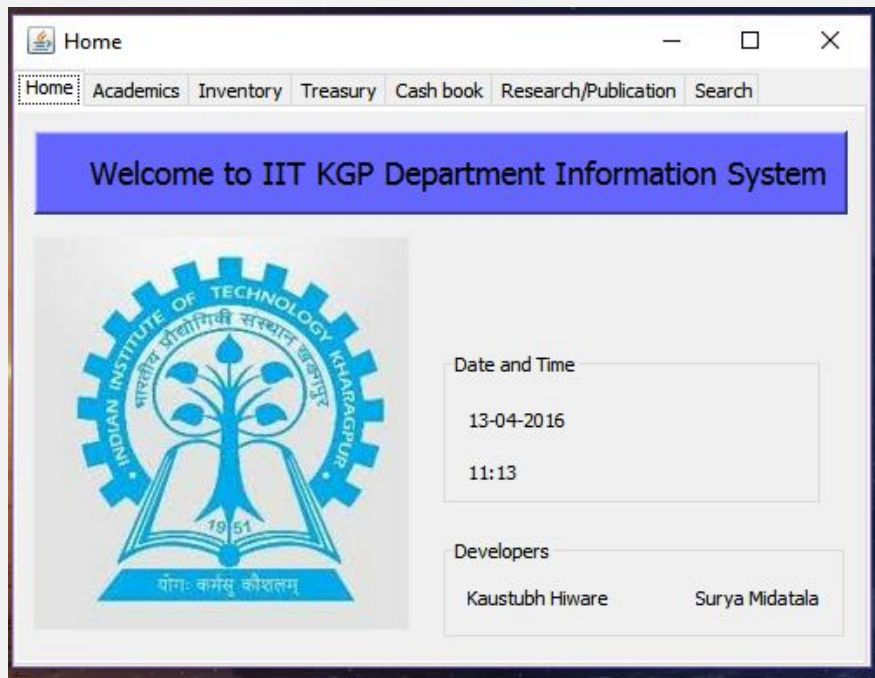


Image 2: Successful login

#2 : Add course

Refer to Image 3 for display

Input : Name , Professor (String) , Credit(int 1-10)

Class	Input	Expected Output	Actual Output
One or more field left empty	None	Error message	Error message displaying missing field(Image 4)
Credit entered is invalid	String or unrealistic integer	Error message	Warning related to credit (Image 5)
Correct details	String in name , professor fields , Integer(<10) in credits	Success message	Course name displayed as saved (Image 6)

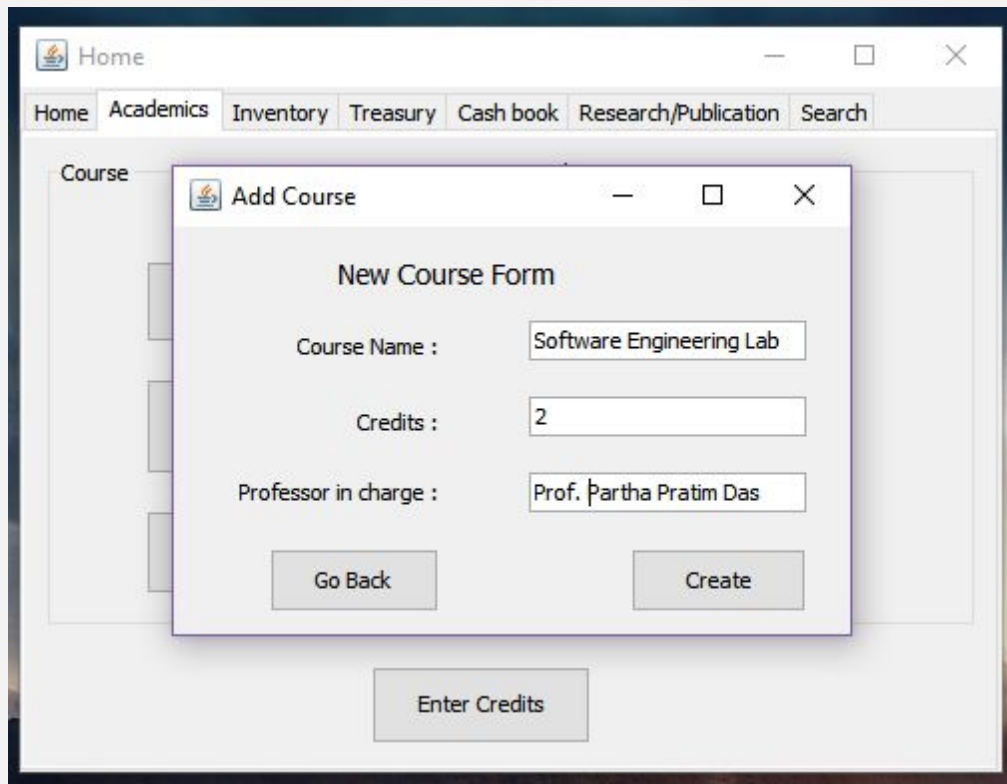


Image 3 : Add course GUI

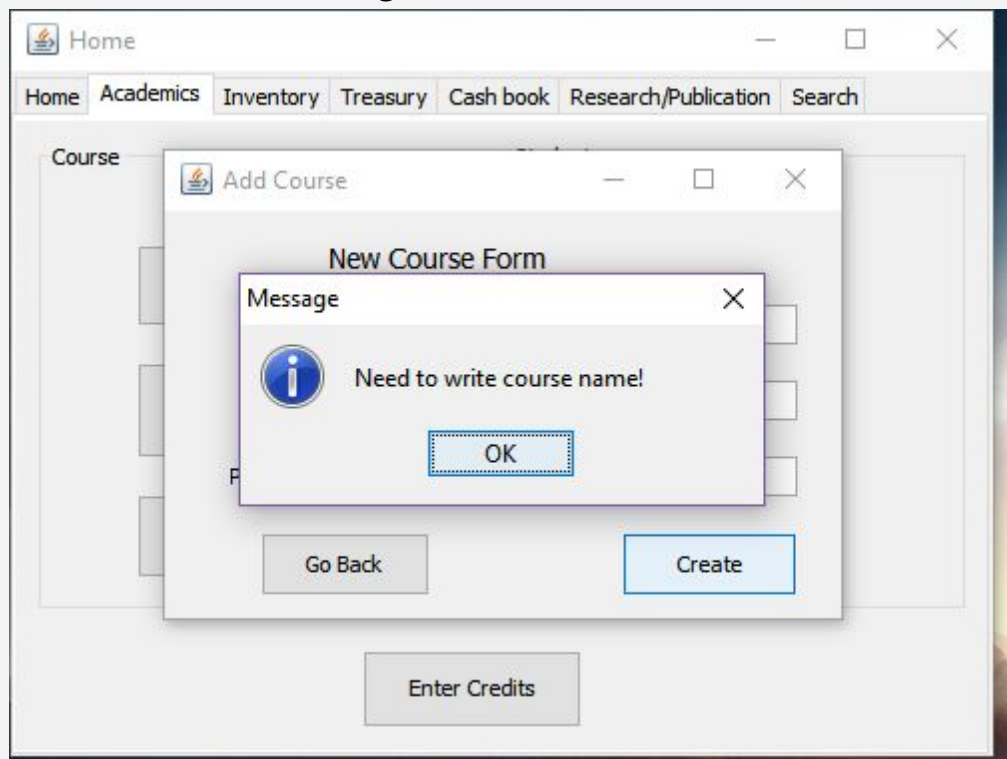


Image 4 : Empty credentials for course

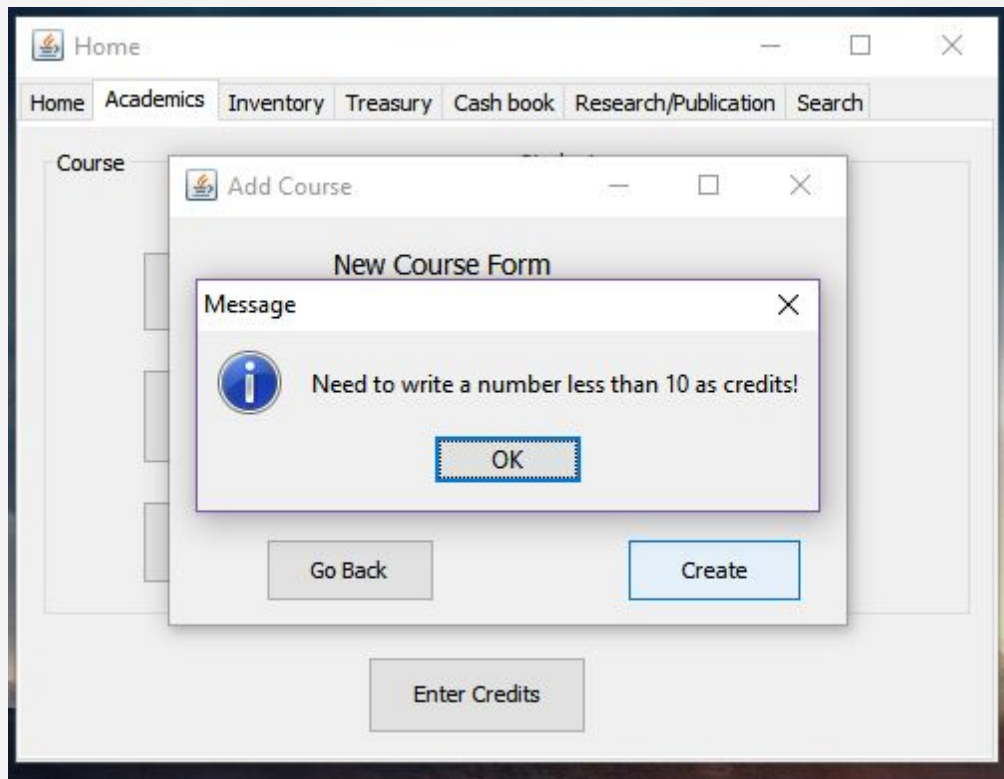


Image 5 : Incorrect credits

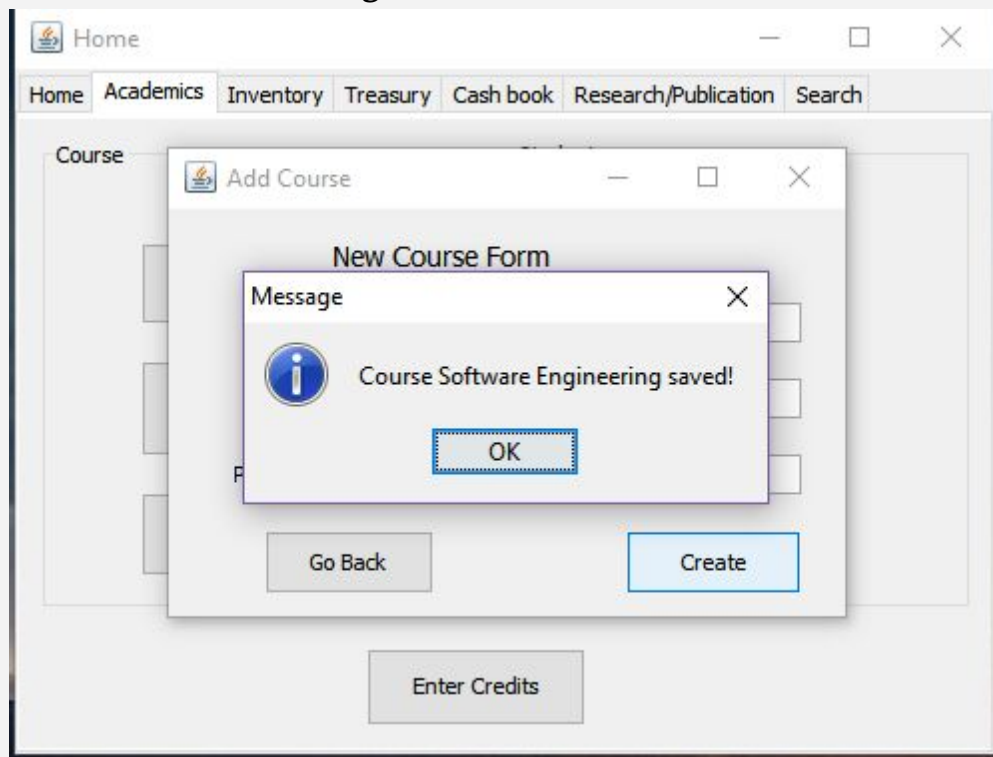


Image 6 : Course saved

#3 : Add student

Refer to image 7 for GUI

Input : Name , Address , Email(Strings),Phone(Number)

Class	Input	Expected Output	Actual Output
One or more field left empty	None	Error message	Error message displaying missing field(Image 8)
Phone number entered is invalid	String	Error message	Warning related to number (Image 9)
Correct details	String in name , address and email fields , Integer in phone	Success message	Student name displayed as saved (Image 10)

The screenshot shows a web application interface with a modal window titled "Enter Student Details". Inside the modal, there is a "New Student Form" with the following fields and values:

- Name : John
- Address : PAN loop , IIT KGP
- Phone number : 2323
- Email : john23@gmail.com
- Roll : 1

At the bottom of the form, there are two buttons: "Go Back" and "Create". The background of the application shows a navigation bar with tabs: Home, Academics, Inventory, Treasury, Cash book, Research/Publication, and Search.

