

# Exam-system Sample Input and Output

## G30

### Task 1

#### Student Register

The left screenshot shows the initial state of the registration form. It includes fields for Username, Name, Gender (Male), Age, Department, Password, and Confirm Password, along with Register and Exit buttons. The right screenshot shows the form after inputting sample data: Username: SampleOutput, Name: Sample, Gender: Male, Age: 21, Department: AIS, Password: ●, and Confirm Password: ●. Both screenshots have a header message: "Please Fill out all the below information".

Invalid Username: Username Already Exists

Note: The username must be unique to all students.

The left screenshot shows the registration form with the same sample data as before. The right screenshot shows a modal dialog titled "Hint" with the message "Username already exists. Please choose another one." and an "OK" button. The background application window is partially visible.

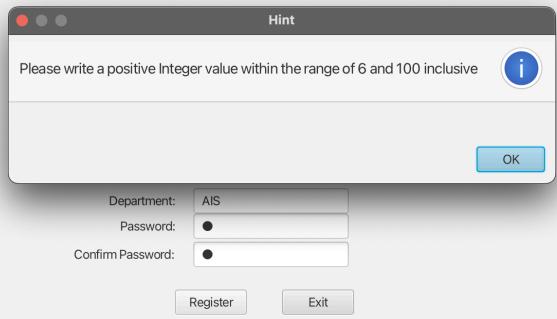
Invalid Age: Age not in the range of 6 to 100 or not an Integer

{Age: 5}

Please Fill out all the below information

Username:	SampleOutput
Name:	Sample
Gender:	Male
Age:	5
Department:	AIS
Password:	●
Confirm Password:	●

Register    Exit

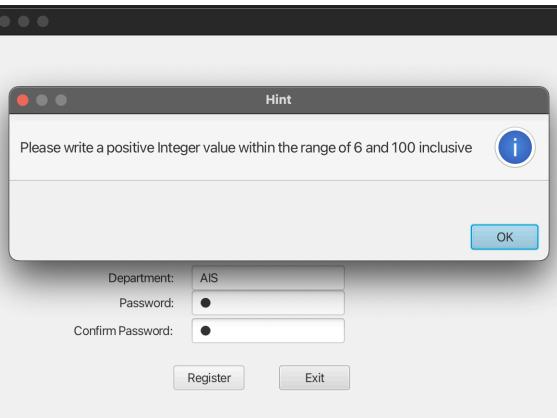


{Age: 101}

Please Fill out all the below information

Username:	SampleOutput
Name:	Sample
Gender:	Male
Age:	101
Department:	AIS
Password:	●
Confirm Password:	●

Register    Exit

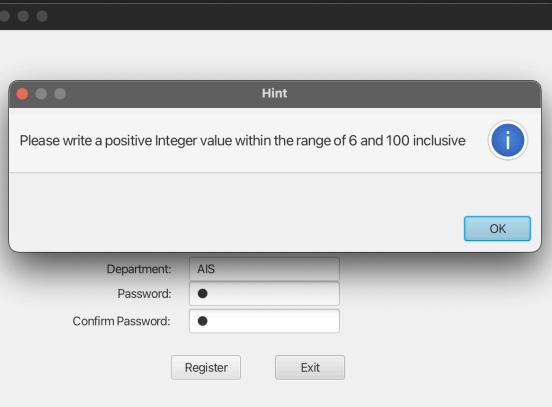


{Age: notAnInt}

Please Fill out all the below information

Username:	SampleOutput
Name:	Sample
Gender:	Male
Age:	notAnInt
Department:	AIS
Password:	●
Confirm Password:	●

Register    Exit

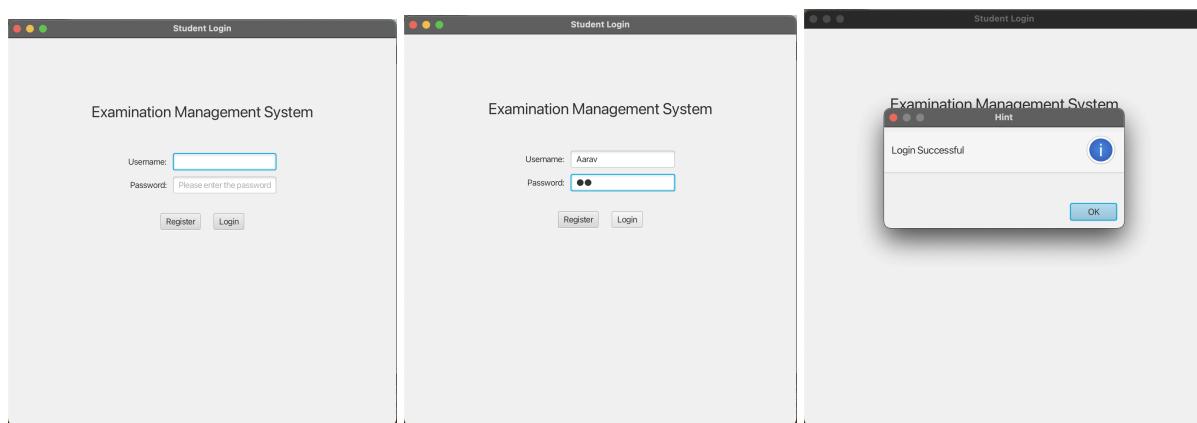


Passwords Dont match:

