

OOAD

Section B

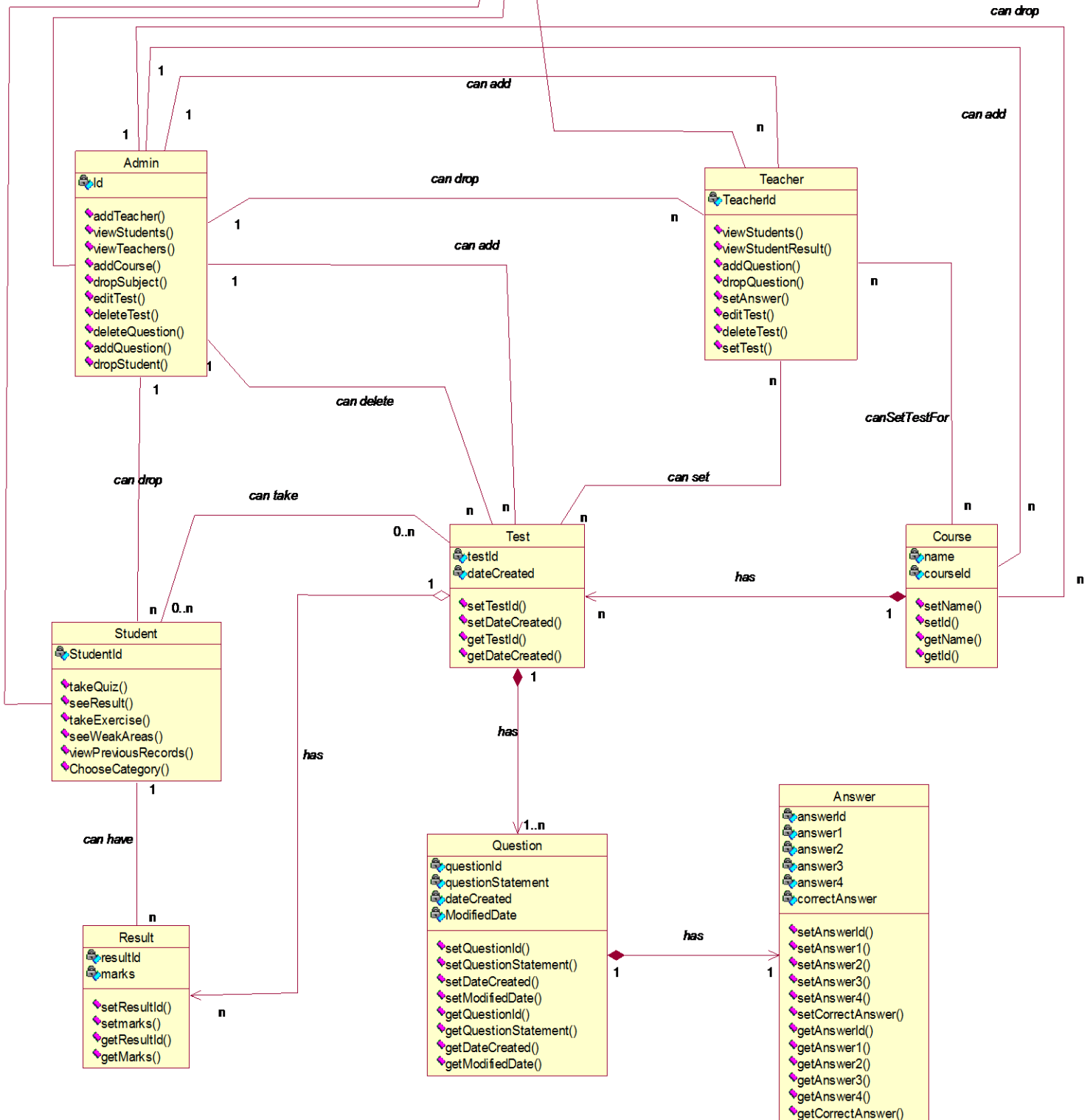
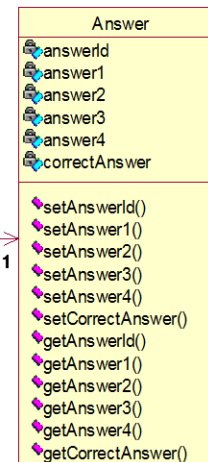
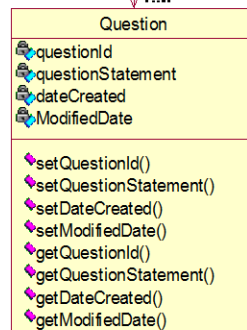
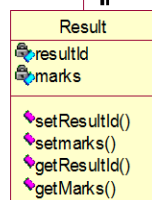
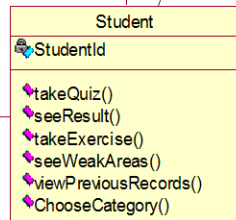
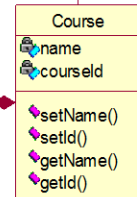
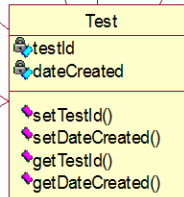
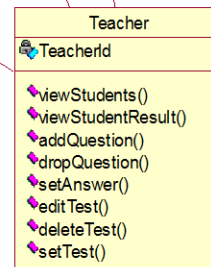
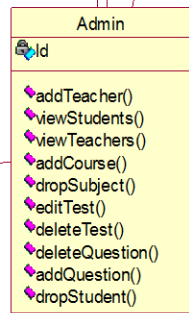
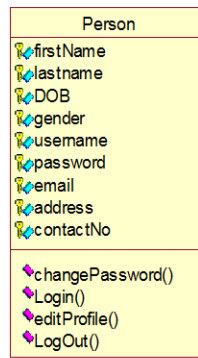
“Learning Management System”