Image 7 : Add student GUI

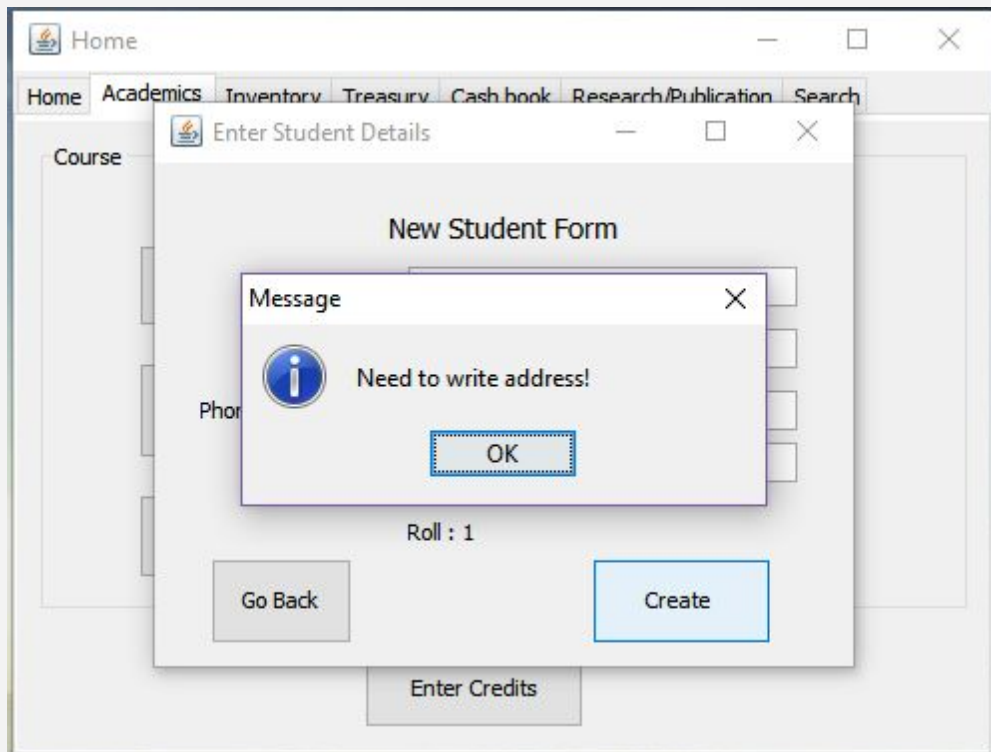


Image 8: Incorrect credentials

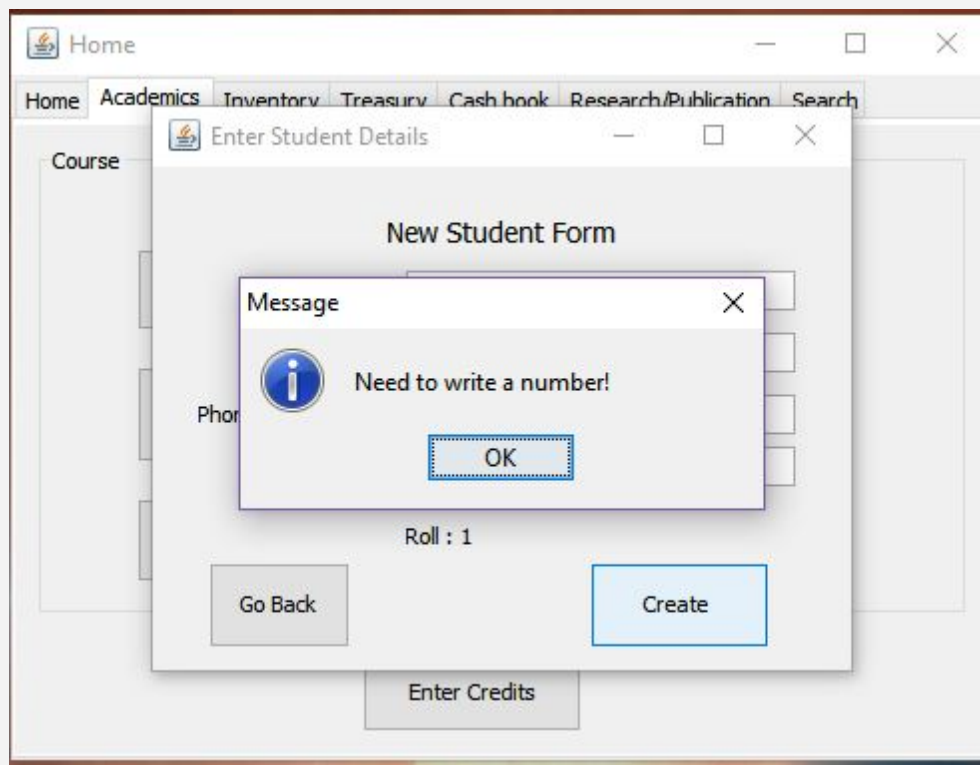


Image 9: Incorrect number

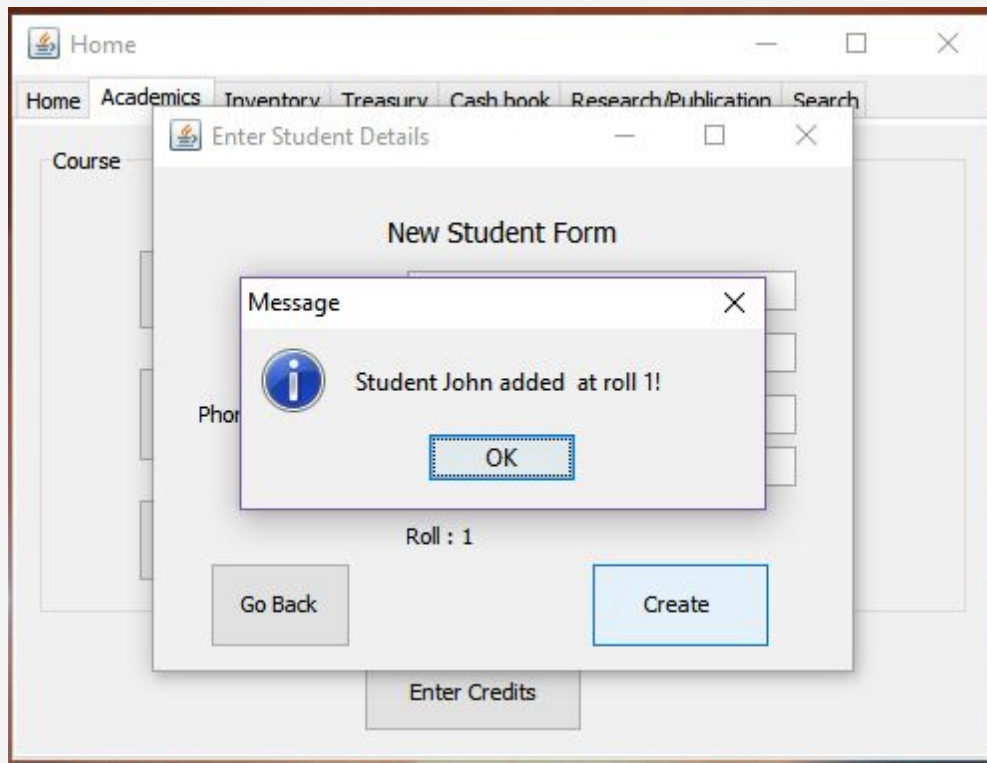


Image 10 : Student saved

#4 : Enroll student

First, a student is to be selected . The available courses are then displayed of which he may be enrolled to.

Refer to image 11 for GUI

Input : Mouse clicks

Class	Input	Expected Output	Actual Output
No subject selected to enroll	Enroll button is clicked	Error message	Error message displaying missing field(Image 12)
Subject selected to enroll	Enroll button is clicked	Update lists	Lists are updated (Image 13)