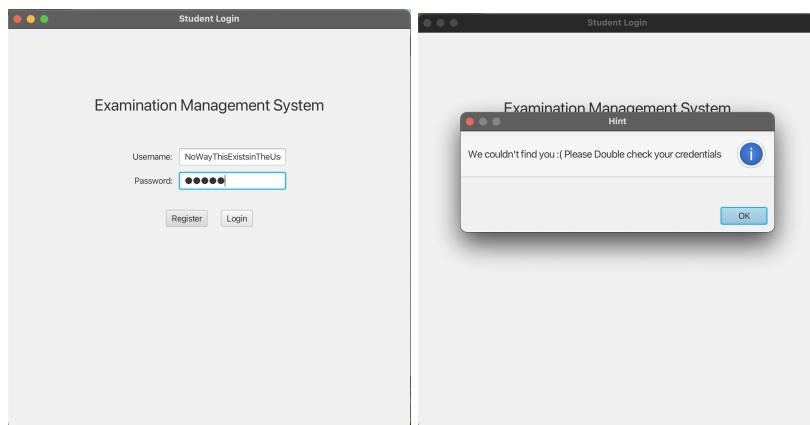
{Password}: g | {Confirm\_password}: 2g



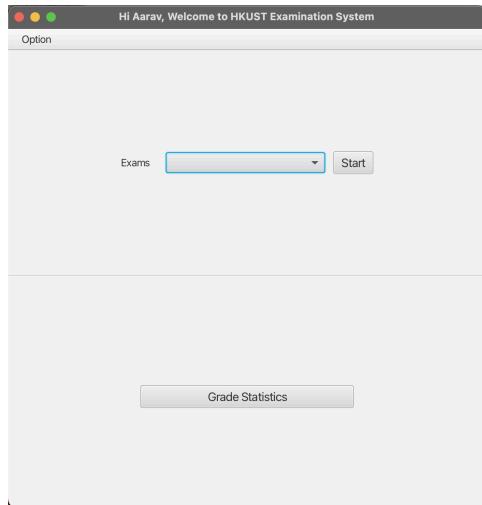
## Student Login



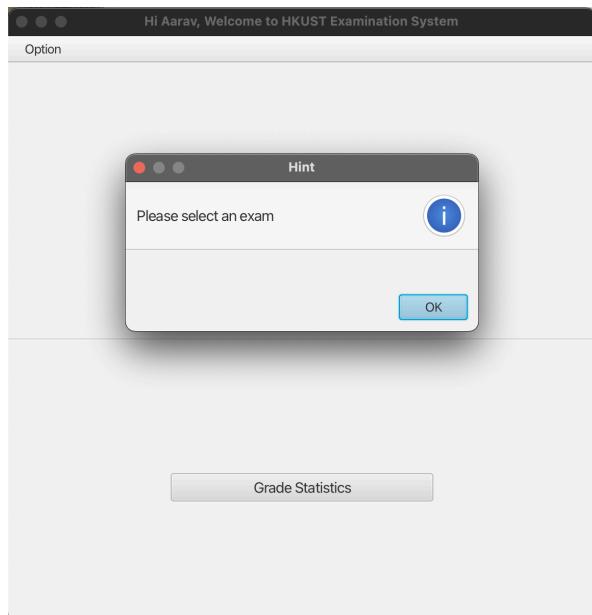
## Invalid Username or Password



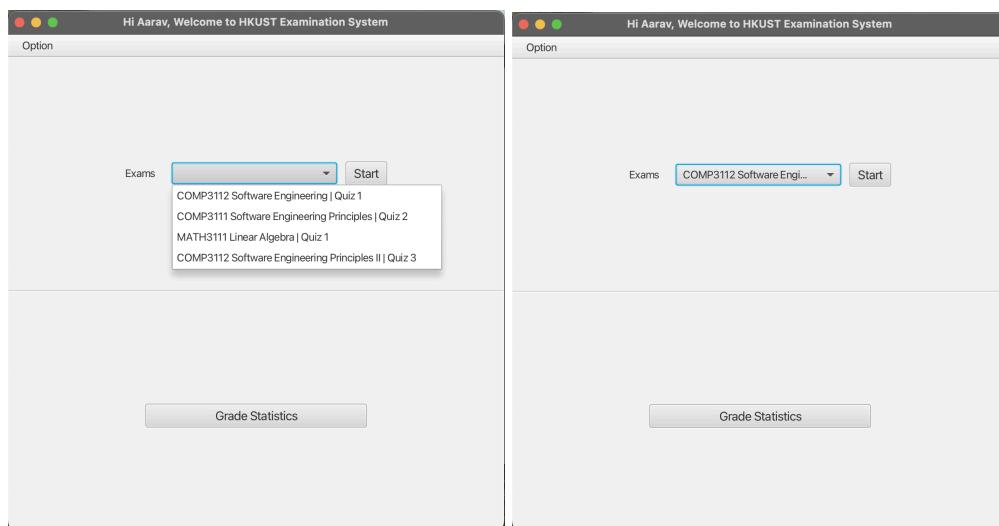
## Student Main Controller



### Clicking Start without selecting a Quiz

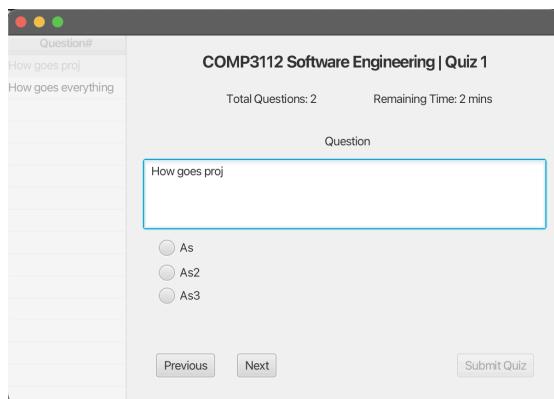


### Starting Quiz

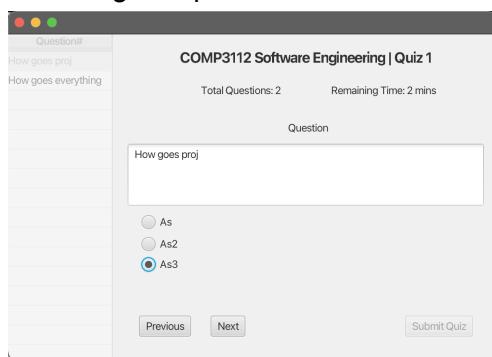


Then click Start

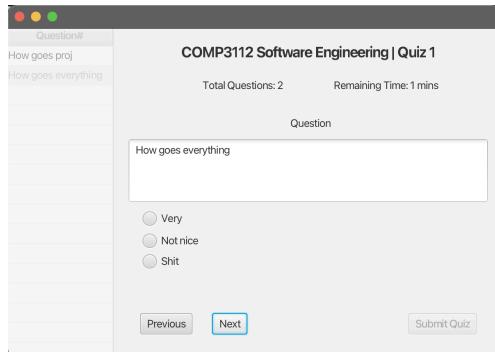
## Student Taking Quiz



## Choosing an option



## Next



## Submit Quiz

Note: the submit button is not available until the student reaches the last question and clicks next again

A screenshot of a quiz application window titled "COMP3112 Software Engineering | Quiz 1". The window shows a single question: "How goes everything". Below the question is a list of three options: "Very", "Not nice", and "Shit". The "Shit" option is selected. At the bottom of the window are buttons for "Previous", "Next", and "Submit Quiz". A floating "Hint" dialog box displays the message "2/2Correct,The precision is: 100.0%.The score is: 2" with an information icon (i) and an "OK" button.

## Submit the Quiz when the time is up before the Student Submits

Note: Take a look at the time being decreased

The image shows two side-by-side screenshots of a quiz interface. Both screens have a header "COMP3112 Software Engineering | Quiz 1". The left screen shows "Total Questions: 2" and "Remaining Time: 2 mins". The right screen shows "Total Questions: 2" and "Remaining Time: 1 mins". Both screens have a question box containing "How goes proj" and three radio button options: "As", "As2", and "As3". At the bottom are "Previous", "Next", and "Submit Quiz" buttons.

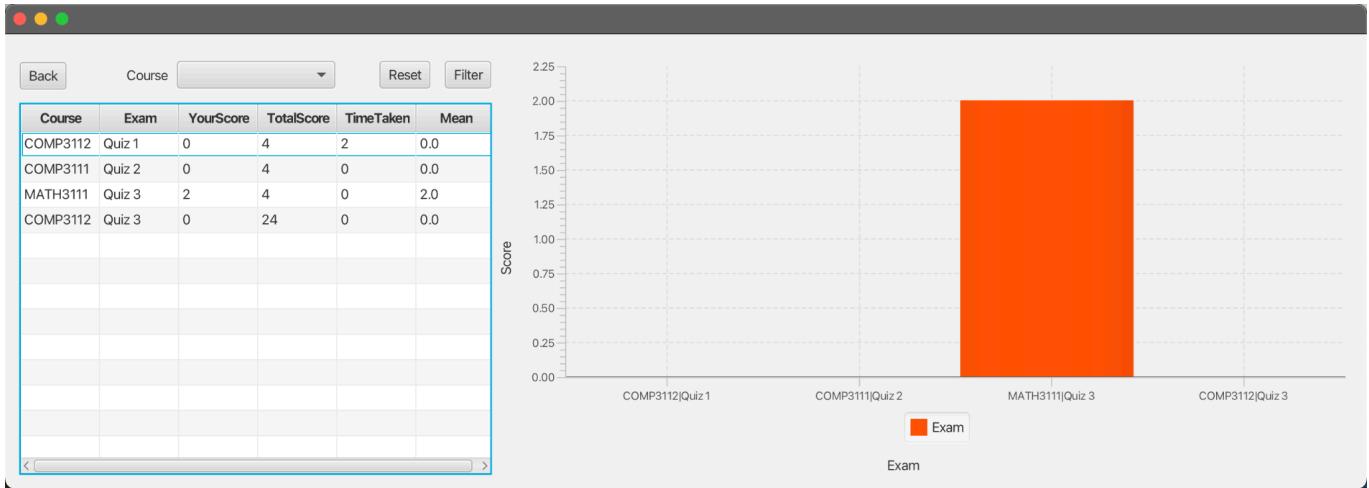
The image shows a screenshot of the "HKUST Examination System". The title bar says "Hi Aarav, Welcome to HKUST Examination System". Below it is a menu bar with "Option". A central window titled "Hint" displays the message "0/2Correct,The precision is: 0.0%.The score is: 0" with an information icon (i) and an "OK" button. At the bottom of the main window is a "Grade Statistics" button.

### If the student has taken all quizzes

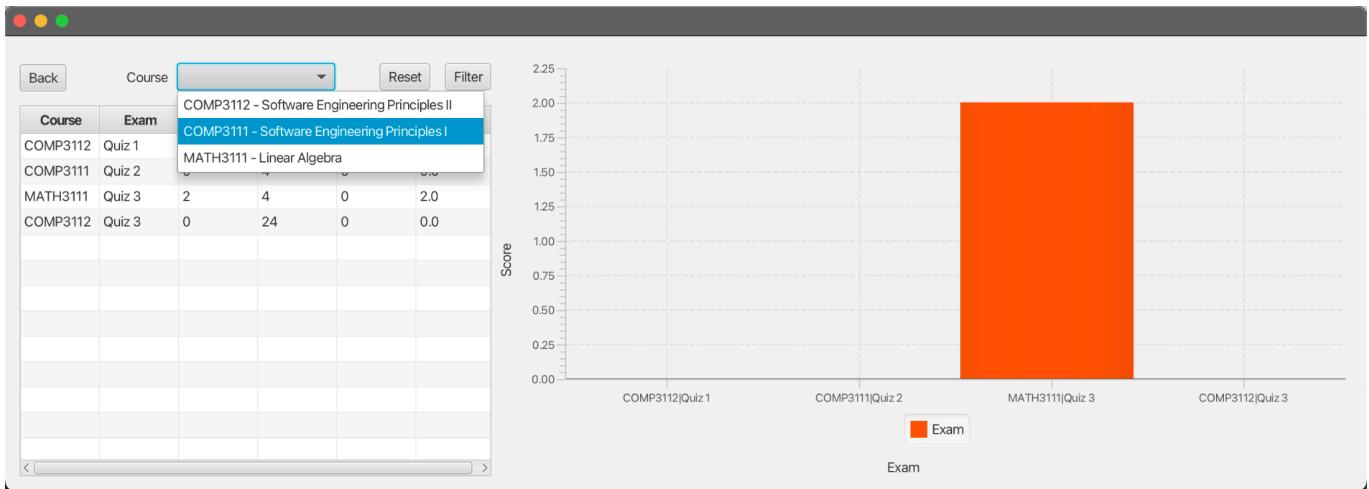
The image shows a screenshot of the "HKUST Examination System". The title bar says "Hi Aarav, Welcome to HKUST Examination System". Below it is a menu bar with "Option". A central window titled "Exams" shows a dropdown menu "No available exams" and a "Start" button. At the bottom is a "Grade Statistics" button.

## Student Grade Statistics

## Click on Grade Statistics



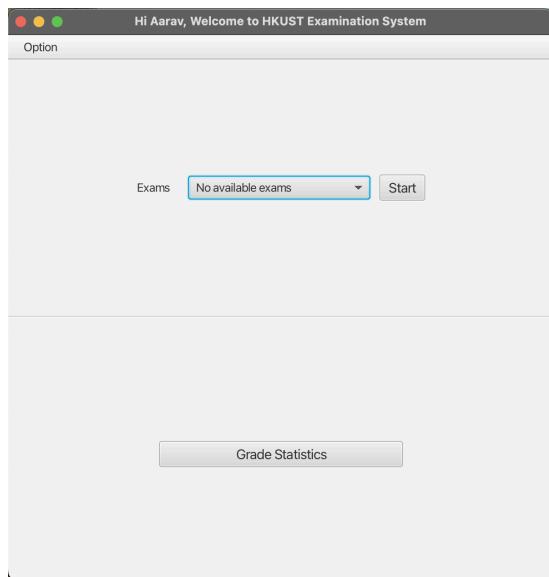
## Filter



## Reset



[Back](#)