Phase 1

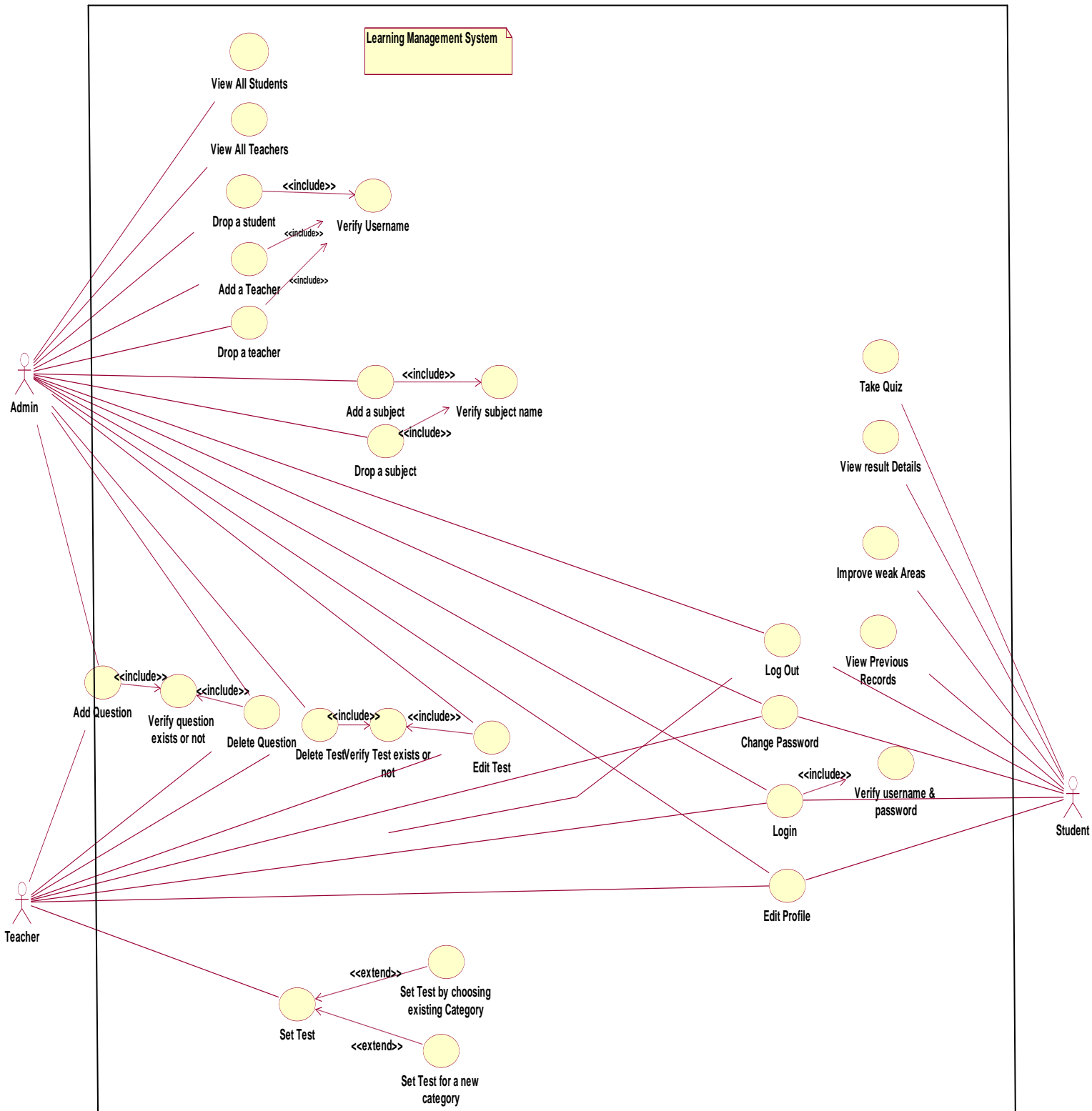
Team# 6

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Janeeta Raj
Atiq Mumtaz
Areeba Zahid
Furqan Nadeem**

Analysis Class Diagram



Use Case Diagram



Use Case Templates

Identifier		UC-1
Name		Sign up
Summary		An actor has to sign up to use the features of application
Priority		Medium
Actors		Student
Pre-condition(s)		Student Category must be selected from the menu
Post-condition(s)		Student is registered successfully
Typical Course of Action		
S#	Actor Action	System Response
1	Type username	
2		Username is unique
3	Type password	
4	Retypes password	
5		Passwords match
6	Types Name	
7	Types contact number	
8	Type Email address	
9	Clicks on "Submit"	
10		Successfully sign up
Alternate Course(s) of Action		
S#	Actor Action	System Response
1	Type username	
2		Username not unique
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Types invalid password	
4		Password invalid

Alternate Course(s) of Action		
S#	Actor Action	System Response
4	Types non-matching password	
5		Password doesn't match

S#	Actor Action	System Response
4	Types invalid name	
5		Name is invalid

S#	Actor Action	System Response
4	Types invalid contact number	
5		Contact number is invalid

S#	Actor Action	System Response
4	Types invalid email	
5		Email invalid

Identifier	UC-2	
Name	Log in	
Summary	An actor has to log in to his account to perform further actions.	
Priority	Medium	
Actors	Student, Teacher, Admin	
Pre-condition(s)	An actor must have an account	
Post-condition(s)	An actor has logged in successfully.	
Typical Course of Action		
S#	Actor Action	System Response
1	Type username	
2	Type password	
3	Clicks on "Log in"	
4		Display: You have successfully logged in to your profile
5		Show profile.
Alternate Course(s) of Action		
S#	Actor Action	System Response
1	Type wrong username	
2	Type password	
3	Click on Log in	
4		Username is incorrect. Type again

Alternate Course(s) of Action		
S#	Actor Action	System Response
1	Type username	
2	Type wrong password	
3	Click on Log in	
4		Password is incorrect. Type again

S#	Actor Action	System Response
1	Type wrong username	
2	Type wrong password	
3	Click on Log in	
4		Username and password is incorrect. Type again

Identifier	UC-3	
Name	Edit Profile	
Summary	An actor can make changes to his personal info in his account.	
Priority	Low	
Actors	Student, Teacher, Admin	
Pre-condition(s)	An actor must have an account and must be logged in.	
Post-condition(s)	Changes are successfully applied to the profile.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Edit Profile"	
2		Shows Complete profile
3	Edits Name	
4	Edits Email	
5	Edits contact	
6	Clicks on "Save changes"	
7		Changes are successfully applied
Alternate Course(s) of Action		
S#	Actor Action	System Response
2	Type invalid name	
3		Displays : Invalid name
Alternate Course(s) of Action		
S#	Actor Action	System Response
4	Type invalid email	
5		Displays : Invalid email