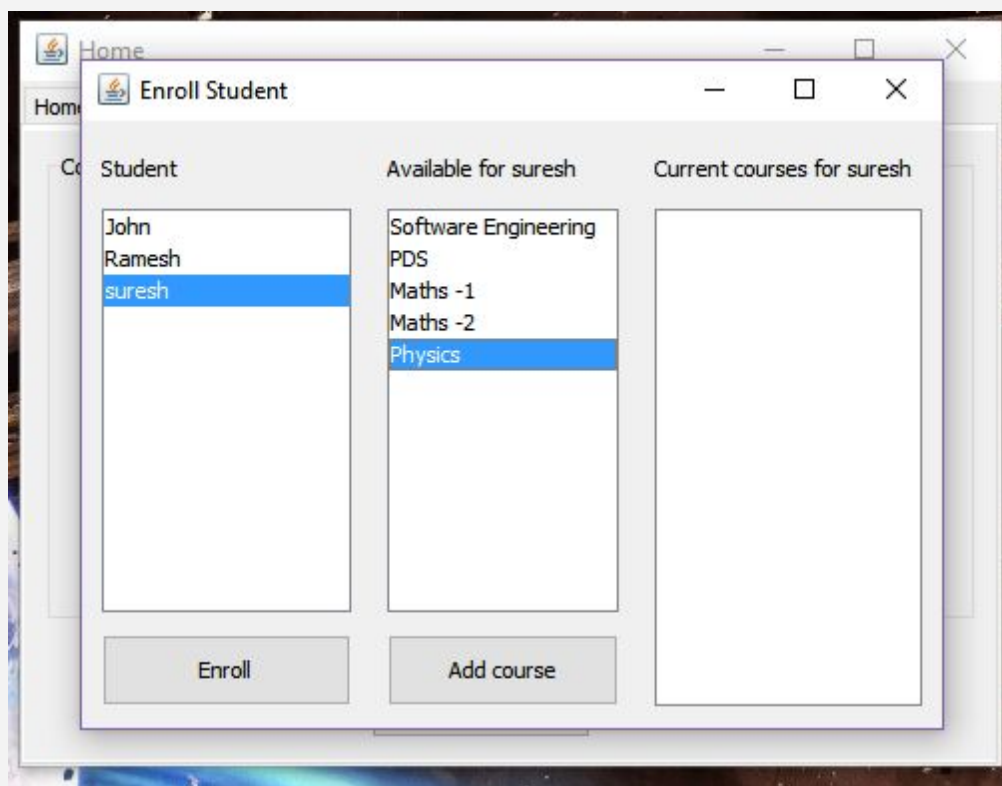


Image 11 : Enroll student options

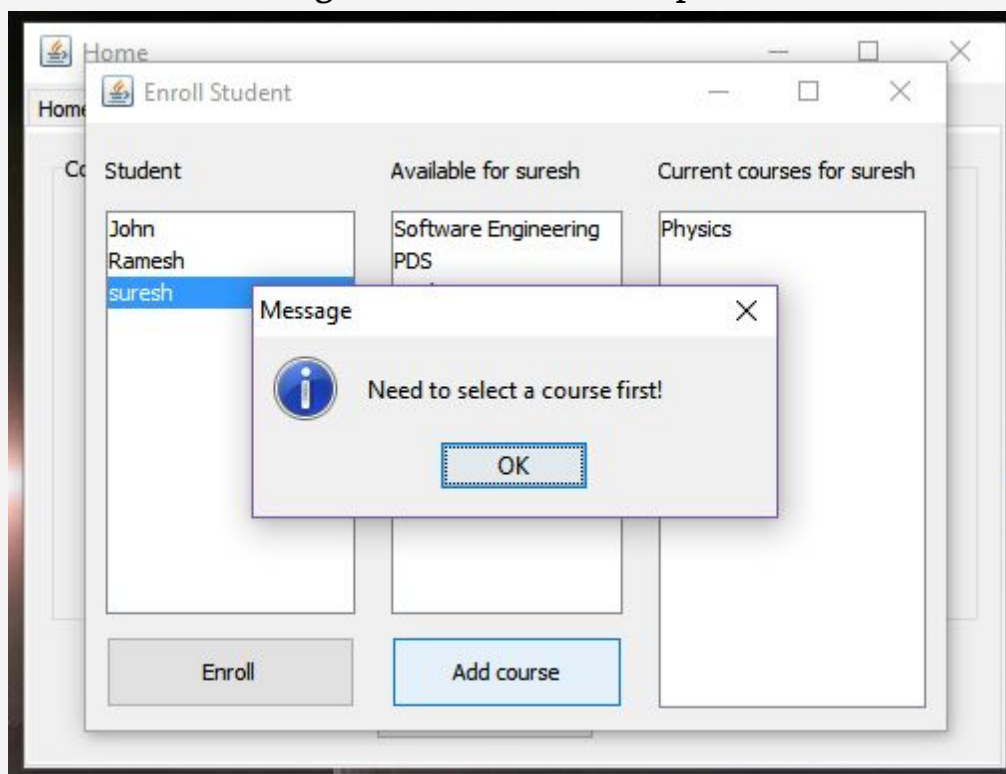


Image 12 : Enroll in no subject

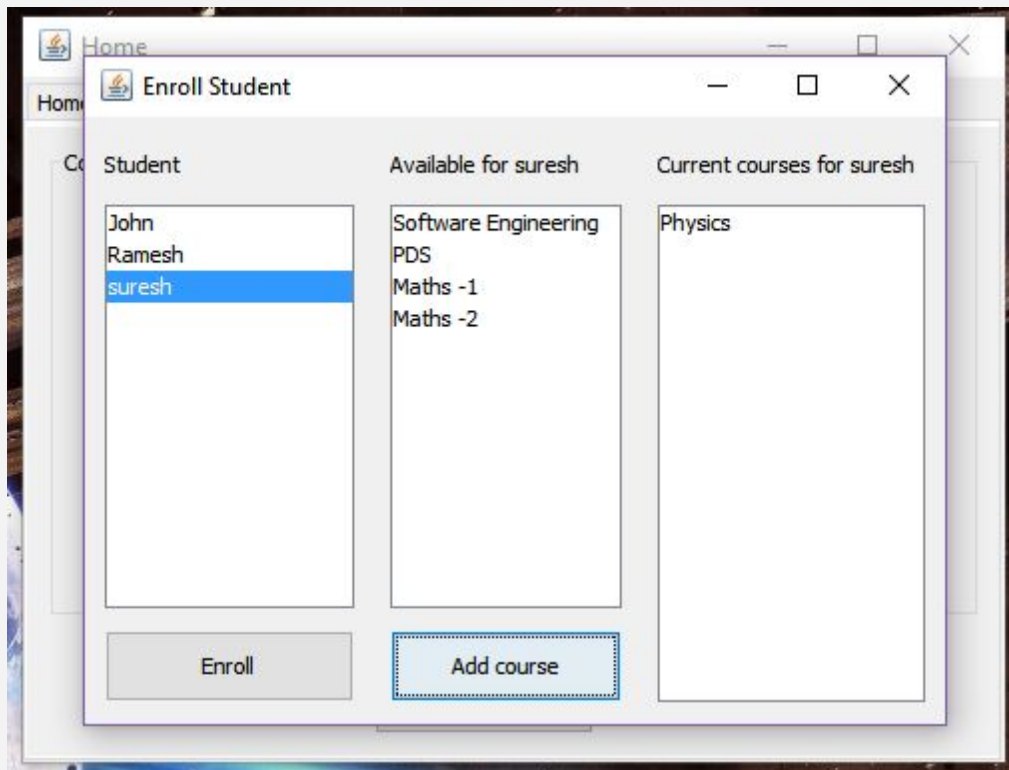


Image 13 : Enroll student success

#5 : Delete course

The user selects a course to be deleted .The software deletes the course ,if no student is enrolled in it currently.

Input : Mouse click

Class	Input	Expected Output	Actual Output
No course selected	Delete button pressed	Error message	Error message displaying warning (Image 14)
Course selected which has current students	Delete button pressed	Error message	Warning related to enrolled students (Image 15)
Course selected with no students	Delete button pressed	Success message	Student name displayed as saved (Image 16)

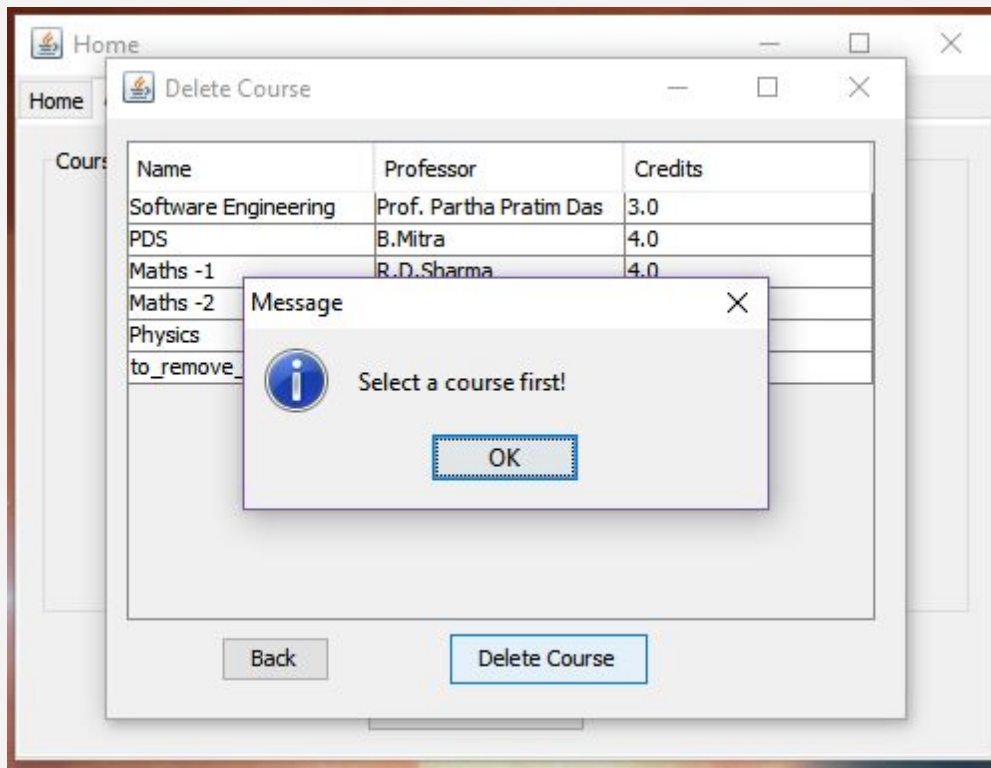


Image 14 : Deleting no course

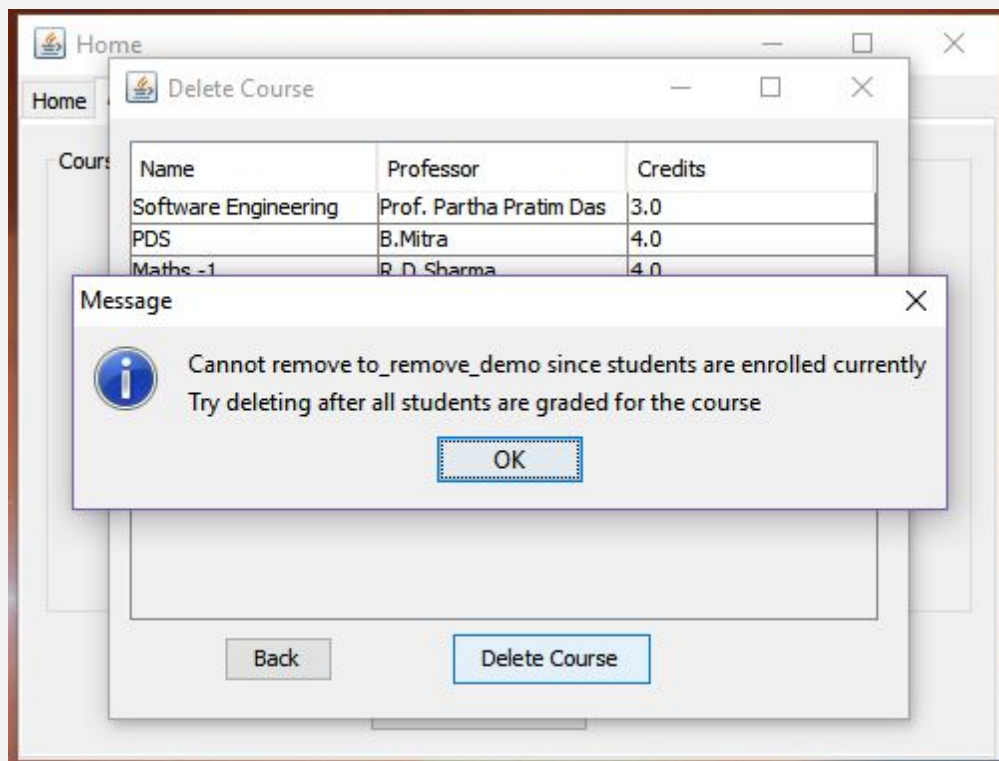


Image 15 : Deleting currently enrolled course

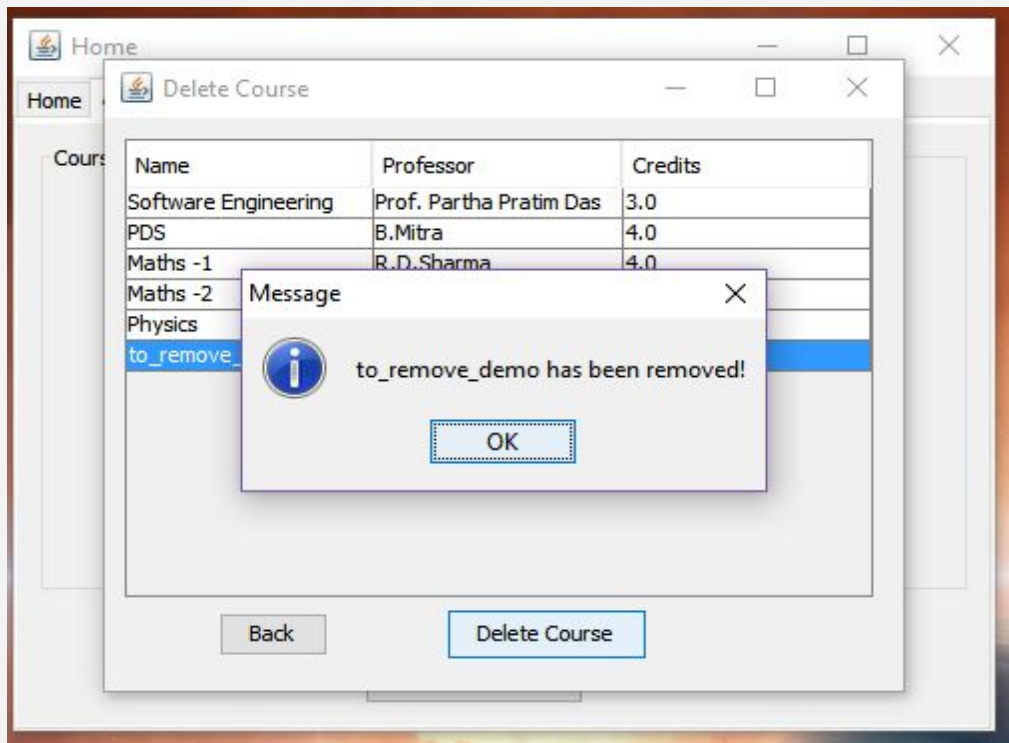


Image 16 : Successfully delete course

#6 : Evaluate / Enter grades

The user must first select a course , of which current students are displayed .Now , the student must be selected and the slider must be used to given the grade.Refer to image 17 for GUI.

Input : Mouse clicks

Class	Input	Expected Output	Actual Output
No course selected	Submit button pressed	Error message	Error message displaying warning (Image 18)
Course selected but student not selected	Submit button pressed	Error message	Error message displaying warning (Image 18)
Course selected and student selected	Delete button pressed	Grade in table updated	Grade against student name updated (Image 19) If all the current courses of the student are graded , SGPA and CGPA is displayed. (Image 20)

Enter Grades

Courses	Professor
Software Enginee...	Prof. Partha Prati...
PDS	B.Mitra
Maths -1	R.D.Sharma
Maths -2	R.K Sharma
Physics	N. Singh

Course : Physics

Name	Roll	Grade
John	1	-1
Ramesh	2	-1

Grade

0 1 2 3 4 5 6 7 8 9 10

Evaluate Submit

Image 17 : Enter grades GUI

Enter Grades

Courses	Professor
Software Enginee...	Prof. Partha Prati...
PDS	B.Mitra
Maths -1	R.D.Sharma
Maths -2	R.K Sharma
Physics	N. Singh

Course : Physics

Name	Roll	Grade
John	1	-1
suresh	3	-1

Message

Need to select a student first! Have you selected a course ?