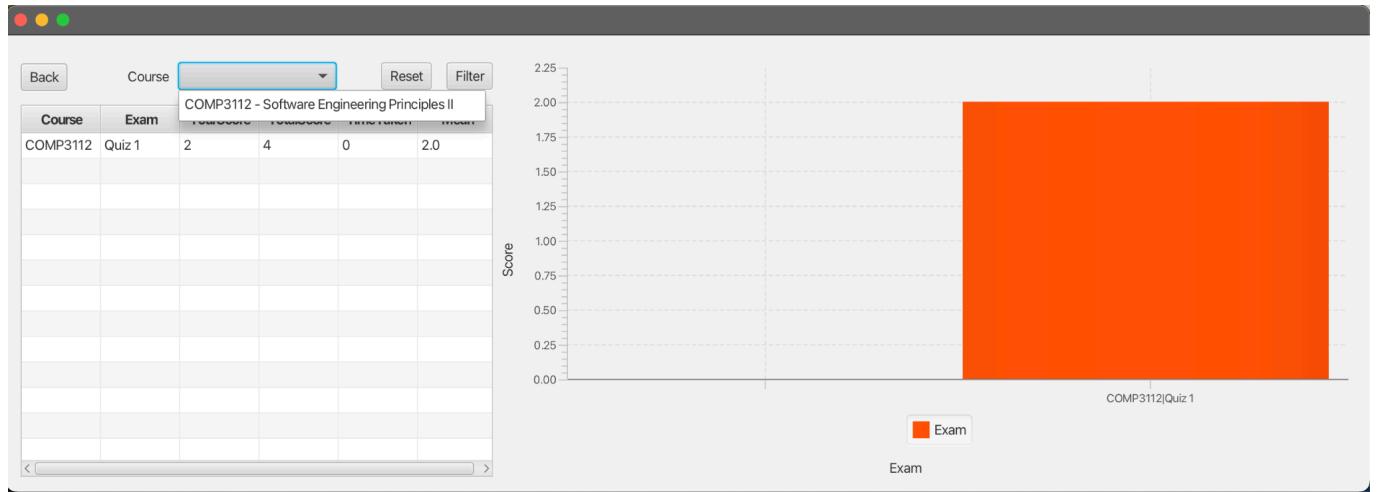
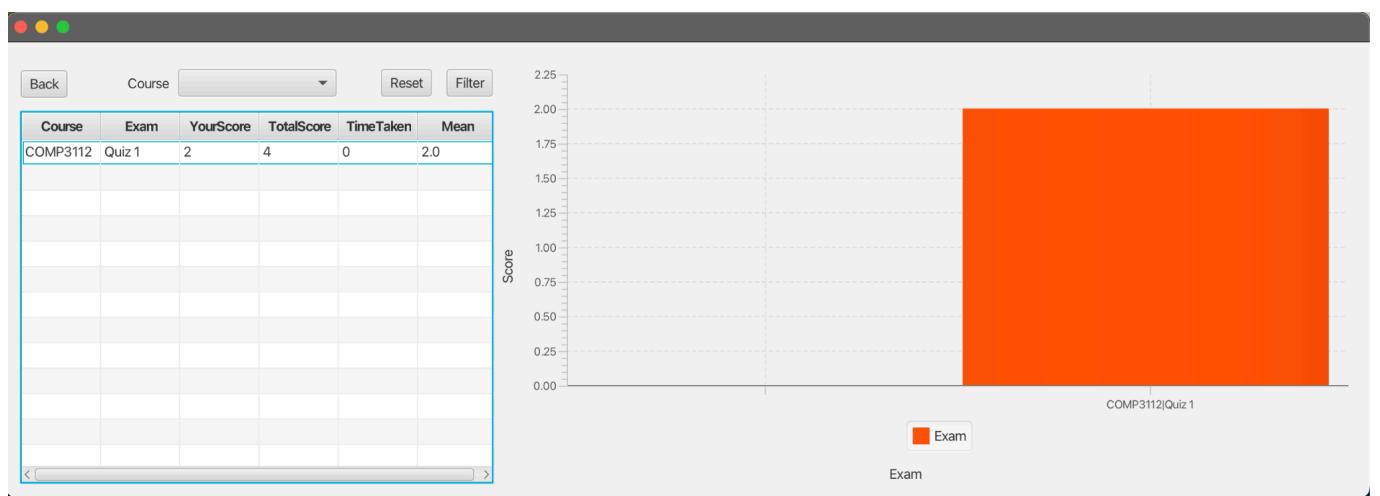


When No quiz has been taken





### When one (of 4) quiz taken



# Test Results

StudentLoginControllerTest

The screenshot shows a coverage analysis tool interface. At the top, there's a toolbar with icons for file operations, search, and settings. Below the toolbar is a navigation bar with tabs: 'Coverage' (selected) and 'StudentRegisterTest'. The main area is a table titled 'Element ^' with columns: 'Element', 'Class, %', 'Method, %', 'Line, %', and 'Branch, %'. The table lists various controller classes under the package 'comp3111.examsystem.controller'. Coverage details are provided for each class.

Element	Class, %	Method, %	Line, %	Branch, %
comp3111.examsystem.controller	18% (4/22)	18% (43/237)	12% (217/16...)	12% (83/644)
CourseManagerController	0% (0/1)	0% (0/20)	0% (0/71)	0% (0/36)
ExamManageController	0% (0/1)	0% (0/23)	0% (0/365)	0% (0/96)
ManagerLoginController	0% (0/2)	0% (0/4)	0% (0/25)	0% (0/14)
ManagerMainController	0% (0/1)	0% (0/5)	0% (0/23)	100% (0/0)
QuestionBankController	0% (0/1)	0% (0/14)	0% (0/271)	0% (0/76)
SelectLoginController	0% (0/1)	0% (0/3)	0% (0/24)	100% (0/0)
StudentGradeStatisticController	0% (0/4)	0% (0/28)	0% (0/122)	0% (0/50)
StudentLoginController	100% (1/1)	80% (8/10)	69% (30/43)	93% (15/16)
StudentMainController	100% (1/1)	41% (5/12)	34% (23/66)	57% (15/26)
StudentManagerController	0% (0/1)	0% (0/12)	0% (0/79)	0% (0/50)
StudentRegister	100% (1/1)	83% (10/12)	83% (59/71)	63% (28/44)
StudentTakeExamController	100% (1/1)	58% (20/34)	56% (105/185)	34% (25/72)
TeacherGradeStatisticController	0% (0/2)	0% (0/16)	0% (0/118)	0% (0/48)
TeacherLoginController	0% (0/1)	0% (0/7)	0% (0/47)	0% (0/18)
TeacherMainController	0% (0/1)	0% (0/9)	0% (0/48)	0% (0/6)
TeacherManagerController	0% (0/1)	0% (0/22)	0% (0/89)	0% (0/48)
TeacherRegister	0% (0/1)	0% (0/6)	0% (0/46)	0% (0/44)

Student Register Test

StudentRegisterTest

Element ^	Class, %	Method, %	Line, %	Branch, %
comp3111.examsystem.controller	13% (3/22)	14% (35/237)	11% (187/1693)	10% (68/644)
© CourseManagerController	0% (0/1)	0% (0/20)	0% (0/71)	0% (0/36)
© ExamManageController	0% (0/1)	0% (0/23)	0% (0/365)	0% (0/96)
© ManagerLoginController	0% (0/2)	0% (0/4)	0% (0/25)	0% (0/14)
© ManagerMainController	0% (0/1)	0% (0/5)	0% (0/23)	100% (0/0)
© QuestionBankController	0% (0/1)	0% (0/14)	0% (0/271)	0% (0/76)
© SelectLoginController	0% (0/1)	0% (0/3)	0% (0/24)	100% (0/0)
© StudentGradeStatisticController	0% (0/4)	0% (0/28)	0% (0/122)	0% (0/50)
© StudentLoginController	0% (0/1)	0% (0/10)	0% (0/43)	0% (0/16)
© StudentMainController	100% (1/1)	41% (5/12)	34% (23/66)	57% (15/26)
© StudentManagerController	0% (0/1)	0% (0/12)	0% (0/79)	0% (0/50)
© StudentRegister	100% (1/1)	83% (10/12)	83% (59/71)	63% (28/44)
© StudentTakeExamController	100% (1/1)	58% (20/34)	56% (105/185)	34% (25/72)
© TeacherGradeStatisticController	0% (0/2)	0% (0/16)	0% (0/118)	0% (0/48)
© TeacherLoginController	0% (0/1)	0% (0/7)	0% (0/47)	0% (0/18)
© TeacherMainController	0% (0/1)	0% (0/9)	0% (0/48)	0% (0/6)
© TeacherManagerController	0% (0/1)	0% (0/22)	0% (0/89)	0% (0/48)
© TeacherRegister	0% (0/1)	0% (0/6)	0% (0/46)	0% (0/44)

StudentTakeExamControllerTest

StudentTakeExamControllerTest

Element ^	Class, %	Method, %	Line, %	Branch, %
comp3111.examsystem.controller	13% (3/22)	14% (35/237)	11% (187/1693)	10% (68/644)
© CourseManagerController	0% (0/1)	0% (0/20)	0% (0/71)	0% (0/36)
© ExamManageController	0% (0/1)	0% (0/23)	0% (0/365)	0% (0/96)
© ManagerLoginController	0% (0/2)	0% (0/4)	0% (0/25)	0% (0/14)
© ManagerMainController	0% (0/1)	0% (0/5)	0% (0/23)	100% (0/0)
© QuestionBankController	0% (0/1)	0% (0/14)	0% (0/271)	0% (0/76)
© SelectLoginController	0% (0/1)	0% (0/3)	0% (0/24)	100% (0/0)
© StudentGradeStatisticController	0% (0/4)	0% (0/28)	0% (0/122)	0% (0/50)
© StudentLoginController	0% (0/1)	0% (0/10)	0% (0/43)	0% (0/16)
© StudentMainController	100% (1/1)	41% (5/12)	34% (23/66)	57% (15/26)
© StudentManagerController	0% (0/1)	0% (0/12)	0% (0/79)	0% (0/50)
© StudentRegister	100% (1/1)	83% (10/12)	83% (59/71)	63% (28/44)
© StudentTakeExamController	100% (1/1)	58% (20/34)	56% (105/185)	34% (25/72)
© TeacherGradeStatisticController	0% (0/2)	0% (0/16)	0% (0/118)	0% (0/48)
© TeacherLoginController	0% (0/1)	0% (0/7)	0% (0/47)	0% (0/18)
© TeacherMainController	0% (0/1)	0% (0/9)	0% (0/48)	0% (0/6)
© TeacherManagerController	0% (0/1)	0% (0/22)	0% (0/89)	0% (0/48)
© TeacherRegister	0% (0/1)	0% (0/6)	0% (0/46)	0% (0/44)

## Task 2

### Teacher Register

The image shows two windows of a Windows application titled "Welcome to the Register Page". Both windows display a registration form with the following fields:

- Username:
- Name:
- Gender: Male
- Age:
- Position: Chair
- Department:
- Password:
- Confirm Password:

At the bottom of each window are two buttons: "Register" and "Exit". In the right-hand window, the "Age" field contains the value "16".

### Invalid Age

The image shows two windows. The left window displays a registration form with the following data:

- Username: Aarav
- Name: Aarav
- Gender: Male
- Age:
- Position: Chair
- Department: cs
- Password:
- Confirm Password:

At the bottom are "Register" and "Exit" buttons. The right window is a modal dialog titled "Hint" with the message "Please Enter a Valid Age" and an "OK" button.

### Successful Register

The image shows two windows. The left window displays a registration form with the following data:

- Username: Aarav
- Name: Aarav
- Gender: Male
- Age: 20
- Position: Assistant
- Department: cs
- Password:
- Confirm Password:

At the bottom are "Register" and "Exit" buttons. The right window is a modal dialog titled "Hint" with the message "Successfully Registered" and an "OK" button.