Alternate Course(s) of Action		
S#	Actor Action	System Response
5	Type invalid contact	
6		Displays : Invalid contact

Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Skips to edit name	

Alternate Course(s) of Action		
S#	Actor Action	System Response
4	Skips to edit email	

Alternate Course(s) of Action		
S#	Actor Action	System Response
5	Skips to edit contact	

Identifier	UC-4
Name	Take quiz
Summary	An actor can take quiz to test his/her skills
Priority	High
Actors	Student
Pre-condition(s)	An actor must be logged in. A category must be chosen by the actor.
Post-condition(s)	Results of quiz are shown

Typical Course of Action

S#	Actor Action	System Response
1	Clicks on "Start Quiz"	
2		Displays question
3	Selects answer	
4		Prompts for: Go to next question
5	Clicks on "Next"	
6		Displays next question (go to point#2) until done with all questions
7		Prompts for: Quiz completed. Do you want to submit
8	Clicks on "Submit Quiz"	
9		Show result

Alternate Course(s) of Action

S#	Actor Action	System Response
3	Skips the question	
4		Displays next question (go to point#2) until done with all questions

Alternate Course(s) of Action

S#	Actor Action	System Response
5	Clicks on "Go back"	
6		Displays the previous question

Alternate Course(s) of Action

S#	Actor Action	System Response
8	Clicks on "Recheck Answers"	
9		Displays the previous question

Identifier	UC-5	
Name	View Details of result	
Summary	An actor can view all the answers she/he has selected against the correct answers.	
Priority	Low	
Actors	Student	
Pre-condition(s)	An actor must be logged in. An actor must have given a quiz to view his/her score	
Post-condition(s)	Details are shown to the actor.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "View Details of result"	
2		Shows details of his/her result

Identifier	UC-6	
Name	View previous records	
Summary	An actor can view all the details of the test he/she has taken before	
Priority	Low	
Actors	Student	
Pre-condition(s)	An actor must be logged in.	
Post-condition(s)	Details are shown to the actor.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "View previous records"	
2		Shows all the details of the test he/she has taken before
Alternate Course(s) of Action		
S#	Actor Action	System Response
1	Clicks on "View previous records"	
2		No records found

Identifier	UC-7	
Name	Improve weak Areas	
Summary	An actor can take exercises to improve his skills	
Priority	Low	
Actors	Student	
Pre-condition(s)	An actor must be logged in. And the actor must have taken the test.	
Post-condition(s)	Student has taken exercises	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Improve weak Areas"	
2		Shows all the details of area's where he is weak
3		Prompts for: Take exercises
4	Clicks on "Take exercises"	
5		Shows the menu for exercises
6	Selects any exercise	
7		Shows the exercise
8	Reads exercise	
9	Clicks on "Done"	
10		Closes the exercise
11		Show home page
Alternate Course(s) of Action		
S#	Actor Action	System Response
4	Clicks on "Quit"	
5		Shows home page

Identifier	UC-8	
Name	View all students	
Summary	An actor can view all the students and their test scores	
Priority	Low	
Actors	Admin	
Pre-condition(s)	An admin must be logged in.	
Post-condition(s)	Details are shown to the actor.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on View all students	
2		Shows all the students and their test scores
Alternate Course(s) of Action		
S#	Actor Action	System Response
1	Clicks on View all students	
2		No student has registered yet.

Identifier	UC-9	
Name	View teachers	
Summary	An actor can view all the teachers information	
Priority	Low	
Actors	Admin	
Pre-condition(s)	An admin must be logged in.	
Post-condition(s)	Details are shown to the actor.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "View all Teacher"	
2		Shows all teachers and their information
Alternate Course(s) of Action		
S#	Actor Action	System Response
1	Clicks on "View all Teacher"	
2		No teacher exists yet.

Identifier		UC-10
Name		Add teacher
Summary		An actor can add a teacher
Priority		Medium
Actors		Admin
Pre-condition(s)		An actor must be logged in.
Post-condition(s)		Teacher is added successfully.
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Add Teacher"	
2		Prompts for: Type name, username, password and subject for teacher
3	Types name	
4	Types username	
5		Username is available
6	Type password	
7	Retype Password	
8		Passwords match
9	Type subject	
10	Type email	
11	Clicks on "Add"	
12		You have successfully added a teacher
Alternate Course(s) of Action		
S#	Actor Action	System Response
4	Type username	
5		Username not available

Alternate Course(s) of Action		
S#	Actor Action	System Response
6	Types invalid password	
7		Password invalid

Alternate Course(s) of Action		
S#	Actor Action	System Response
7	Types non-matching password	
8		Password doesn't match

S#	Actor Action	System Response
3	Types invalid name	
4		Name is invalid

S#	Actor Action	System Response
9	Types invalid subject	
10		Subject is invalid

S#	Actor Action	System Response
10	Types invalid email	
11		Email invalid

Identifier	UC-11	
Name	Drop a teacher	
Summary	An actor can drop a teacher	
Priority	Low	
Actors	Admin	
Pre-condition(s)	An actor must be logged in.	
Post-condition(s)	The teacher is dropped successfully.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Drop Teacher"	
2		Prompts for: Type username of the teacher you want to delete
3	Type username of the specific teacher	
4		Prompts for: Are you sure?
5	Clicks on "Yes"	
6		You have successfully dropped a teacher
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Type username of the specific teacher	
4		Username doesn't exist

S#	Actor Action	System Response
6	Clicks on "No"	
7		Teacher not dropped
8		Shows homepage

Identifier	UC-12	
Name	Add a subject	
Summary	An actor can add a subject	
Priority	Medium	
Actors	Admin	
Pre-condition(s)	An actor must be logged in.	
Post-condition(s)	The subject is added successfully.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Add a subject"	
2		Prompts for: Type name of subject
3	Types subject name	
4	Clicks on "Submit"	
5		You have successfully added a subject
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Types subject name	
4	Clicks on "Submit"	
5		Subject Already exists

Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Types subject name	
4	Clicks on "Submit"	
5		Subject is not valid.