OK

Grade

0 1 2 3 4 5 6 7 8 9 10

Evaluate Submit

Image 18 : Incorrect credentials for grading

Enter Grades

Courses	Professor
Software Enginee...	Prof. Partha Prati...
PDS	B.Mitra
Maths -1	R.D.Sharma
Maths -2	R.K Sharma
Physics	N. Singh

Course : Maths -2

Name	Roll	Grade
John	1	9

Grade

0 1 2 3 4 5 6 7 8 9 10

Submit

Evaluate

Image 19: Successfully graded student

Enter Grades

Courses	Professor
Software Enginee...	Prof. Partha Prati...
PDS	B.Mitra
Maths -1	R.D.Sharma
Maths -2	R.K Sharma
Physics	N. Singh

Course : Physics

Name	Roll	Grade
John	1	-1
Ramesh	2	-1

Grade

0 1 2 3 4 5 6 7 8 9 10

Submit

Evaluate

Message

SGPA and CGPA of Ramesh for sem 2 has been updated
 SGPA = 8.5
 CGPA = 8.42
 semSize = 5

OK

Image 20 : All courses of student graded

#7:Print student

The user must enter valid roll number , upon which the record of the student corresponding to that roll number is displayed.The user may give upto 5 invalid inputs at a time.

Input : Roll number(int)

Class	Input	Expected Output	Actual Output
Invalid roll number	String or invalid int	Error message	Error message displaying warning (Image 21)
Valid roll number entered	Int as roll number	Records of the student displayed	Popup showing subjects and SGPA and CGPA(Image 22)
Valid roll number entered	Int as roll number and save as file button clicked	Software generates grade card	Message saying file is generated(Image 23) and file is formatted (Image 24)

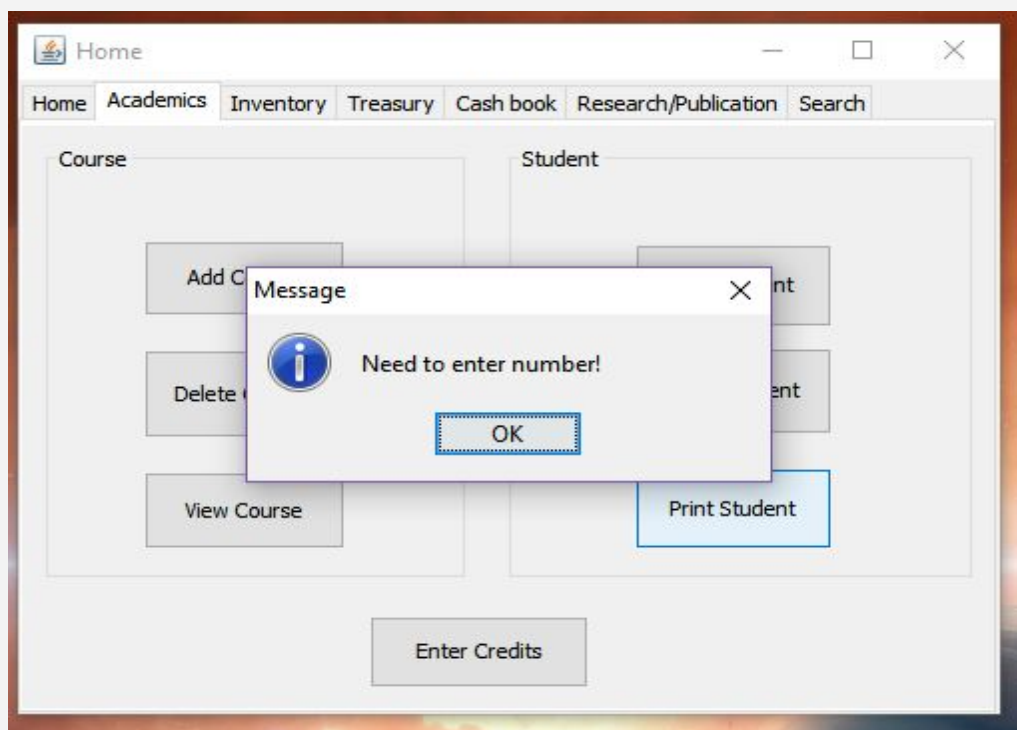


Image 21 : Print student allows at max 5 incorrect attempts

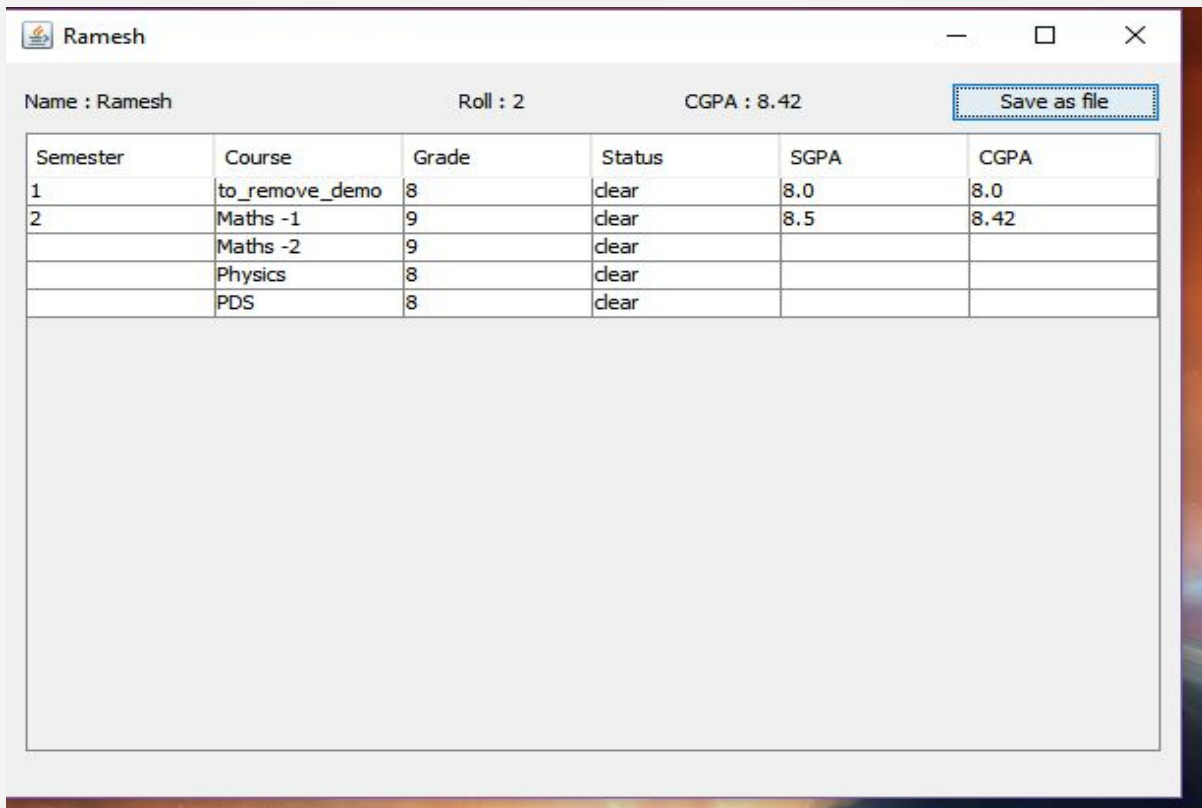


Image 22 : Print student GUI

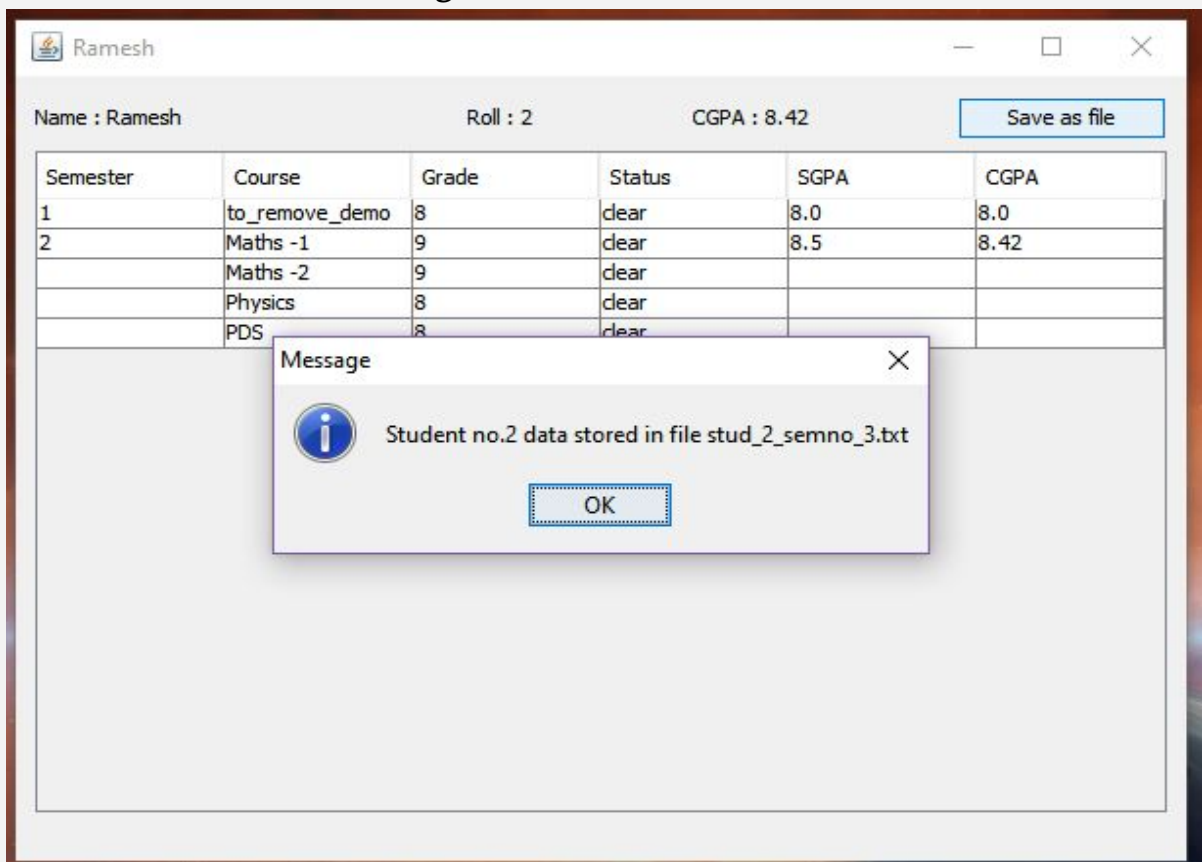


Image 23 : Success in saving file

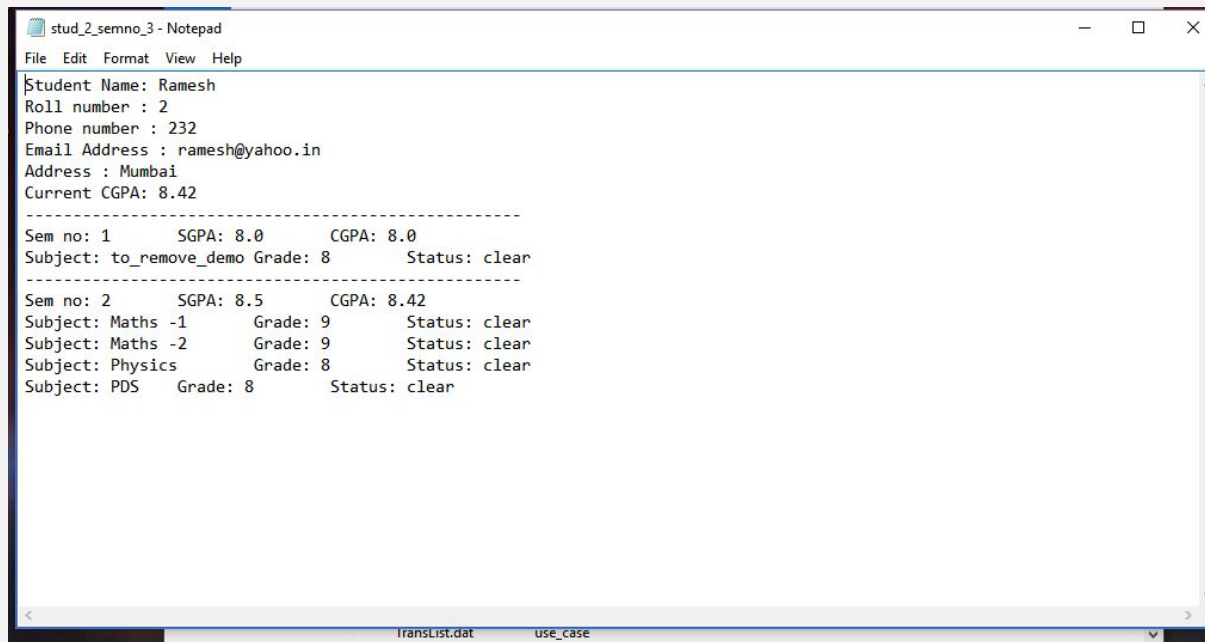


Image 24 : Software generated grade card

#8 : Add item to inventory

Input : Name , Location(String),Price (double).