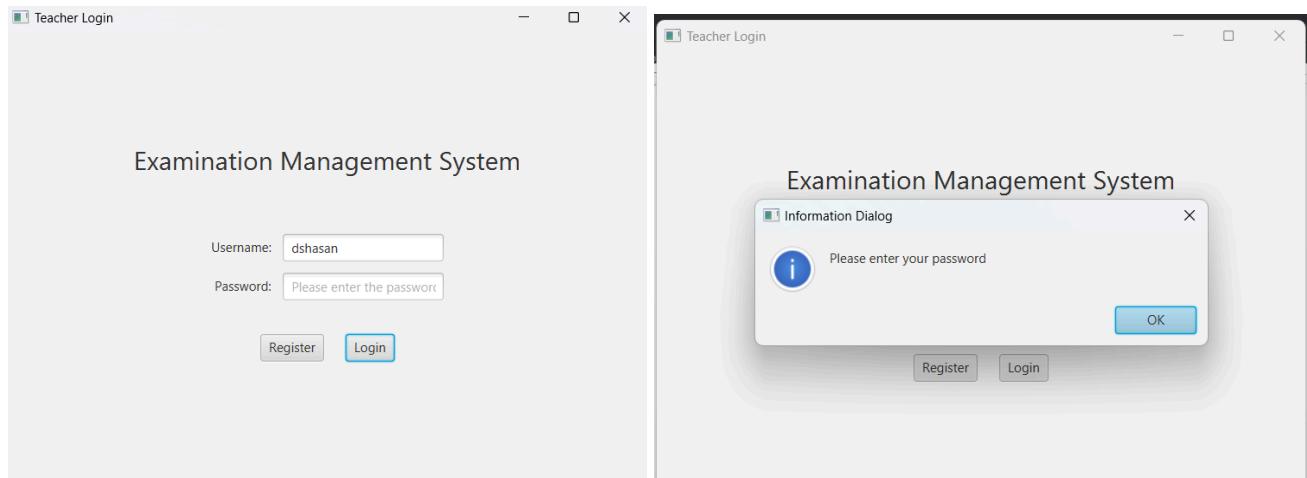
## Database Update

A screenshot of a code editor window titled "ControllerTest.java". The code contains two lines of text:

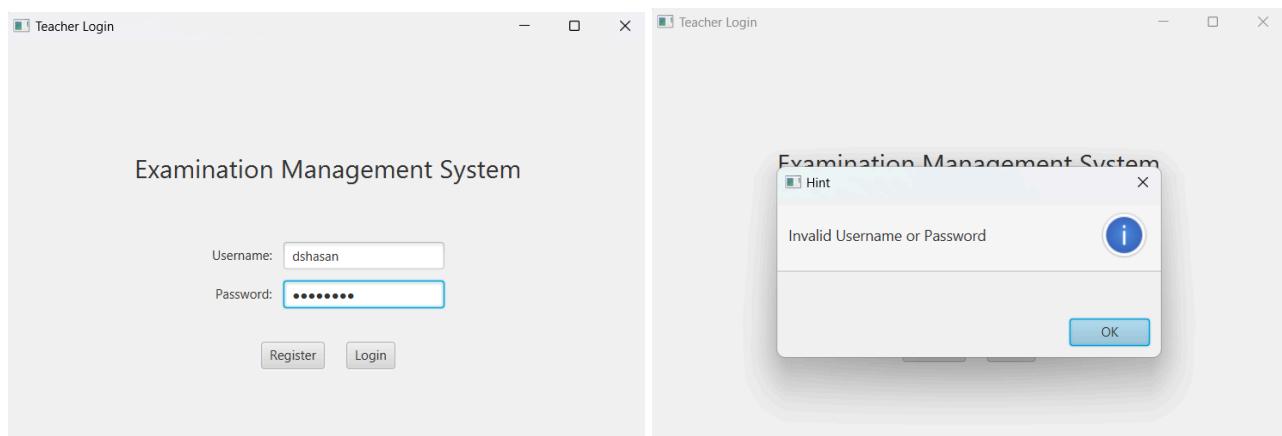
```
1 username:dshasan,password:dd,firstName:John Doe,gender:Male,department:CS,age:30,position:Professor,id:1732426475383,  
2 username:Aarav,password:asdf,firstName:Aarav,gender:Male,department:cs,age:20,position:Assistant,id:1732532468402,
```

## Teacher Login

### Empty Textfield



### Invalid Password or username



# Question Bank

## Display interface

The screenshot shows a Windows application window titled "Question Bank". At the top, there are search fields for "Question", "Type" (set to "Single"), and "Score", along with "Reset" and "Filter" buttons. Below is a table with columns: Question, Option A, Option B, Option C, Answer, Score, and Type. The table contains several rows of question data. To the right of the table are input fields for "Question", "Option A", "Option B", "Option C", "Answer", "Score", and a dropdown for "Type". At the bottom are "Refresh", "Delete", "Add", and "Update" buttons.

Question	Option A	Option B	Option C	Answer	Score	Type
How goes proj	As	As2	As3	C	1	Single
How goes everything	Very	Not nice	Shit	BC	1	Multiple
Another ones back	1	2	3	AB	10	Multiple
How life goes	A	B	C	AC	1	Multiple

## Delete Question

This screenshot shows two instances of the "Question Bank" application. The left instance has a modal dialog box titled "Hint" with the message "Question Deleted Successfully" and an "OK" button. The right instance shows the same table of questions, with the row for "Hello there" now removed. Both instances have identical UI elements for searching, adding, and updating questions.

## Add Question

This screenshot shows two instances of the "Question Bank" application. The left instance shows a table of questions with one additional row at the bottom. The right instance has a modal dialog box titled "Hint" with the message "Question Added Successfully" and an "OK" button. Both instances have identical UI elements for searching, adding, and updating questions.

Question Bank

Question	Type	Score	Reset	Filter		
How goes proj	As	As2	As3	C	1	Single
How goes everything	Very	Not nice	Shit	BC	1	Multiple
How life goes	A	B	C	AC	1	Multiple
Hello there	A	B	C	1	12	Single
Another one	1	2	3	AB	12	Multiple
Hey there	A	B	C	A	12	Single

Question      Type      Score      Refresh      Delete      Add      Update

## Question Update

Question Bank

Question	Type	Score	Reset	Filter
How goes proj	Multiple	1	Refresh	Delete
How goes everything	Multiple	1	Refresh	Delete
Another ones back	Multiple	1	Refresh	Delete
How life goes	Multiple	1	Refresh	Delete
Hello there	Multiple	1	Refresh	Delete

Question      Type      Score      Refresh      Delete      Add      Update

Question      Type      Score      Refresh      Delete      Add      Update

# Exam Management System

## Display Interface

Exam Management System

Exam	Course ID	Publish	Question	Type	Score
Quiz 1	COMP3112	Yes	How goes proj	Single	1
Quiz 2	COMP3111	Yes	How goes everything	Multiple	1
Quiz 3	MATH3111	Yes	How life goes	Multiple	1
Quiz 3	COMP3112	Yes	Hello there	Single	12
			Another one	Multiple	12

Exam Name      Course ID      Publish      Question      Type      Score

No content in table

Delete From Left      Add To Left

Exam Name  
Exam Time  
Course ID      Publish

CS103      Yes

Delete      Refresh      Add      Update

Exam Management System

Exam	Course ID	Publish	Question	Type	Score
Quiz 1	COMP3112	Yes	How goes proj	Single	1
Quiz 2	COMP3111	Yes	How goes everything	Multiple	1
Quiz 3	MATH3111	Yes	How life goes	Multiple	1
Quiz 3	COMP3112	Yes	Hello there	Single	12
			Another one	Multiple	12

Exam Name      Course ID      Publish      Question      Type      Score

No content in table

Delete From Left      Add To Left

Exam Name  
Exam Time  
Course ID      Publish

CS103      Yes

Delete      Refresh      Add      Update

## Exam Creation (Invalid Cases)

The left screenshot shows an attempt to create an exam named "Quiz 3" with course ID "COMP3112" and exam time "1200". A modal dialog box displays the message: "Exam Already Exists. Please Choose Another Name or Update the Exam".

The right screenshot shows an attempt to publish an exam named "Quiz 3" with course ID "COMP3112" and exam time "1200". A modal dialog box displays the message: "Exam Already Published. Please Unpublish the Exam to Update".

## Exam Creation (Valid case)

A new exam named "Quiz 4" is being added. The modal dialog box displays the message: "Exam Added Successfully".

## Exam Update

The left screenshot shows an attempt to update an exam named "Quiz 5" with course ID "COMP3112" and exam time "900". A modal dialog box displays the message: "Exam Updated Successfully".

The right screenshot shows the same update attempt, but the modal dialog box displays the message: "No content in table".

## Exam Delete

The screenshot shows two instances of the Exam Management System interface. The left window displays a list of exams with columns: Exam Name, Course ID, Exam Time, Publish, Question in Exam, Type, Score, Question, Type, and Score. An exam titled 'Quiz 5' is selected. The right window shows the result of the deletion process, with a message 'Exam Deleted Successfully' and an 'OK' button.

Exam Name	Course ID	Exam Time	Publish	Question in Exam	Type	Score	Question	Type	Score
Quiz 1	COMP3112	1	Yes				How goes proj	Single	1
Quiz 2	COMP3111	100	Yes				How goes everything	Multiple	1
Quiz 3	MATH3111	100	Yes				How life goes	Multiple	1
Quiz 4	COMP3112	10	Yes				Hello there	Single	12
Quiz 5	COMP3112	1200	No				Another one	Multiple	12

Exam Name	Course ID	Exam Time	Publish	Question in Exam	Type	Score	Question	Type	Score
Quiz 1	COMP3112	1	Yes				How goes proj	Single	1
Quiz 2	COMP3111	100	Yes				How goes everything	Multiple	1
Quiz 3	MATH3111	100	Yes				How life goes	Multiple	1
Quiz 4	COMP3112	10	Yes				Hello there	Single	12
Quiz 5	COMP3112	1200	No				Another one	Multiple	12

## Exam Filter

The screenshot shows two instances of the Exam Management System interface. The left window displays a list of exams with columns: Exam Name, Course ID, Exam Time, Publish, Question in Exam, Type, Score, Question, Type, and Score. An exam titled 'Quiz 3' is selected. The right window shows the result of the filtering process, with a message 'Exam Filtered Successfully' and an 'OK' button.

Exam Name	Course ID	Exam Time	Publish	Question in Exam	Type	Score	Question	Type	Score
Quiz 1	COMP3112	1	Yes				How goes proj	Single	1
Quiz 2	COMP3111	100	Yes				How goes everything	Multiple	1
Quiz 3	MATH3111	100	Yes				How life goes	Multiple	1
Quiz 4	COMP3112	10	Yes				Hello there	Single	12

Exam Name	Course ID	Exam Time	Publish	Question in Exam	Type	Score	Question	Type	Score
Quiz 1	COMP3112	1	Yes				How goes proj	Single	1
Quiz 2	COMP3111	100	Yes				How goes everything	Multiple	1
Quiz 3	MATH3111	100	Yes				How life goes	Multiple	1
Quiz 4	COMP3112	10	Yes				Hello there	Single	12

## Question Filter

The image shows two identical windows of the Exam Management System side-by-side. Each window has a header bar with fields for Exam Name, Course ID, Exam Time, and Publish status, along with buttons for Reset, Filter, and a dropdown menu.