Identifier	UC-13	
Name	Drop a subject	
Summary	An actor can drop a subject	
Priority	Medium	
Actors	Admin	
Pre-condition(s)	An actor must be logged in.	
Post-condition(s)		
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Drop a subject"	
2		Prompts for: Type name of subject
3	Types subject name	
4	Clicks on "Submit"	
5		You have successfully dropped a subject
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Types subject name	
4	Clicks on "Submit"	
5		Subject doesn't exist

Identifier		UC-14
Name		Set Test
Summary		Teacher sets a new test for a particular course provided by the system
Priority		High
Actors		Teacher
Pre-condition(s)		A teacher must be logged in and the course he wants to set test for, must have been added to the system by admin
Post-condition(s)		The test has been successfully added
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Set test" option.	
2		Prompts to choose subject category.
3	Chooses the category.	
4		Prompts for number of questions he wants to add to the test.
5	Enters the number of questions.	
6		Prompts to set the first question.
7	Types the question.	
8		Prompts for 4 options of that question.
9	Enters the options to that question.	
10		Prompts to enter the correct answer to that question.
11	Enters the correct answer.	
12		Displays: "This question is successfully added to this test."
13		Prompts for the next question (and repeats 6-12 points unless all the questions are added)
14		Displays: "Test is successfully added to the system".
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Chooses wrong category.	
4		Displays: "Wrong category is chosen; Please choose from the

		given categories.”
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Alternate Course(s) of Action		
S#	Actor Action	System Response
5	Gives the wrong number of questions.	
6		Displays: “Number of questions per test must be between 10 and 50.”

Identifier		UC-15
Name		Edit Test
Summary		A teacher or admin can edit any question in the tests that are in the system.
Priority		Medium
Actors		Teacher, Admin
Pre-condition(s)		An actor must be logged in and the test he wants to edit must be in the system.
Post-condition(s)		The test is successfully edited.
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on “Edit test” option.	
2		Prompts to choose subject category.
3	Chooses the category.	
4		Displays all the available tests of that category.
5	Chooses test number he wants to edit.	
6		Displays that complete test.
7		Asks for the question number he wants to edit.
8	Enters the question number.	
9		Asks to enter the new edited statement of that question.
10	Enters the new statement for that question.	
11		Asks if actor wants to edit options of that question too.
12	Enters “yes”	
		Asks for new options.
13	Enters the options to that question.	
14		Prompts to enter the correct answer to that question.
15	Enters the correct answer.	
16		Displays: “Question is successfully edited”
17		Prompts for the next question he wants to edit (and repeat 7-16 points unless he’s done with all the questions he wanted to edit)

18		Displays: "You have successfully edited the question."
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Chooses wrong category.	
4		Displays: "Wrong category is chosen; Please choose from the given categories."

Alternate Course(s) of Action		
S#	Actor Action	System Response
5	Gives the wrong number of the test	
6		Displays: "You have entered a wrong number."

Alternate Course(s) of Action		
S#	Actor Action	System Response
8	Gives the number for question not present in the test.	
9		Displays: "You have entered a wrong number."

Alternate Course(s) of Action		
S#	Actor Action	System Response
12	Enters "No"	
13		Goes to point 16 of typical course of action.

Identifier	UC-16	
Name	Delete Test	
Summary	A teacher or admin can delete a test present in the system.	
Priority	Medium	
Actors	Teacher, Admin	
Pre-condition(s)	An actor must be logged in and the test he wants to delete must be in the system.	
Post-condition(s)	The test is successfully deleted.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Delete test" option.	
2		Prompts to choose subject category.
3	Chooses the category.	
4		Displays all the available tests of that category.
5	Chooses test number he wants to delete.	
6		Deletes the test.
7		Displays: "Chosen test sis successfully deleted"
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Chooses wrong category.	
4		Displays: "Wrong category is chosen; Please choose from the given categories."

Alternate Course(s) of Action		
S#	Actor Action	System Response
5	Gives the wrong number of the test	
6		Displays: "You have entered a wrong number."

Identifier		UC-17
Name		Delete question
Summary		A teacher or admin can delete any question in the tests that are in the system.
Priority		Medium
Actors		Teacher, Admin
Pre-condition(s)		An actor must be logged in and the test must be in the system.
Post-condition(s)		The questions are deleted from the test.
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on “Delete question” option.	
2		Prompts to choose subject category.
3	Chooses the category.	
4		Displays all the available tests of that category.
5	Chooses test number whose question he wants to delete.	
6		Displays that complete test.
7		Asks for the question number he wants to delete.
8	Enters the question number.	
9		Displays: “Question is successfully deleted”
10		Displays: “Do you want to delete another question?”
11	Enters “yes”	
12		Prompts for the next question he wants to delete (and repeat 7-11points unless he’s done with all the questions he wanted to delete)
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Chooses wrong category.	
4		Displays: “Wrong category is chosen; Please choose from the

		given categories.”
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Alternate Course(s) of Action		
S#	Actor Action	System Response
5	Gives the wrong number of the test	
6		Displays: “You have entered a wrong number.”

Alternate Course(s) of Action		
S#	Actor Action	System Response
8	Gives the number for question not present in the test.	
9		Displays: “You have entered a wrong number.”

Alternate Course(s) of Action		
S#	Actor Action	System Response
11	Enters “No”	
12		Displays: “You are done with deletion of questions”

Identifier	UC-18	
Name	Add question	
Summary	A teacher or admin can add a new question in the tests that are in the system.	
Priority	Medium	
Actors	Teacher, Admin	
Pre-condition(s)	An actor must be logged in and the test must be in the system.	
Post-condition(s)	The questions are added in the test.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Add question" option.	
2		Prompts to choose subject category.
3	Chooses the category.	
4		Displays all the available tests of that category.
5	Chooses test number whose question he wants to delete.	
6		Displays that complete test.
6		Asks to enter the statement of the new question.
7	Types the question.	
8		Prompts for 4 options of that question.
9	Enters the options to that question.	
10		Prompts to enter the correct answer to that question.
11	Enters the correct answer.	
12		Displays: "This question is successfully added to this test."
13		Displays: "Do you want to add another question?"
14	Enters "yes"	
15		Repeats 6-13 points unless actor doesn't want to enter any new question.

Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Chooses wrong category.	
4		Displays: "Wrong category is chosen; Please choose from the given categories."

Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Chooses wrong number of the test.	
4		Displays: "Wrong number of test is chosen"

Alternate Course(s) of Action		
S#	Actor Action	System Response
11	Enters "No"	
12		Displays: "You are done with the addition of the questions"

Alternate Course(s) of Action		
S#	Actor Action	System Response
7	Types the question that already exists	
8		Displays: "Question already exists."