Refer to image 25 for GUI

Class	Input	Expected Output	Actual Output
One or more fields left empty	None	Error message	Error message displaying warning (Image 26)
Price entered is incorrect	String or negative double	Error regarding price	Popup showing enter number correctly (Image 27)
Correct details	String in Name , Location , Double in Price	Item added	Message saying item is added, and a transaction for the same (Image 28)

The screenshot shows a web application window titled 'Home'. The 'Inventory' tab is selected in the top navigation bar. The main content area is titled 'New item'. It contains three input fields: 'Name' with the value 'chair', 'Location' with the value 'A-108', and 'Price' with the value '1000'. To the right of these fields are four buttons: 'View all', 'Delete Item', 'Modify Details', and 'Display by Numbers'. Below the input fields is a 'Save' button.

Image 25: Add item GUI/Inventory tab

The screenshot shows the same 'New item' form as in Image 25, but with an error message displayed. The 'Name' field is empty, and the 'Location' field has the value 'A'. A modal dialog box titled 'Message' is overlaid on the form, containing an information icon and the text 'Need to enter name!'. The 'OK' button in the dialog is highlighted. The 'Price' field has the value '1000'. The 'Save' button is also highlighted.

Image 26 :Empty field in item

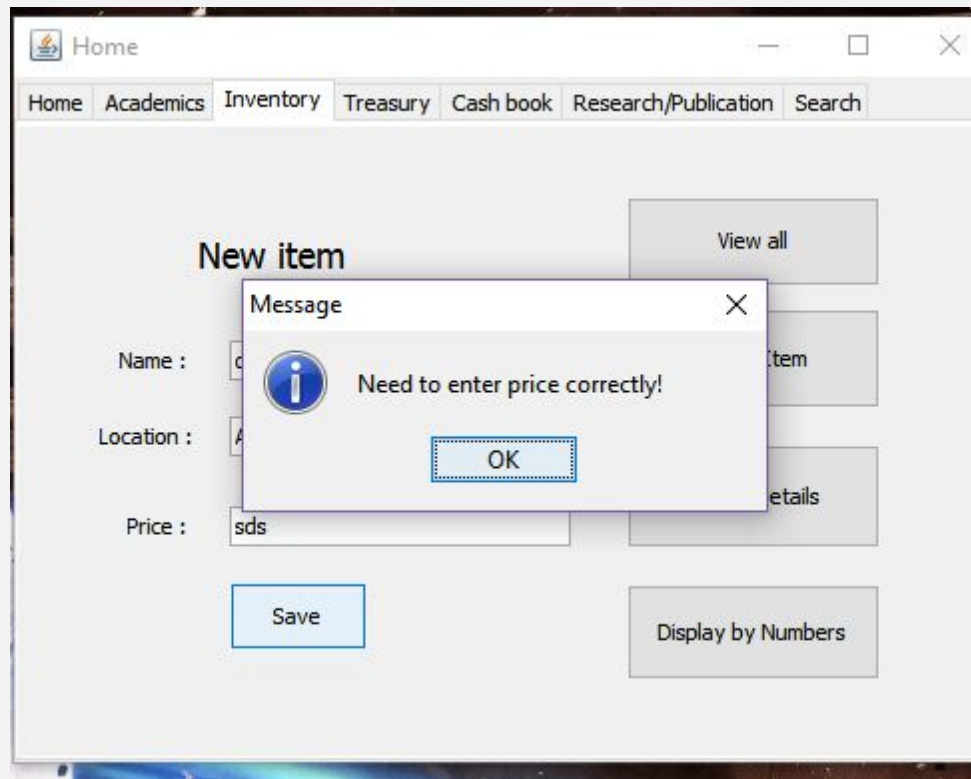


Image 27: Incorrect price

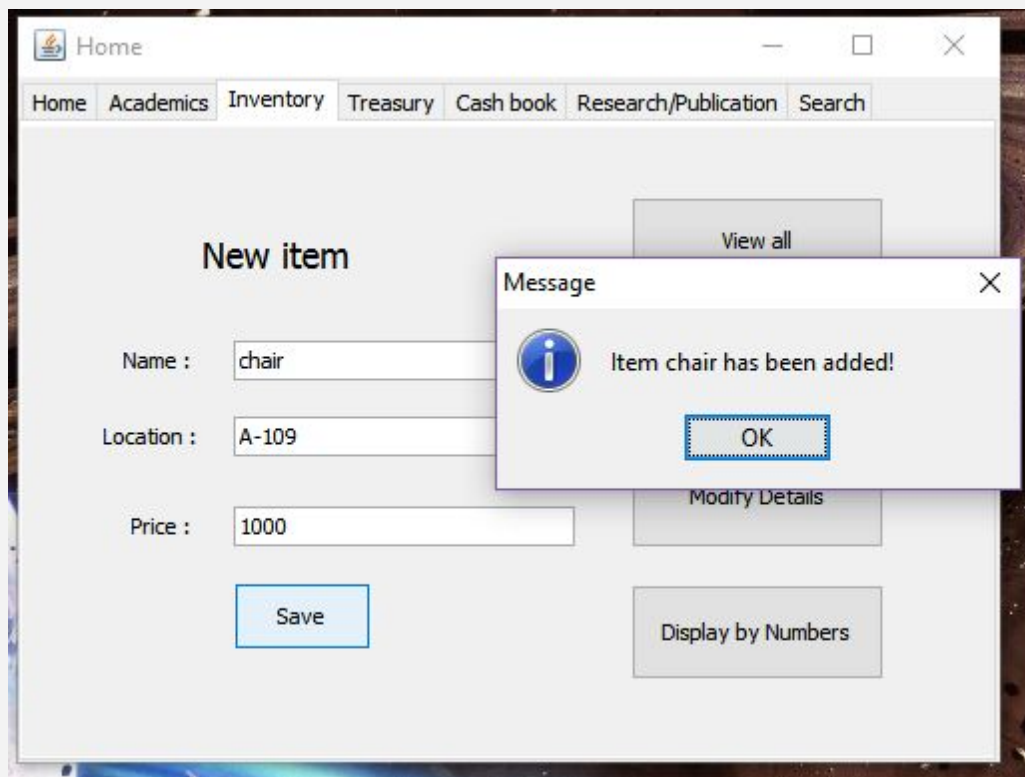


Image 28 : Save item to inventory

#9 : Delete item

The user must first click on delete item button on inventory tab.

Input : Mouse click

Class	Input	Expected Output	Actual Output
No item selected	None	Error message	Error message displaying warning (Image 29)
Item selected	Clicked on an item row	Item removed	Message saying item is deleted , but transaction is not (Image 30)

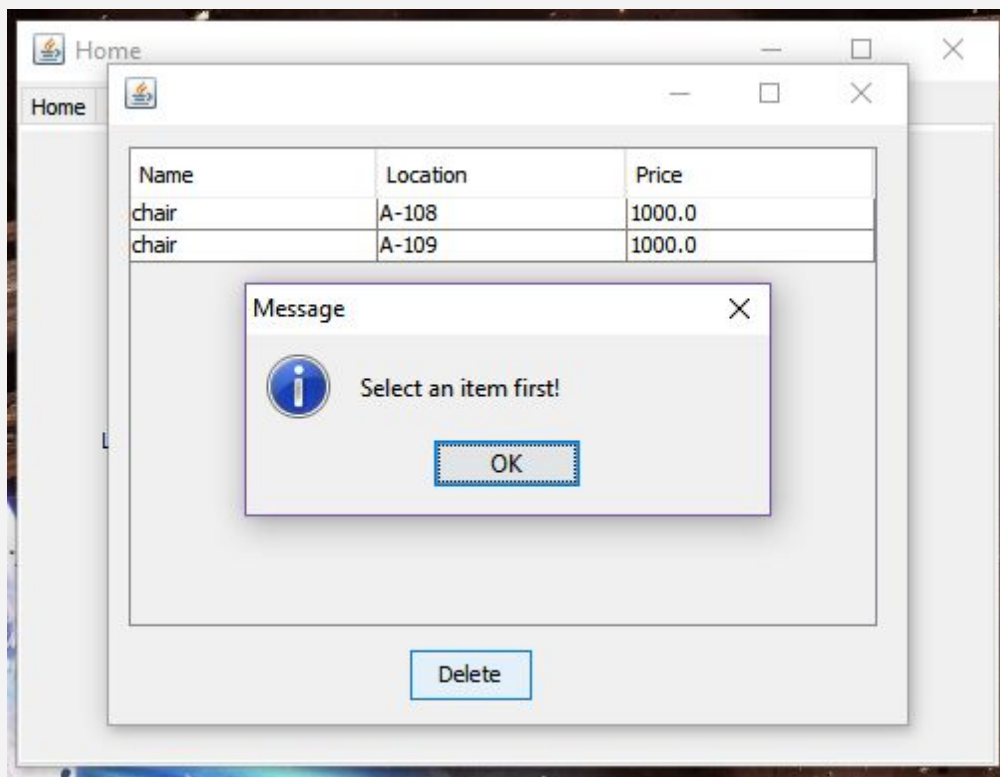


Image 29 : No item selected

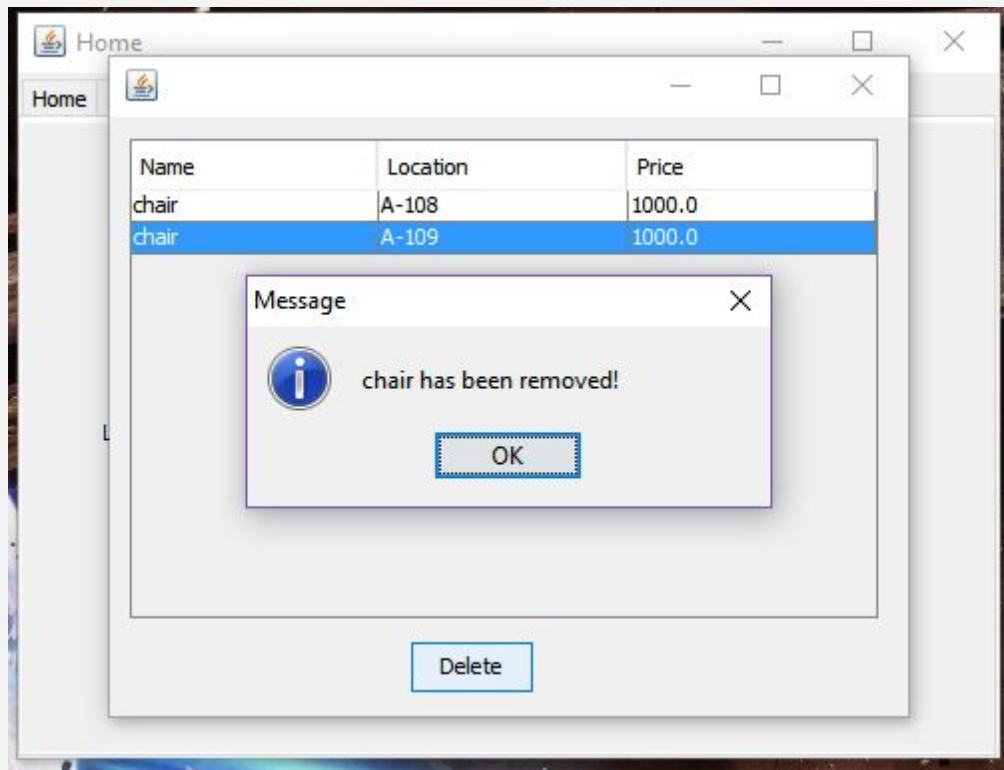


Image 30 : Delete item success

#10 : Modify item details

The user must first click modify item in the inventory menu.