The main area displays a table titled "Question in Exam" with columns for Question, Type, and Score. The table contains three rows:

Question	Type	Score
How goes prog	Single	1
How goes everything	Multiple	1
How life goes	Multiple	1

A message "No content in table" is displayed below the table. Below the table are two buttons: "Delete From Left" and "Add To Left".

The sidebar on the right contains fields for Exam Name (Quiz 3), Course ID (MATH3111), Exam Time (100), and Publish status (Yes). It also includes buttons for Delete, Refresh, Add, and Update.

# Testing Coverage

## TeacherRegister

Element	Class, %	Method, %	Line, %	Branch, %
comp3111.examsystem 25% (1/4)	8% (4/50)	5% (38/695)	12% (28/230)	
© TeacherRegister 100% (1/1)	66% (4/6)	82% (38/46)	63% (28/44)	
© TeacherLoginContr 0% (0/1)	0% (0/7)	0% (0/47)	0% (0/18)	
© QuestionBankContr 0% (0/1)	0% (0/14)	0% (0/271)	0% (0/76)	
© ExamManageContr 0% (0/1)	0% (0/23)	0% (0/331)	0% (0/92)	

## TeacherLogin

Coverage	TeacherRegisterTest	TeacherLoginControllerTest	⋮
Element	Class, %	Method, %	Line, %
comp3111.examsyst 50% (2/4)	18% (9/50)	10% (75/695)	18% (43/230)
© TeacherRegister 0% (0/1)	0% (0/6)	0% (0/46)	0% (0/44)
© TeacherLoginCor 100% (1/1)	57% (4/7)	51% (24/47)	66% (12/18)
© QuestionBankCor 100% (1/1)	35% (5/14)	18% (51/271)	40% (31/76)
© ExamManageCor 0% (0/1)	0% (0/23)	0% (0/331)	0% (0/92)

## QuestionBank

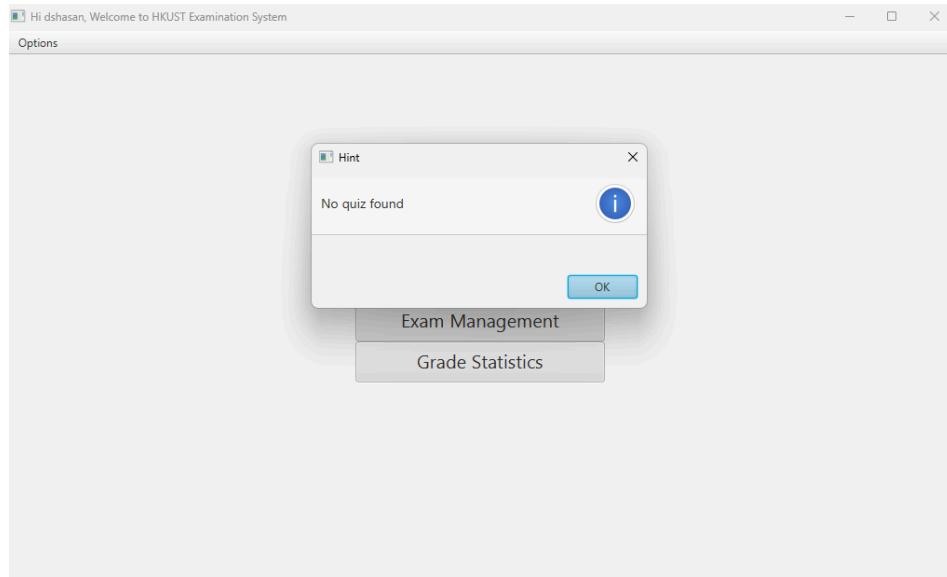
Coverage	TeacherRegisterTest	TeacherLoginControllerTest	⋮
Element	Class, %	Method, %	Line, %
comp3111.examsyst 50% (2/4)	18% (9/50)	10% (75/695)	18% (43/230)
© TeacherRegister 0% (0/1)	0% (0/6)	0% (0/46)	0% (0/44)
© TeacherLoginCor 100% (1/1)	57% (4/7)	51% (24/47)	66% (12/18)
© QuestionBankCor 100% (1/1)	35% (5/14)	18% (51/271)	40% (31/76)
© ExamManageCor 0% (0/1)	0% (0/23)	0% (0/331)	0% (0/92)

## ExamManage

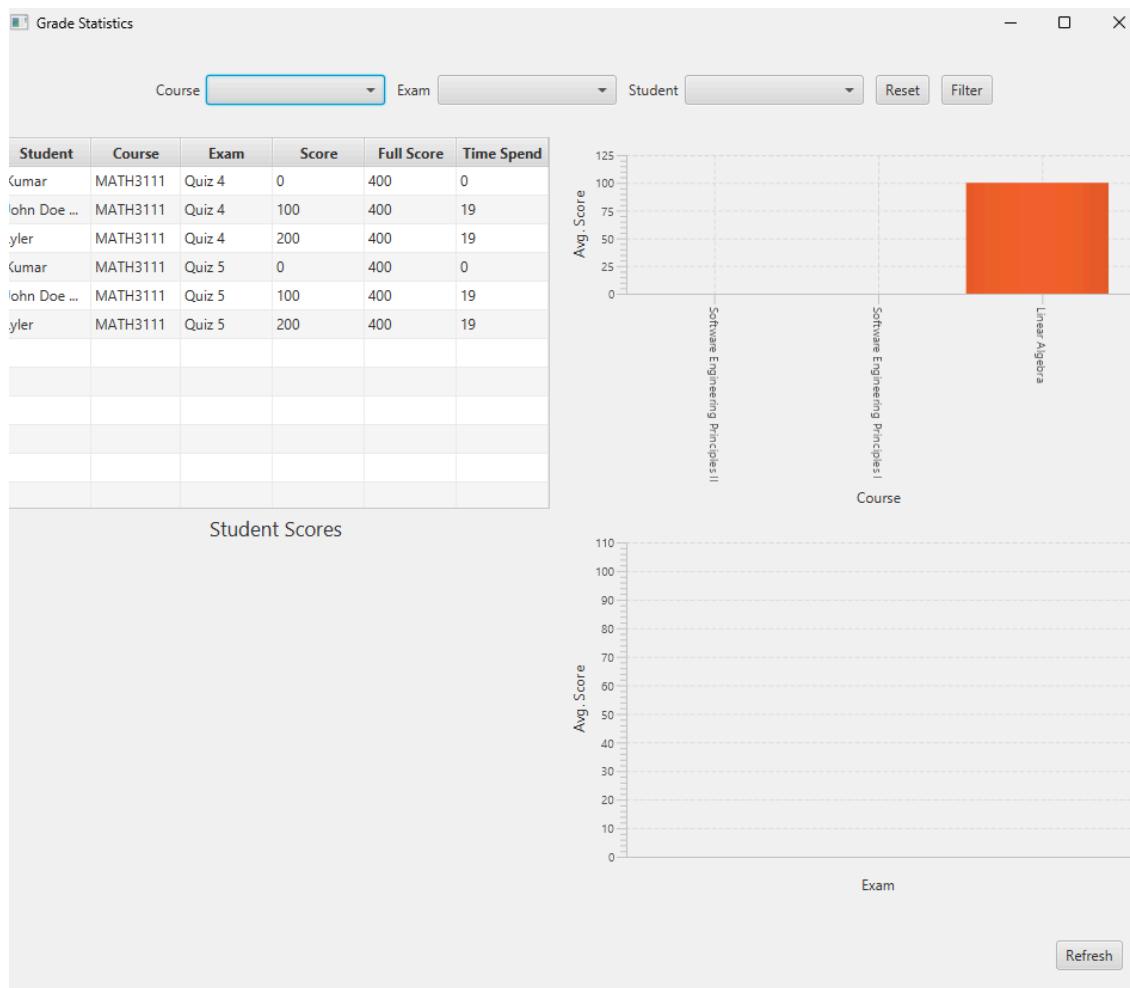
Coverage	ExamManageControllerTest.Test_update	TeacherRegisterTest	⋮
Element	Class, %	Method, %	Line, %
comp3111.examsystem.c 50% (2/4)	20% (10/50)	14% (103/695)	24% (56/230)
© TeacherRegister 100% (1/1)	66% (4/6)	82% (38/46)	63% (28/44)
© TeacherLoginControl 0% (0/1)	0% (0/7)	0% (0/47)	0% (0/18)
© QuestionBankControl 0% (0/1)	0% (0/14)	0% (0/271)	0% (0/76)
© ExamManageControl 100% (1/1)	26% (6/23)	19% (65/331)	30% (28/92)