Identifier	UC-19	
Name	Change Password	
Summary	An actor holding an account can change his/her password.	
Priority	Low	
Actors	Admin, Teacher, Student	
Pre-condition(s)	An actor must have an account and must also be logged in.	
Post-condition(s)	Password is changed successfully.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Change Password" option.	
2		Prompts for old password
3	Enters the old password.	
4		Prompts for new password
5	Enters the new password.	
6		Prompts to enter the new password again
7	Enters the new password again.	
8		Displays: "Password is changed"
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Enters the wrong old password.	
4		Displays: "Incorrect password."

Alternate Course(s) of Action		
S#	Actor Action	System Response
5	Enters an invalid new password.	
6		Displays: "Your password must have 8 characters."

Alternate Course(s) of Action		
S#	Actor Action	System Response
7	Enters the unmatched password	
8		Displays: "Password doesn't match."

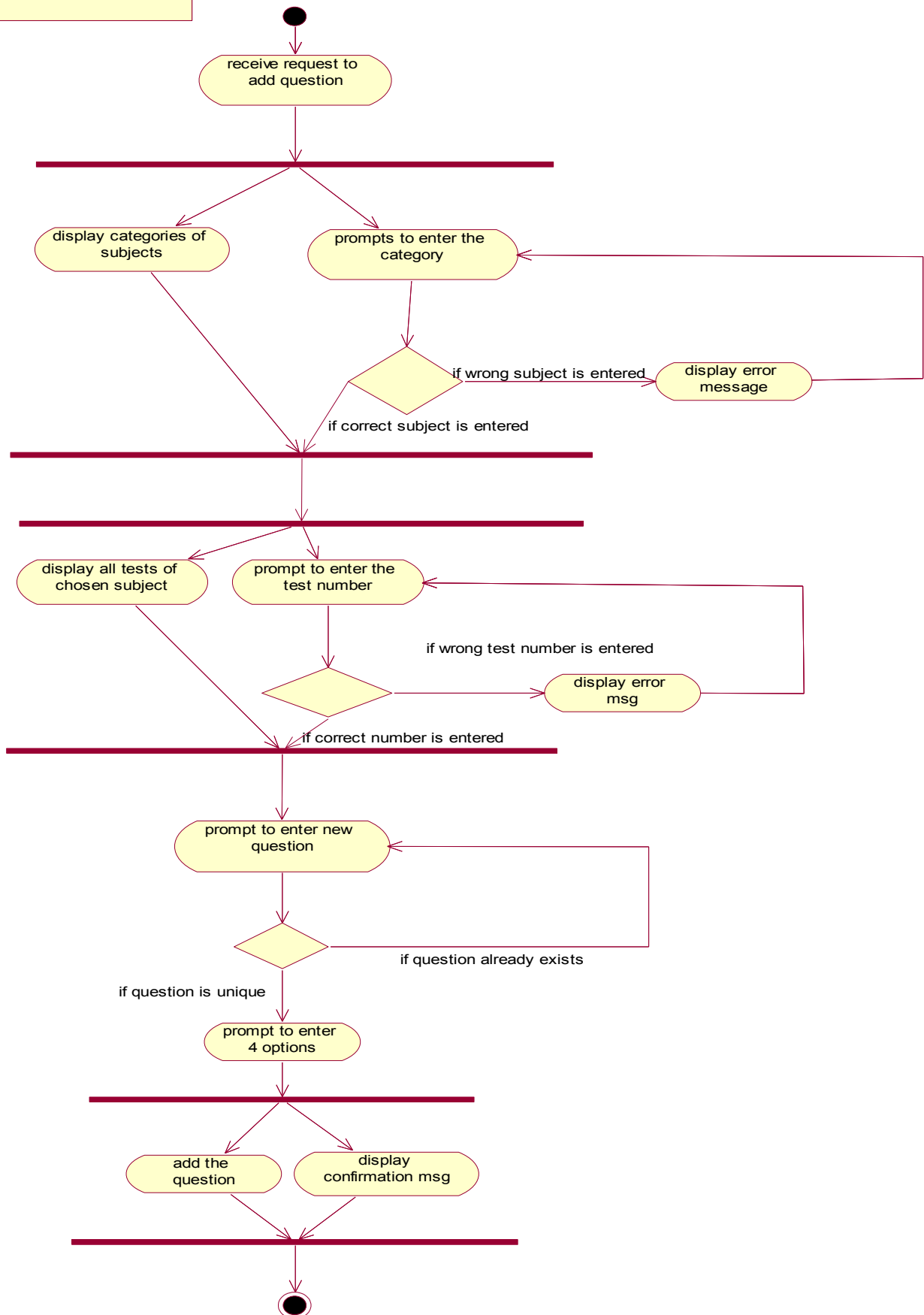
Identifier	UC-20	
Name	Drop a student	
Summary	An actor can drop a student	
Priority	Low	
Actors	Admin	
Pre-condition(s)	Admin must be logged in.	
Post-condition(s)	The student is dropped successfully.	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "Drop student"	
2		Prompts to Type username of the student you want to delete
3	Type username of the specific student	
4		Displays: Are you sure?
5	Clicks on "Yes"	
6		You have successfully dropped a student
Alternate Course(s) of Action		
S#	Actor Action	System Response
3	Type username of the specific student	
4		Username doesn't exist

S#	Actor Action	System Response
6	Clicks on "No"	
7		student not dropped
8		Shows homepage