Input : String

Class	Input	Expected Output	Actual Output
No item selected	Modify button clicked	Error message	Error message displaying warning (Image 31)
Item selected and one empty field	Modify button clicked and save button clicked	Error regarding missing detail	Popup showing empty field type (Image 32)
Correct details	Modify button clicked & String in Name, Location	Item modified	Message saying item is modified, and the transaction for the same (Image 33)

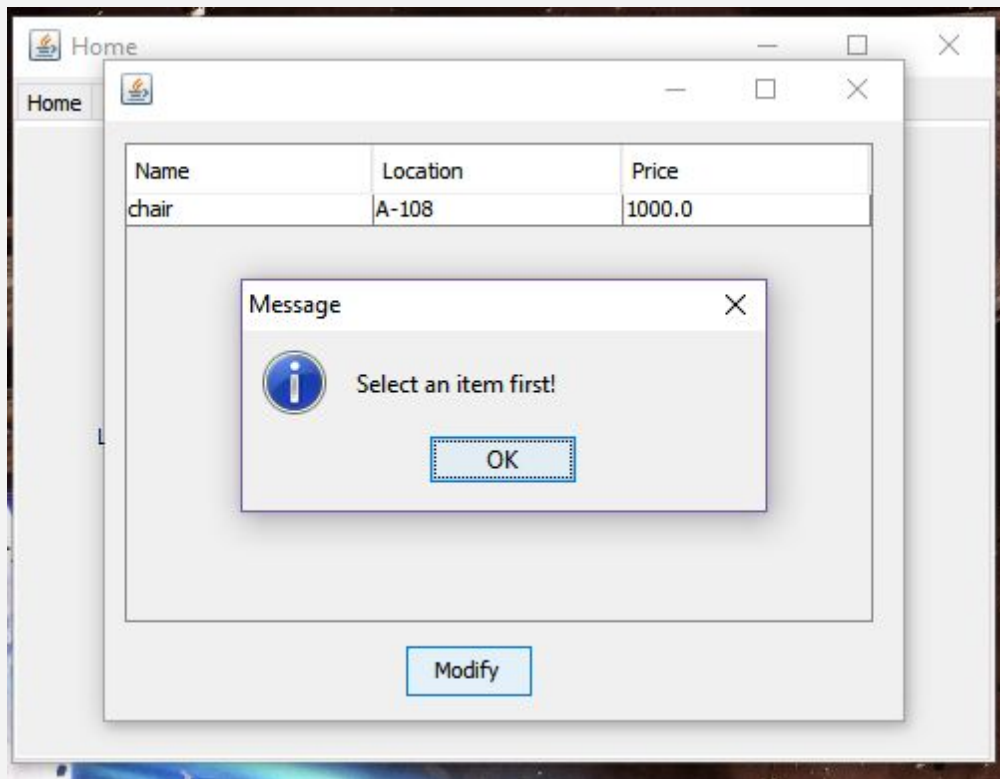


Image 31 : Item not selected for modification

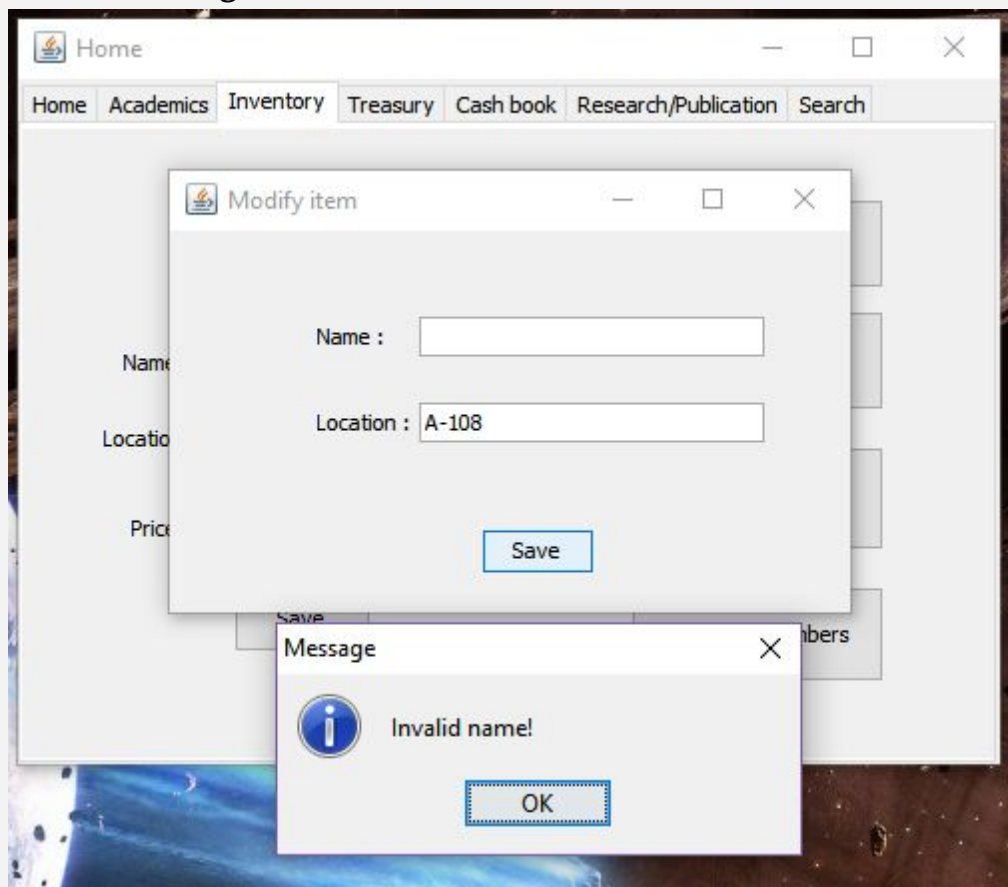


Image 32 : Empty field in modify item menu

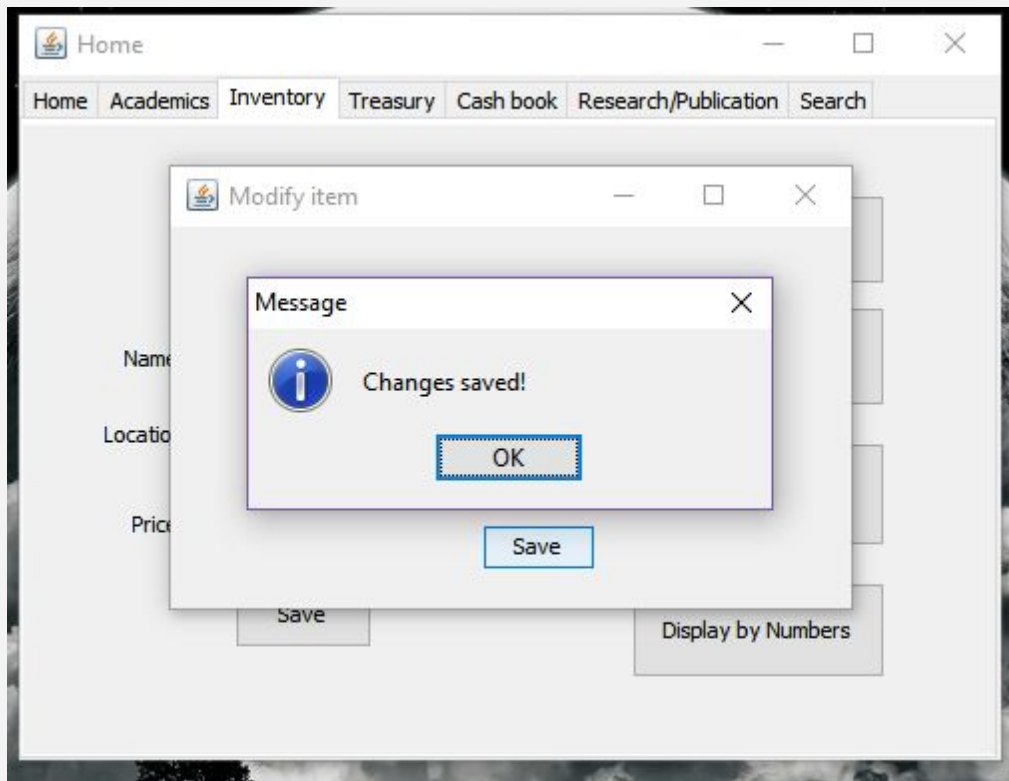


Image 33 : Modified successfully

#11 : Adding transaction

Input : Name , Details(String),Price (double),Type(selected).

Class	Input	Expected Output	Actual Output
One or more fields left empty	None	Error message	Error message displaying warning (Image 34)
Price entered is incorrect	String or negative double	Error regarding price	Popup showing enter number correctly (Image 35)
Correct details	String in Name , Location , Double in Price	Transaction added	Message saying transaction is added (Image 36)