**Task 3:**  
**Teacher Grade Statistics:**

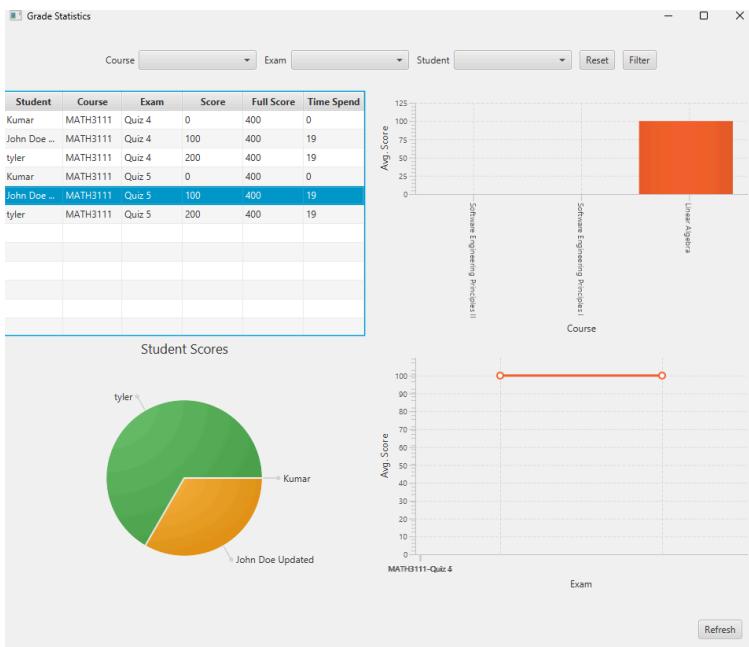
**Invalid Details:**



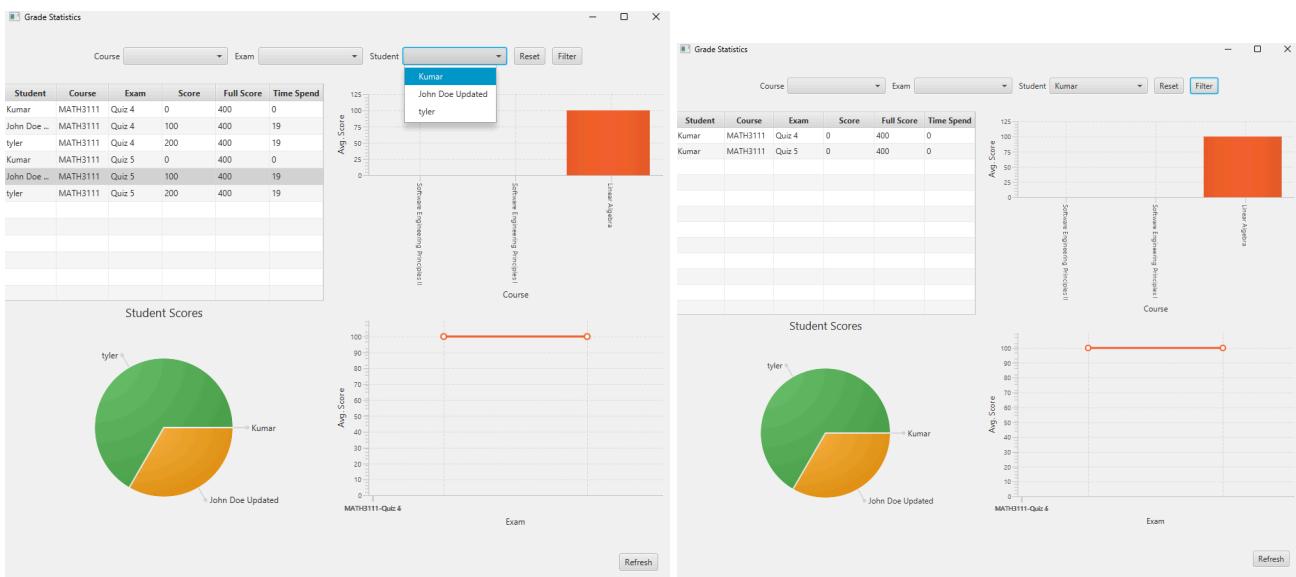
**Refresh:**



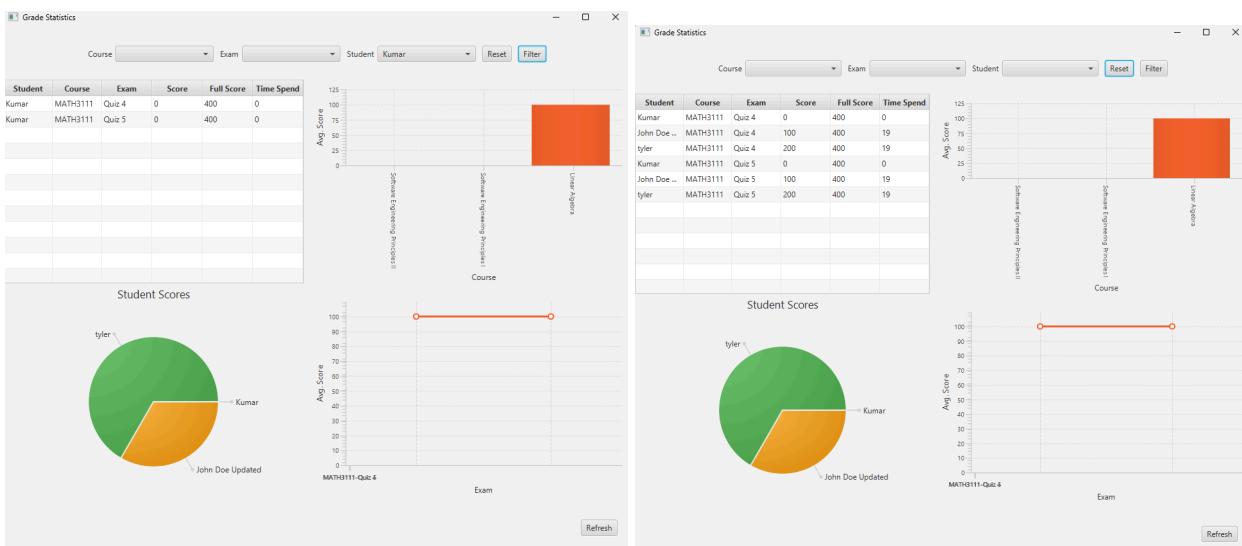
**Select Entry:**



## Filter:



## Reset:



## Student Management:

### Add:

Username	Name	Age	Gender	Department	Password
Mistake1_2...	Mistake1_1	12	Male	AIS	hi
Aarav3	AK	21	Male	AIS	hi
John	John	18	Male	AIS	g
aarav4	aarav	21	Male	AIS	g
updatedenosel...	John Doe	30	Male	CS	password
updatedvalid	John Doe Up...	31	Male	CS	newpassword
jdoe	John Doe	30	Male	CS	password
updatedenosel...	John Doe	30	Male	CS	password
updatevalid	John Doe	30	Male	CS	password
jdoe	John Doe	30	Male	CS	password
updatedenosel...	John Doe	30	Male	CS	password
updatevalid	John Doe	30	Male	CS	password

### Update:

Username	Name	Age	Gender	Department	Password
Aarav	Kumar	21	Male	AIS	hi
asda	asdads	21	Male	dasda	asdad
Shaun	tyler	21	Male	AIS	3111SRacist
Mistake 1	asd	12	Male	das	hi
Mistake1_2...	Mistake1_1	12	Male	as	G
Aarav3	AK	21	Male	AIS	hi
John	John	18	Male	AIS	g
aarav4	aarav	21	Male	AIS	g
updatedenosel...	John Doe	30	Male	CS	password
updatedvalid	John Doe Up...	31	Male	CS	newpassword
jdoe	John Doe	30	Male	CS	password
updatedenosel...	John Doe	30	Male	CS	password

### Delete:

Username	Name	Age	Gender	Department	Password
Aarav	Kumar	21	Male	AIS	hi
asda	asdads	21	Male	dasda	asdad
Shaun	tyler	21	Male	AIS	3111SRacist
Mistake 1	asd	12	Male	das	hi
Mistake1_2...	Mistake1_1	12	Male	as	G
Saadman	Saadman_De...	13	Female	adsd	G
Aarav3	AK	21	Male	AIS	hi
John	John	18	Male	AIS	g
aarav4	aarav	21	Male	AIS	g
updatedenosel...	John Doe	30	Male	CS	password
updatedvalid	John Doe Up...	31	Male	CS	newpassword
jdoe	John Doe	30	Male	CS	password

Invalid details

Student Manager

Username :	<input type="text"/>	Name:	<input type="text"/>	Department:	<input type="text"/>	<input type="button" value="Reset"/>	<input type="button" value="Filter"/>
Username	Name	Age	Gender	Department	Password		
Aarav3	AK	21	Male	AIS	hi		
John	John	18	Male	AIS	g		
aarav4	aarav	21	Male	AIS	g		
updatedenosel...	John Doe	30	Male	CS	password		
updatedvalid	John Doe Up..	31	Male	CS	newpassword		
jdoe	John Doe	30	Male	CS	password		
updatedenosel...	John Doe	30	Male	CS	password		
updatevalid	John Doe	30	Male	CS	password		
jdoe	John Doe	30	Male	CS	password		
updatedenosel...	John Doe	30	Male	CS	password		
updatevalid	John Doe	30	Male	CS	password		
anewentry	newentry	30	Female	CS	password		

The screenshot shows a Windows application window titled "Student Manager". The main interface includes search fields for "Username", "Name", and "Department", along with "Reset" and "Filter" buttons. Below these are two tables: one for "Usernames" and another for "Students". A modal dialog box is displayed, containing a title bar with a close button, a message area with the text "Invalid user details", and an "OK" button. The "Students" table has columns for "Name", "Age", "Gender", and "Department". The "Usernames" table has columns for "Name" and "Age".

Name	Age				
Aarav3	AK				
John	John				
aarav4	aarav				
updatednosel..	John				
updatedvalidid	John				
jdoe	John				
updatednosel..	John Doe	30	Male	CS	password
updatevalid	John Doe	30	Male	CS	password
jdoe	John Doe	30	Male	CS	password
updatednosel..	John Doe	30	Male	CS	password
updatedvalid	John Doe	30	Male	CS	password
anewentry	newentry	30	Female	CS	password

## Filter:

Student Manager

Username	Name	Age	Gender	Department	Password
Aarav	Kumar	21	Male	AIS	hi
asda	asdads	21	Male	dasda	another
Shaun	tyler	21	Male	AIS	3111ISRacist
Mistake 1	asd	12	Male	das	hi
Mistake1_2...	Mistake1_1	12	Male	as	G
Aarav3	AK	21	Male	AIS	hi
John	John	18	Male	AIS	g
aarav4	aarav	21	Male	AIS	g
updatednosel...	John Doe	30	Male	CS	password
updatedvalid	John Doe Up...	31	Male	CS	newpassword
jdoe	John Doe	30	Male	CS	password
unddatenosel...	John Doe	30	Male	CS	password

Reset
Filter

Username:

Name:

Age:

Gender:

Department:

Password:

Delete
Refresh
Add
Update

## **Reset:**

Student Manager

Username :	<input type="text"/>	Name:	<input type="text"/>	Department:	<input type="text"/>	<input type="button" value="Reset"/>	<input type="button" value="Filter"/>
Username	Name	Age	Gender	Department	Password		
Aarav	Kumar	21	Male	AIS	hi		
asda	asdads	21	Male	dasda	another		
Shaun	tyler	21	Male	AIS	3111lSRacist		
Mistake 1	asd	12	Male	das	hi		
Mistake1_2...	Mistake1_1	12	Male	as	G		
Aarav3	AK	21	Male	AIS	hi		
John	John	18	Male	AIS	g		
aarav4	aarav	21	Male	AIS	g		
updatedenosel...	John Doe	30	Male	CS	password		
updatedvalid	John Doe Up...	31	Male	CS	newpassword		
jdoe	John Doe	30	Male	CS	password		
undatenosel...	John Doe	30	Male	CS	password		

**Search:**

Username:  
Name:  
Age:  
Gender:  
Department:  
Password:

**Action Buttons:**

**Username already exists:**

The screenshot shows two instances of the 'Student Manager' application. The left instance displays a table of student data with columns: Username, Name, Age, Gender, Department, and Password. The right instance shows a modal dialog titled 'Hint' with the message 'Username already exists'. Both instances have search and filter fields at the top.