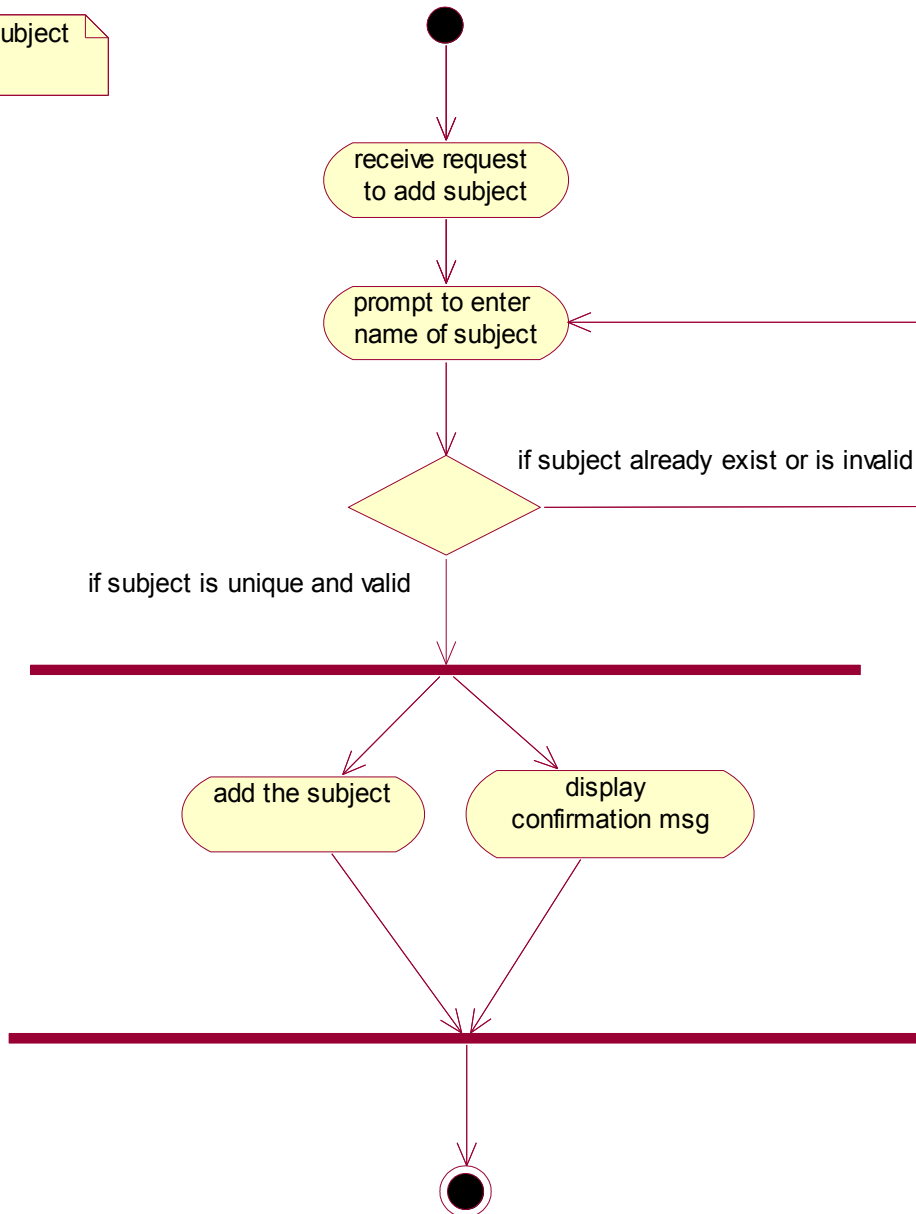
Identifier	UC-21	
Name	Log out	
Summary	An actor will be able to logout after using his account	
Priority	Low	
Actors	Student, Actor, Teacher	
Pre-condition(s)	An actor must have an account and must be logged in to his account to log out.	
Post-condition(s)	Student is logged out successfully	
Typical Course of Action		
S#	Actor Action	System Response
1	Clicks on "log out"	
2		Closes active account
3		Shows start-up page of application