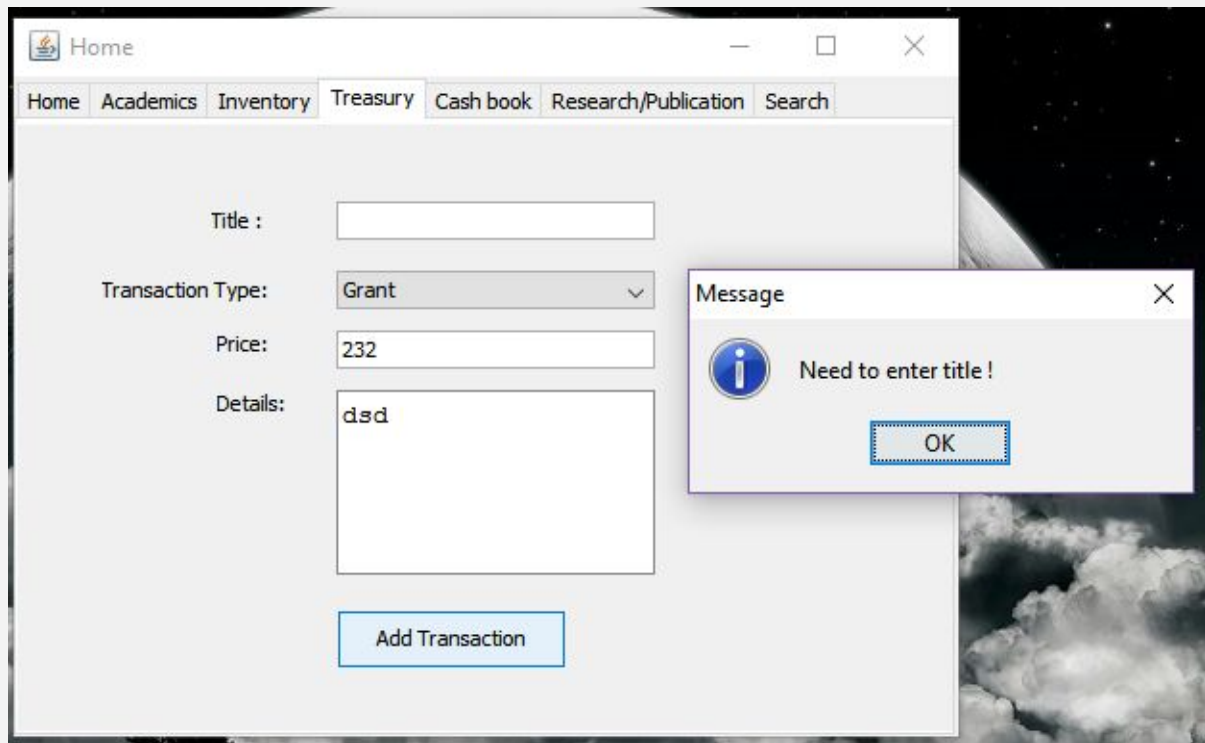


Image 34 : Empty field in transaction

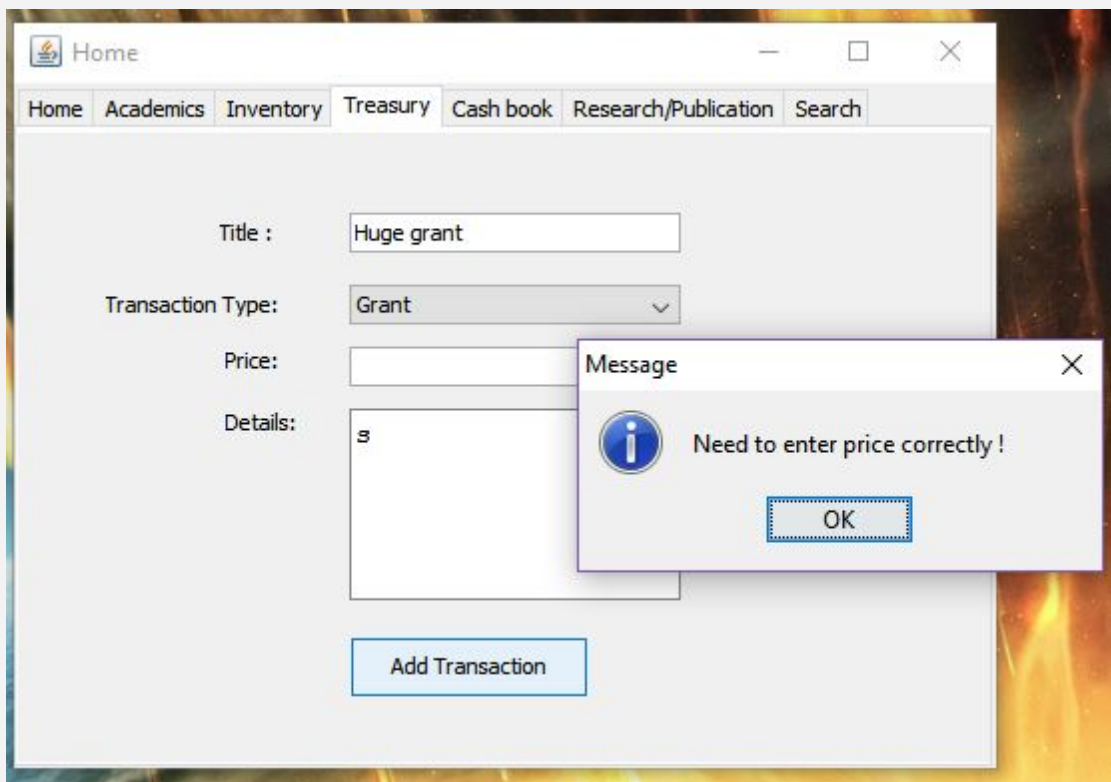


Image 35 : Price entered incorrectly

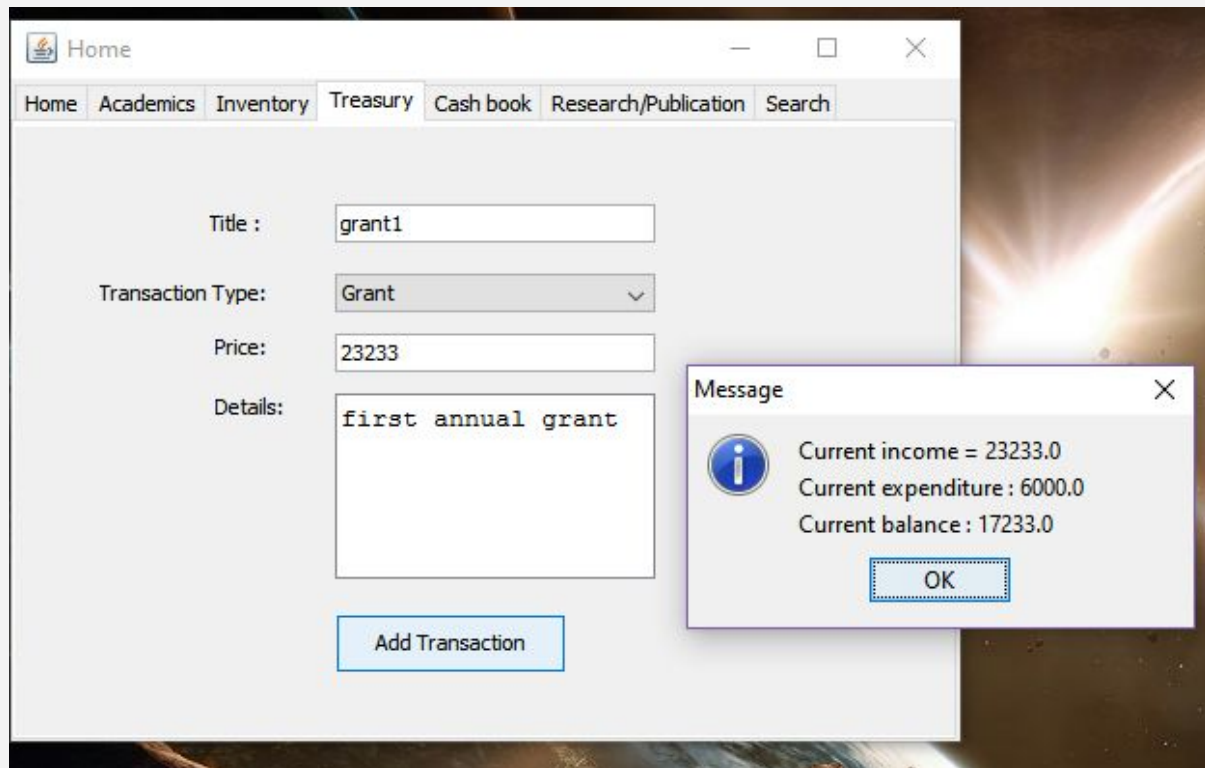


Image 36 : Save transaction

#12 : Add Research / Publication

Since not every Research/Publication has a cost attached to it , if left empty , investment and/or profit is considered 0.

Input : Name , Details,Incharge(String),Price (double),Type(selected).

Class	Input	Expected Output	Actual Output
One or more string fields left empty	None	Error message	Error message displaying missing field (Image 37)
Price entered is incorrect	String or negative double	Error regarding price	Popup showing enter number correctly (Image 38)
Correct details	String in Name , Location,Incharge , Double in Price	Work added	Message saying work is added (Image 39)