Username	Name	Age	Gender	Department	Password
Aarav	Kumar	21	Male	AIS	hi
asda	asdads	21	Male	dasda	another
Shaun	tyler	21	Male	AIS	3111ISRacist
Mistake 1	asd	12	Male	das	hi
Mistake1_2_...	Mistake1_1	12	Male	as	G
Aarav3	AK	21	Male	AIS	hi
John	John	18	Male	AIS	g
aarav4	aarav	21	Male	AIS	g
updatenosel...	John Doe	30	Male	CS	password
updatedvalid	John Doe Up...	31	Male	CS	newpassword
jdoe	John Doe	30	Male	CS	password
updatenosel...	John Doe	30	Male	CS	password

## Refresh:

The screenshot shows a single instance of the 'Student Manager' application. It displays a table of student data with columns: Username, Name, Age, Gender, Department, and Password. There are also search and filter fields at the top of the interface.

Username	Name	Age	Gender	Department	Password
Aarav	Kumar	21	Male	AIS	hi
asda	asdads	21	Male	dasda	another
Shaun	tyler	21	Male	AIS	3111ISRacist
Mistake 1	asd	12	Male	das	hi
Mistake1_2_...	Mistake1_1	12	Male	as	G
Aarav3	AK	21	Male	AIS	hi
John	John	18	Male	AIS	g
aarav4	aarav	21	Male	AIS	g
updatenosel...	John Doe	30	Male	CS	password
updatedvalid	John Doe Up...	31	Male	CS	newpassword
jdoe	John Doe	30	Male	CS	password
updatenosel...	John Doe	30	Male	CS	password

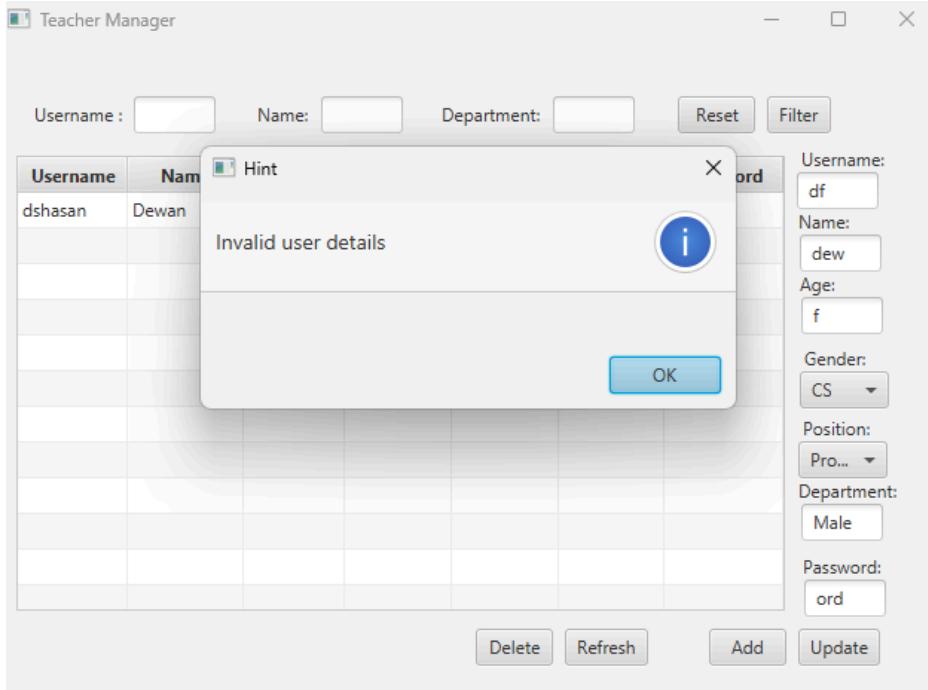
### **Teacher Manager:**

## **Update:**

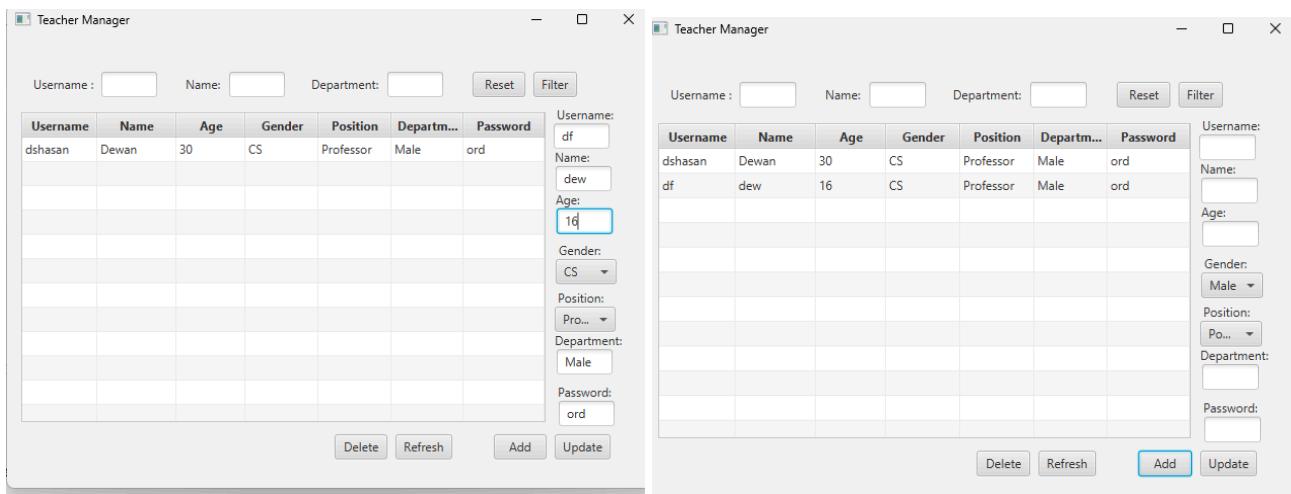
**Username already exists:**

The screenshot shows a Windows application window titled "Teacher Manager". The main interface includes search fields for "Username", "Name", and "Department", along with "Reset" and "Filter" buttons. To the right, there's a sidebar with dropdowns for "Username", "Name", "Age", "Gender", "Position", "Department", and "Password". Below these are buttons for "Delete", "Refresh", "Add", and "Update". A modal dialog box titled "Hint" is displayed in the center, containing the message "Username already exists" and an information icon (a blue circle with a white 'i'). At the bottom of the dialog is an "OK" button.

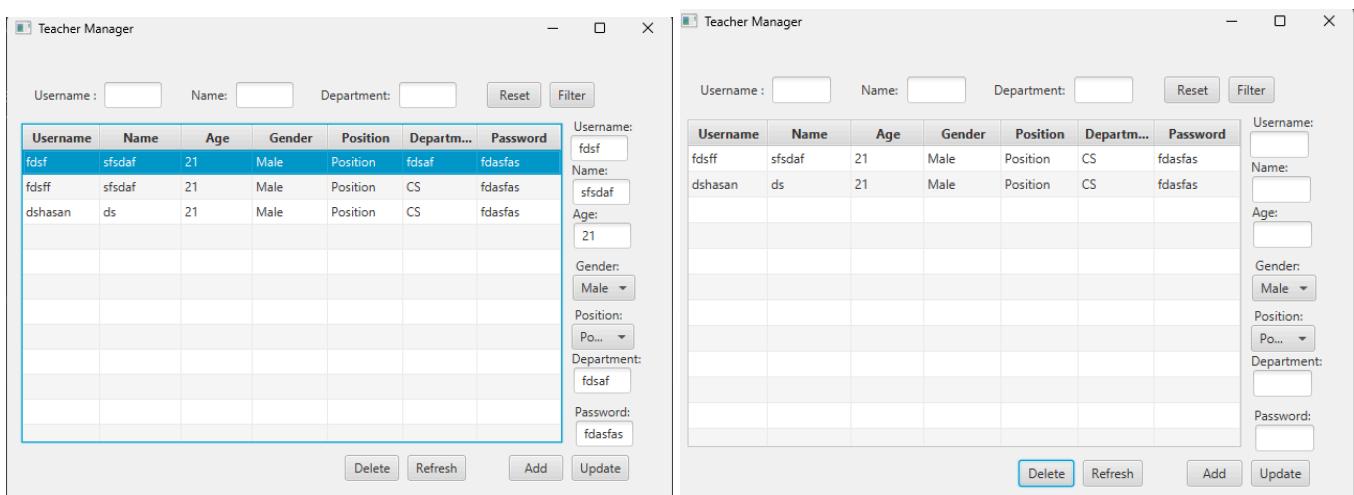
## Invalid details:



**Add:**



## Delete:



**Filter:**

## **Reset:**

## Refresh:

## Course Management:

### Filter:

The left screenshot shows the application window with three filter fields: Course ID (COMP3112), Course Name (Software Engineering Principle...), and Department (CSE). The right screenshot shows the application window with the same filter settings, resulting in an empty table and the message "No content in table".

Course ID	Course Name	Department
COMP3112	Software Engineering Principle...	CSE
COMP3111	Software Engineering Principles I	CSE
MATH3111	Linear Algebra	CSE

Course ID	Course Name	Department

### Reset:

The left screenshot shows the application window with three filter fields: Course ID (MATH3), Course Name (Linear A), and Department (CSE). The right screenshot shows the application window with the same filter settings removed, displaying all course data.

Course ID	Course Name	Department

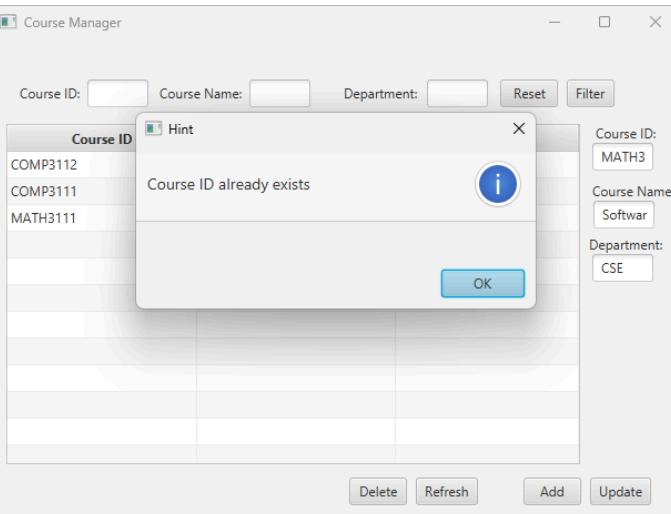
Course ID	Course Name	Department
COMP3112	Software Engineering Principle...	CSE
COMP3111	Software Engineering Principles I	CSE
MATH3111	Linear Algebra	CSE

### Invalid details:

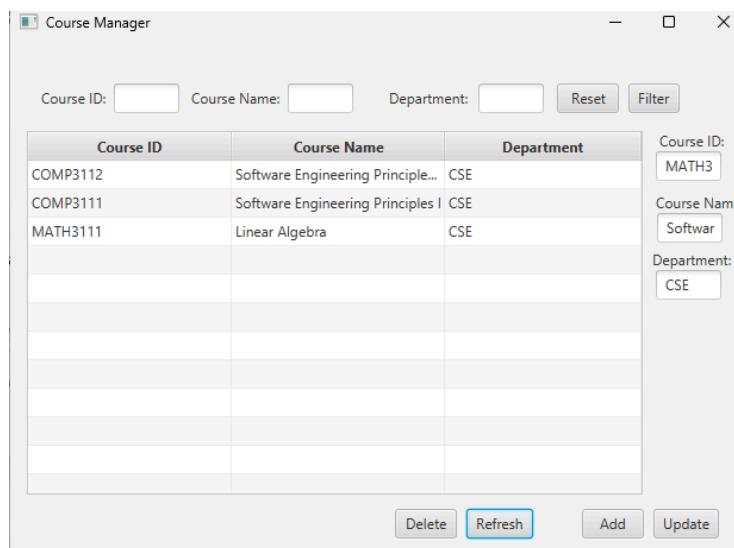
A modal dialog box titled "Hint" displays the message "Invalid course details" with an information icon (i). The background application window shows a table with three rows: COMP3112, COMP3111, and MATH3111. The filter fields show Course ID (MATH3), Course Name (empty), and Department (empty).