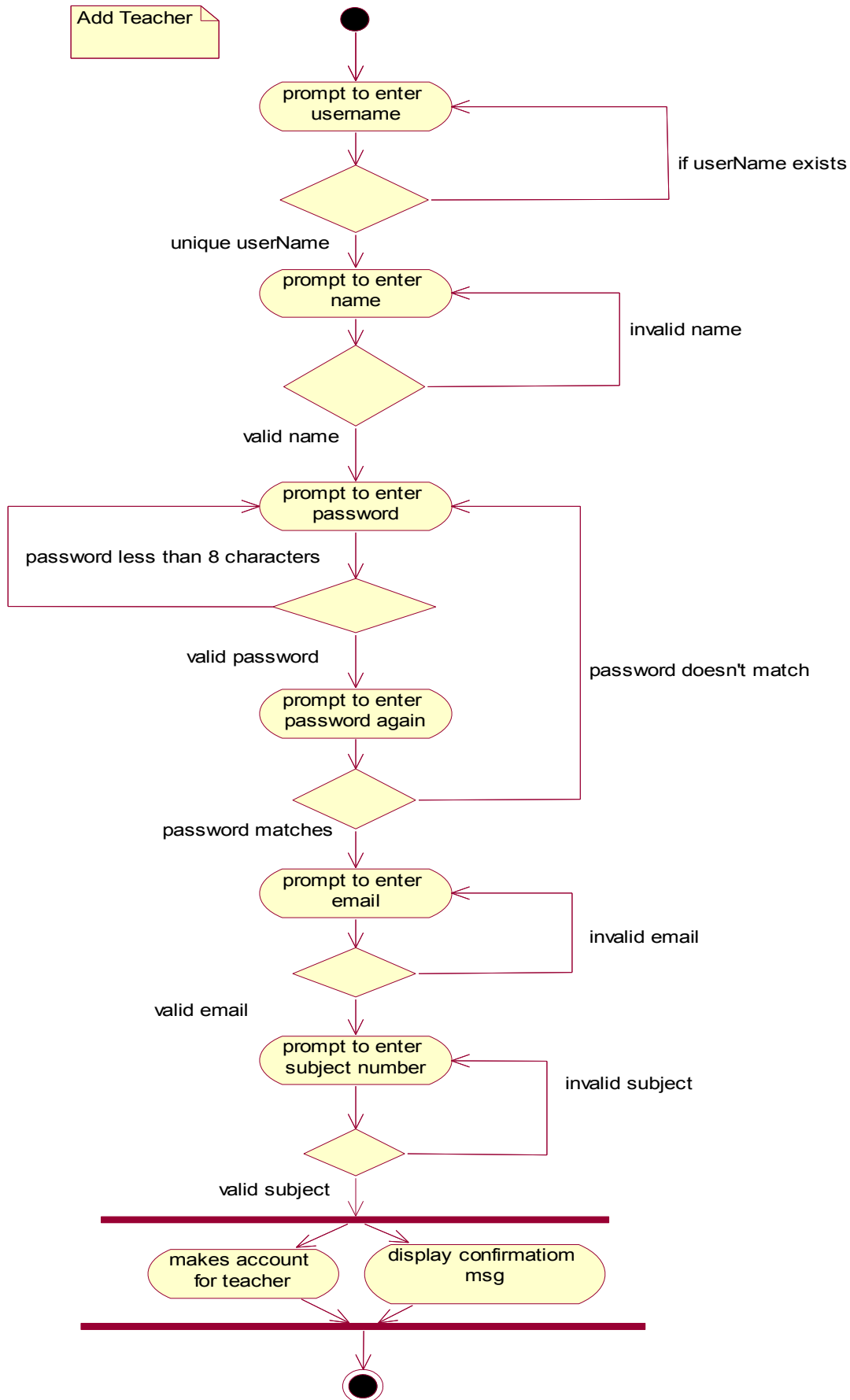
Activity Diagrams

Add Question

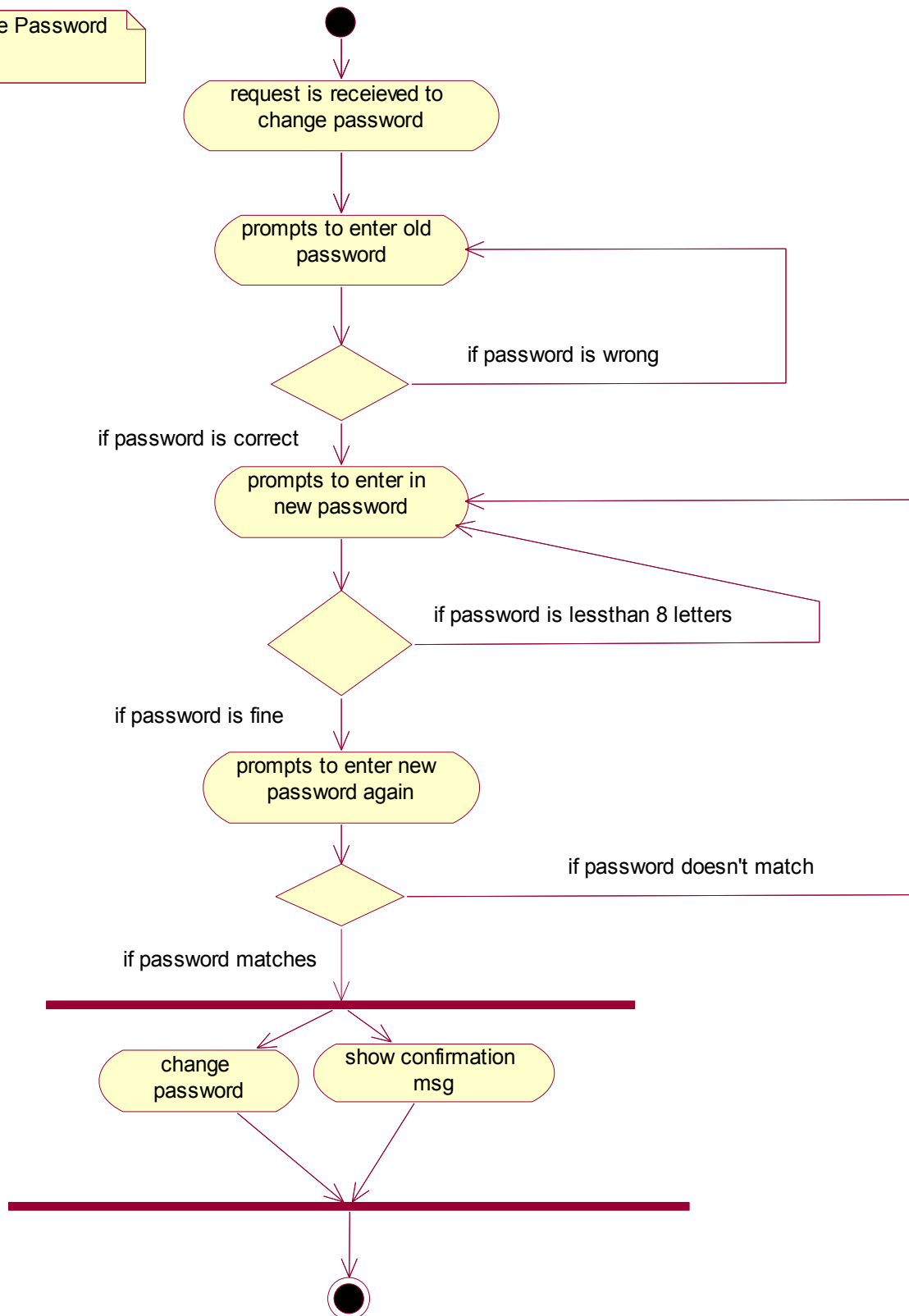