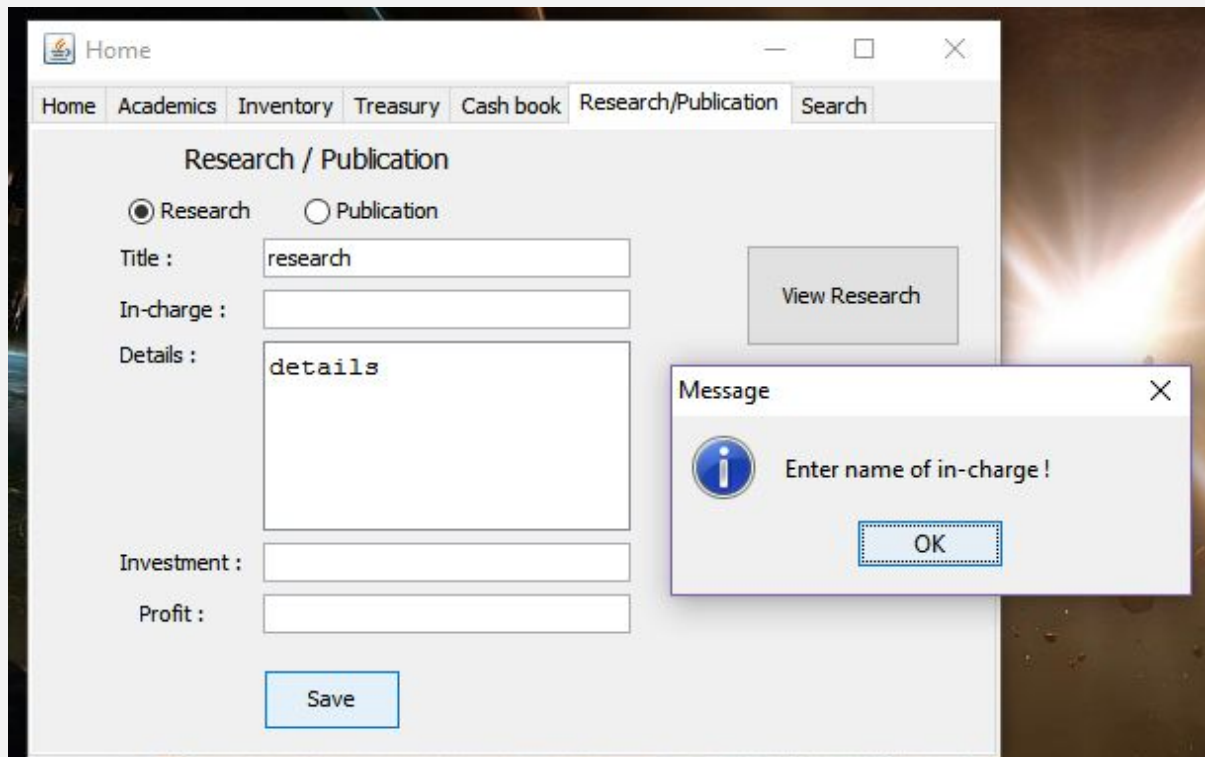


Image 37 : Empty credentials in Research/Publication

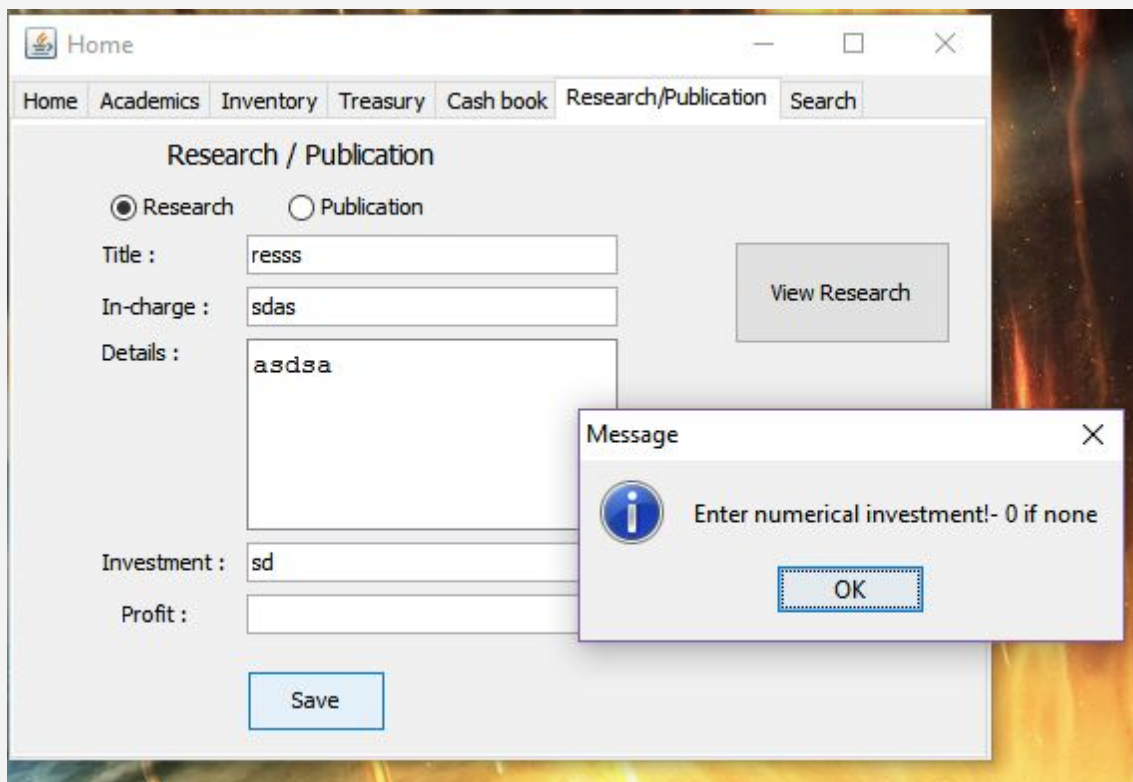


Image 38 : Incorrect Investment/Profit

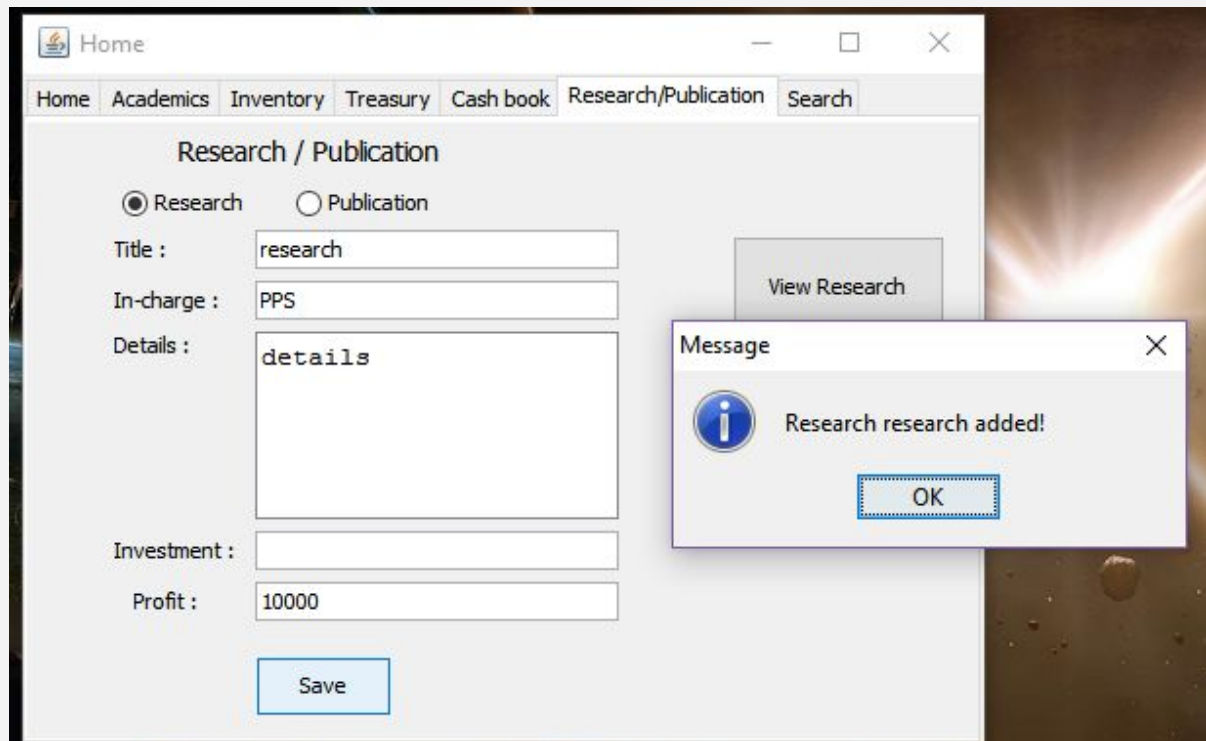


Image 39 : Research/Publication added

#13 : View Research/Publication

The user must first click on view Research/Publication button.

Input : Mouse click

Class	Input	Expected Output	Actual Output
No work selected	None	Error message	Error message displaying warning (Image 40)
Work selected	Clicked on a work row	Details displayed	Textfield display selected work's details (Image 41)

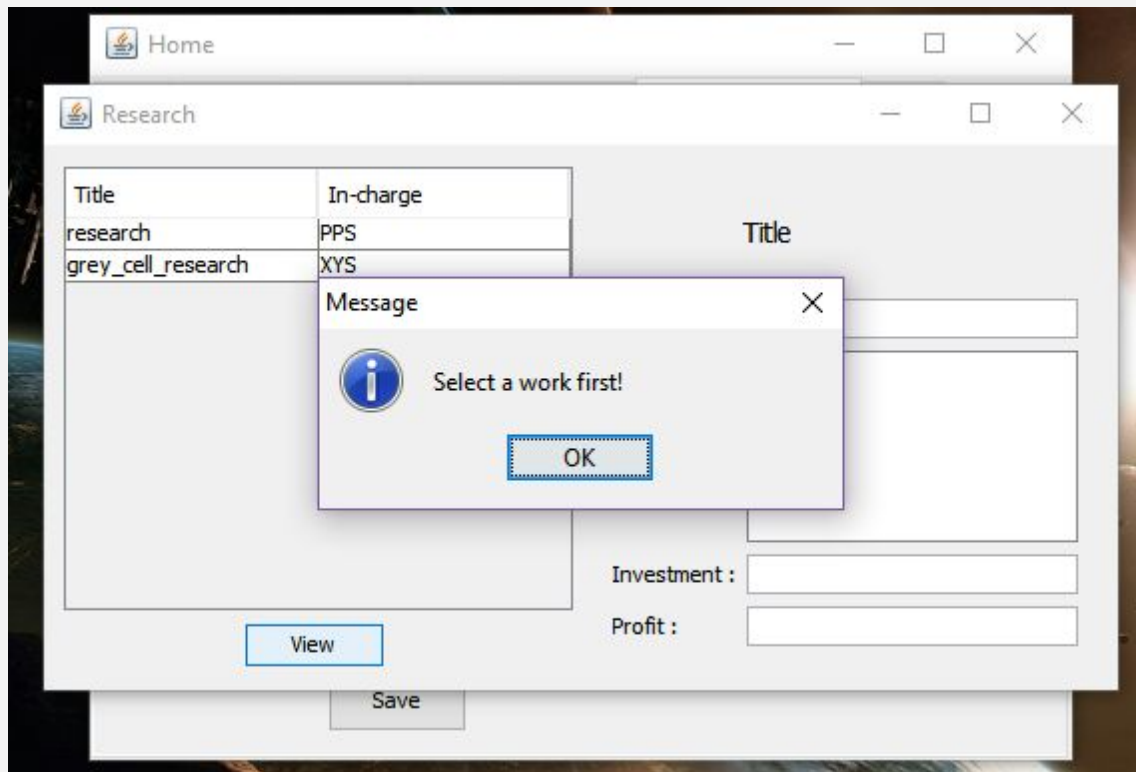


Image 40 : Work not selected

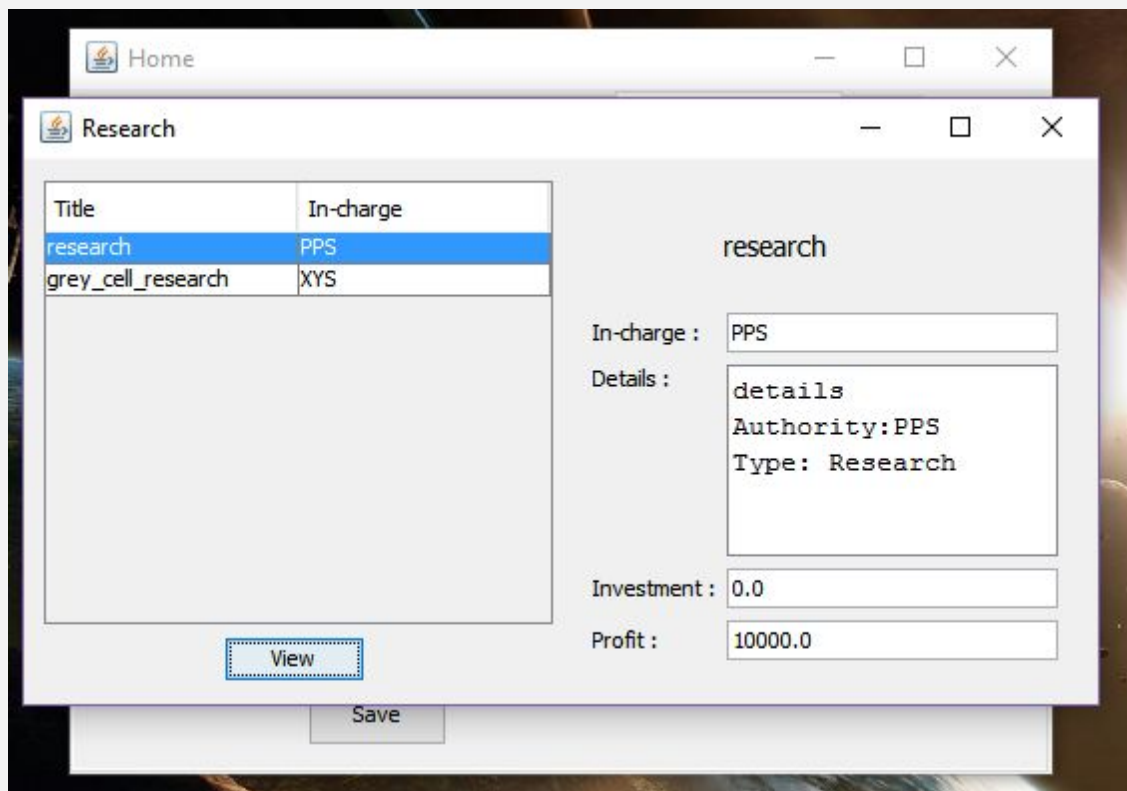


Image 41 : Work selected

#14 : Search Transactions

For record sake , research / publications are also displayed.

Input(Optional) : search key(String)

Class	Input	Expected Output	Actual Output
No transaction selected	None	Error message	Error message displaying warning (Image 42)
Transaction selected	Clicked on a transaction row	Details displayed	Textfield display selected transaction 's details (Image 43)
Search key entered	String in search bar	Transactions Containing that substring should be displayed	Table updated to display Only those transactions containing search string (Image 44)

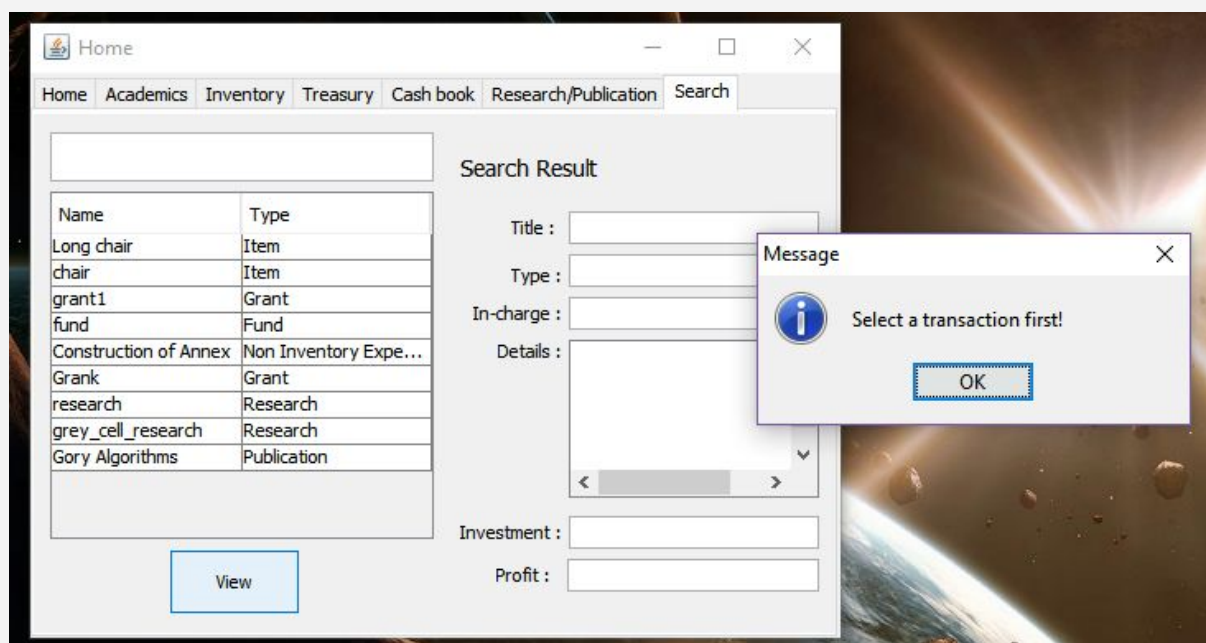


Image 42 : No transaction selected in Search menu

The screenshot shows a web application window titled 'Home'. It has a navigation bar with tabs: Home, Academics, Inventory, Treasury, Cash book, Research/Publication, and Search. The 'Search' tab is active. On the left, there is a search input field and a table of results. The table has two columns: 'Name' and 'Type'. The first row, 'Long chair', is highlighted in blue. Below the table is a 'View' button. On the right, the 'Search Result' section displays the details for the selected item: Title: Long chair, Type: Item, In-charge: Inventory, and Details: Location: A-109. At the bottom right, there are input fields for 'Investment' (1000.0) and 'Profit' (0.0).

Name	Type
Long chair	Item
chair	Item
grant1	Grant
fund	Fund
Construction of Annex	Non Inventory Expe...
Grank	Grant
research	Research
grey_cell_research	Research
Gory Algorithms	Publication

Search Result

Title : Long chair

Type : Item

In-charge : Inventory

Details : Location: A-109

Investment : 1000.0

Profit : 0.0

View

Image 43 : Transaction selected for viewing

The screenshot shows the same 'Home' window, but the search input field now contains the string 'gr'. The table of results is updated to show only items starting with 'gr': grant1 (Grant), Grank (Grant), and grey_cell_research (Research). The 'View' button remains below the table. The 'Search Result' section on the right is empty, and the 'Investment' and 'Profit' fields are also empty.

Name	Type
grant1	Grant
Grank	Grant
grey_cell_research	Research

Search Result

Title :

Type :

In-charge :

Details :

Investment :

Profit :

View

Image 44 : String entered in search menu

White Box Tests

The various tools used for the unit and integration testing under the white box testing approach have returned no conclusive results.