Course ID	Course Name	Department
COMP3112		
COMP3111		
MATH3111		

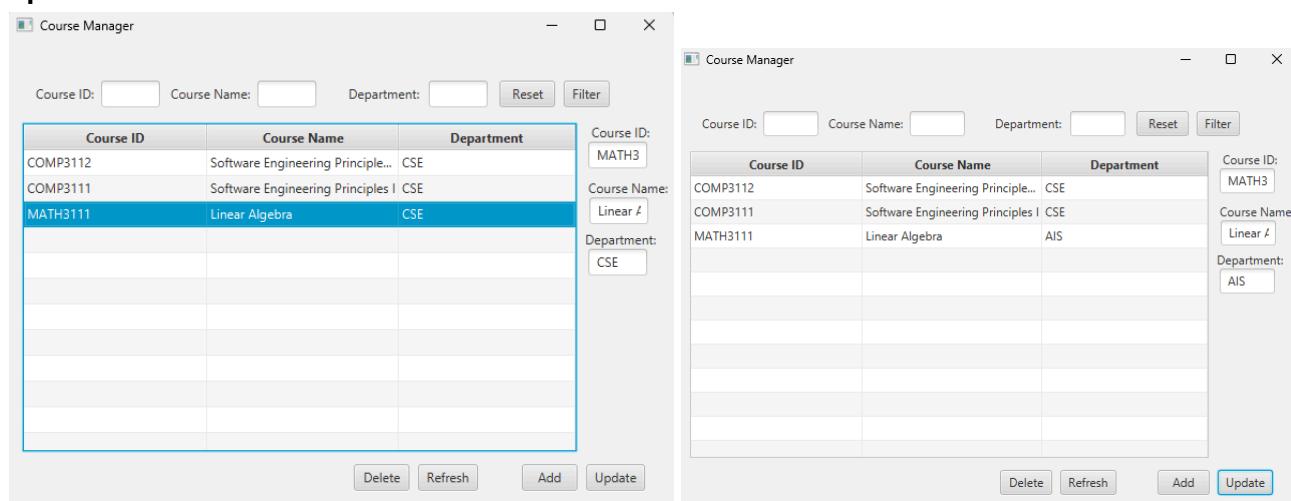
### Username exists:



### Refresh:



### Update:



### Delete:

## Testing Coverage:

Element	Class, %	Method, %	Line, %	Branch, %
CountDownPlatformController	13% (3/22)	18% (4/21)	10% (166/1640)	14% (93/636)
CourseManagerController	100% (1/1)	80% (16/20)	73% (52/71)	66% (24/36)
ExamManageController	0% (0/1)	0% (0/12)	0% (0/319)	0% (0/88)
ManagerLoginController	0% (0/2)	0% (0/4)	0% (0/25)	0% (0/14)
ManagerMainController	0% (0/1)	0% (0/5)	0% (0/23)	100% (0/0)
QuestionBankController	0% (0/1)	0% (0/8)	0% (0/255)	0% (0/76)
SelectLoginController	0% (0/1)	0% (0/3)	0% (0/24)	100% (0/0)
StudentGradeStatisticController	0% (0/4)	0% (0/28)	0% (0/116)	0% (0/48)
StudentLoginController	0% (0/1)	0% (0/10)	0% (0/43)	0% (0/16)
StudentMainController	0% (0/1)	0% (0/12)	0% (0/66)	0% (0/26)
StudentManagerController	100% (1/1)	75% (9/12)	65% (52/79)	72% (36/50)
StudentRegister	0% (0/1)	0% (0/12)	0% (0/77)	0% (0/44)
StudentTakeExamController	0% (0/1)	0% (0/36)	0% (0/191)	0% (0/74)
TeacherGradeStatisticController	0% (0/2)	0% (0/16)	0% (0/118)	0% (0/48)
TeacherLoginController	0% (0/1)	0% (0/5)	0% (0/45)	0% (0/18)
TeacherMainController	0% (0/1)	0% (0/9)	0% (0/48)	0% (0/6)
TeacherManagerController	100% (1/1)	72% (16/22)	69% (62/89)	68% (33/48)
TeacherRegister	0% (0/1)	0% (0/3)	0% (0/47)	0% (0/44)

Element	Class, %	Method, %	Line, %	Branch, %
CourseManagerController	4% (1/22)	7% (16/217)	3% (62/1640)	5% (33/36)
ExamManageController	0% (0/1)	0% (0/20)	0% (0/71)	0% (0/36)
ManagerLoginController	0% (0/2)	0% (0/4)	0% (0/25)	0% (0/14)
ManagerMainController	0% (0/1)	0% (0/5)	0% (0/23)	100% (0/0)
QuestionBankController	0% (0/1)	0% (0/8)	0% (0/265)	0% (0/76)
SelectLoginController	0% (0/1)	0% (0/3)	0% (0/24)	100% (0/0)
StudentGradeStatisticController	0% (0/4)	0% (0/28)	0% (0/116)	0% (0/48)
StudentLoginController	0% (0/1)	0% (0/10)	0% (0/43)	0% (0/16)
StudentMainController	0% (0/1)	0% (0/12)	0% (0/66)	0% (0/26)
StudentManagerController	0% (0/1)	0% (0/12)	0% (0/66)	0% (0/26)
StudentRegister	0% (0/1)	0% (0/12)	0% (0/71)	0% (0/44)
StudentTakeExamController	0% (0/1)	0% (0/36)	0% (0/191)	0% (0/74)
TeacherGradeStatisticController	0% (0/2)	0% (0/16)	0% (0/118)	0% (0/48)
TeacherLoginController	0% (0/1)	0% (0/5)	0% (0/45)	0% (0/18)
TeacherMainController	0% (0/1)	0% (0/9)	0% (0/48)	0% (0/6)
TeacherManagerController	100% (1/1)	72% (16/22)	69% (62/89)	68% (33/48)
TeacherRegister	0% (0/1)	0% (0/3)	0% (0/47)	0% (0/44)

Element	Class, %	Method, %	Line, %	Branch, %
CourseManagerController	25% (6/24)	33% (18/54)	25% (15/60)	25% (6/24)
ExamManageController	0% (0/1)	0% (0/12)	0% (0/319)	0% (0/88)
ManagerLoginController	0% (0/2)	0% (0/4)	0% (0/25)	0% (0/14)
ManagerMainController	0% (0/1)	0% (0/5)	0% (0/23)	100% (0/0)
QuestionBankController	0% (0/1)	0% (0/8)	0% (0/265)	0% (0/76)
SelectLoginController	0% (0/1)	0% (0/3)	0% (0/24)	100% (0/0)
StudentGradeStatisticController	0% (0/4)	0% (0/28)	0% (0/116)	0% (0/48)
StudentLoginController	0% (0/1)	0% (0/10)	0% (0/43)	0% (0/16)
StudentMainController	0% (0/1)	0% (0/12)	0% (0/66)	0% (0/26)
StudentManagerController	0% (0/1)	0% (0/12)	0% (0/66)	0% (0/26)
StudentRegister	0% (0/1)	0% (0/12)	0% (0/71)	0% (0/44)
StudentTakeExamController	0% (0/1)	0% (0/36)	0% (0/191)	0% (0/74)
TeacherGradeStatisticController	0% (0/2)	0% (0/16)	0% (0/118)	0% (0/48)
TeacherLoginController	0% (0/1)	0% (0/5)	0% (0/45)	0% (0/18)
TeacherMainController	0% (0/1)	0% (0/9)	0% (0/48)	0% (0/6)
TeacherManagerController	100% (1/1)	72% (16/22)	69% (62/89)	68% (33/48)
TeacherRegister	0% (0/1)	0% (0/3)	0% (0/47)	0% (0/44)

The screenshot shows the IntelliJ IDEA interface with the following details:

- Project View:** Shows the project structure with files like `UsefulTools.iml`, `Main`, `module-info.java`, `resources`, `test`, `java`, `comp3111.examsystem`, `controller`, `CourseManagerControllerTest`, `Sample`, `StudentGradeStatisticControllerTest`, `StudentLoginControllerTest`, `StudentManagerControllerTest` (selected), `StudentRegisterTest`, `StudentTakeExamControllerTest`, `TeacherManagerControllerTest`, `Utils`, `MsgSender`, `target`, `mvnw`, `mvnw.cmd`, `pom.xml`, `project`, and `README.md`.
- Code Editor:** Displays the `ManagerController` class with several test methods: `deleteStudent`, `filterStudents`, and `getStudents`. The `filterStudents` method is currently selected.
- Coverage Tab:** Shows the coverage report for `StudentManagerControllerTest`. The report includes:

	Class, %	Method, %	Line, %	Branch, %
100% (1/1)	75% (9/12)	65% (52/79)	72% (36/50)	
100% (1/1)	75% (9/12)	65% (52/79)	72% (36/50)	
- Bottom Panel:** Shows the test results for `StudentManagerControllerTest`: 17 tests passed in 440ms. The log output includes JavaFX runtime warnings about FXML loading.

## Overall Coverage

Coverage	controller in ExamSystem	⋮	–	⠇	
Element	^	Class, %	Method, %	Line, %	Branch, %
comp3111.examsystem	58% (20/34)	44% (160/359)	37% (809/2144)	39% (338/848)	
Classes	83% (5/6)	46% (36/78)	41% (72/175)	4% (2/48)	
controller	50% (11/22)	43% (104/237)	34% (590/1693)	41% (269/644)	
UserClass	0% (0/1)	0% (0/14)	0% (0/20)	100% (0/0)	
Utils	100% (4/4)	71% (20/28)	59% (147/249)	42% (67/156)	
Main	0% (0/1)	0% (0/2)	0% (0/7)	100% (0/0)	