Add Subject

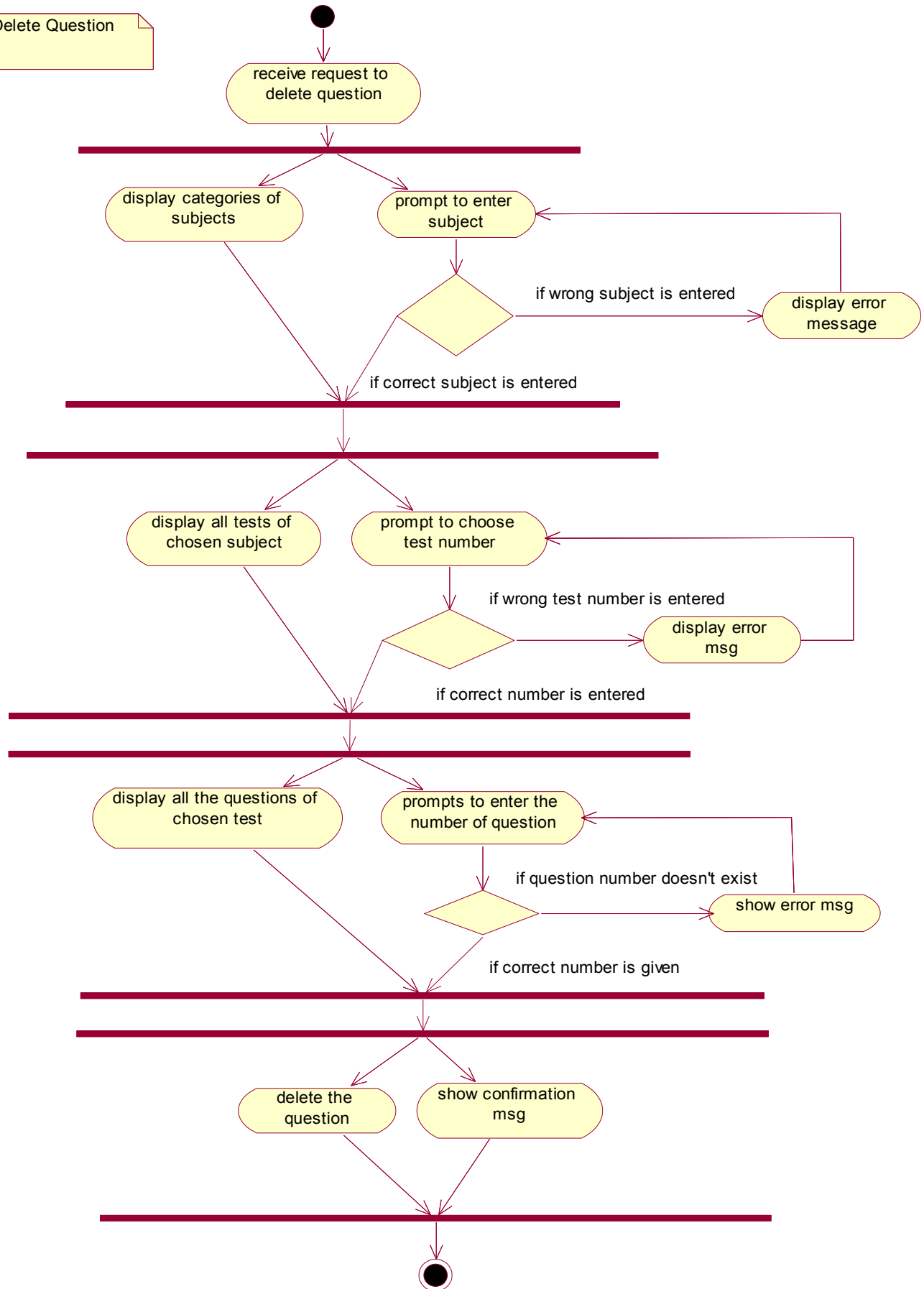




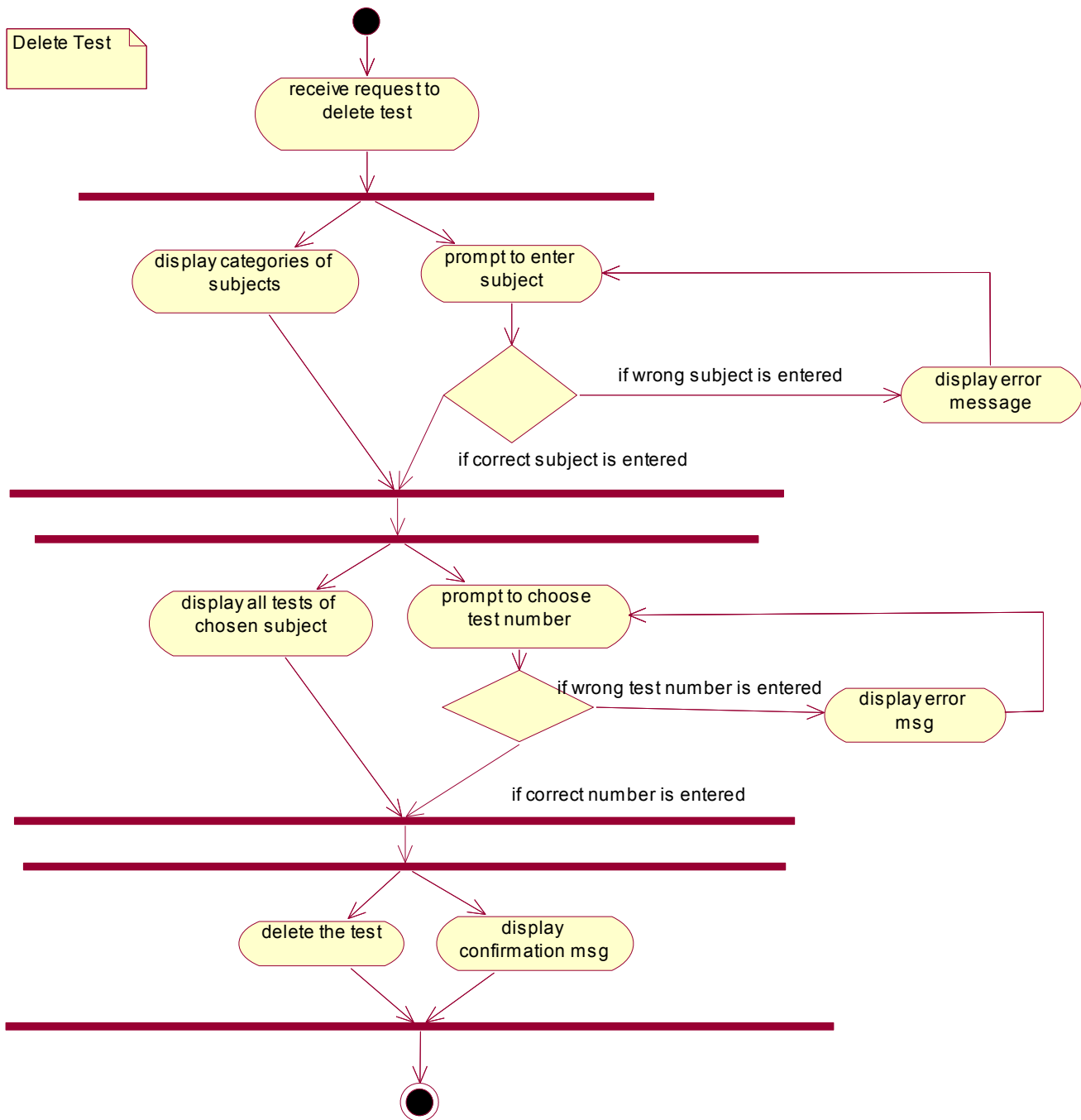
Change Password



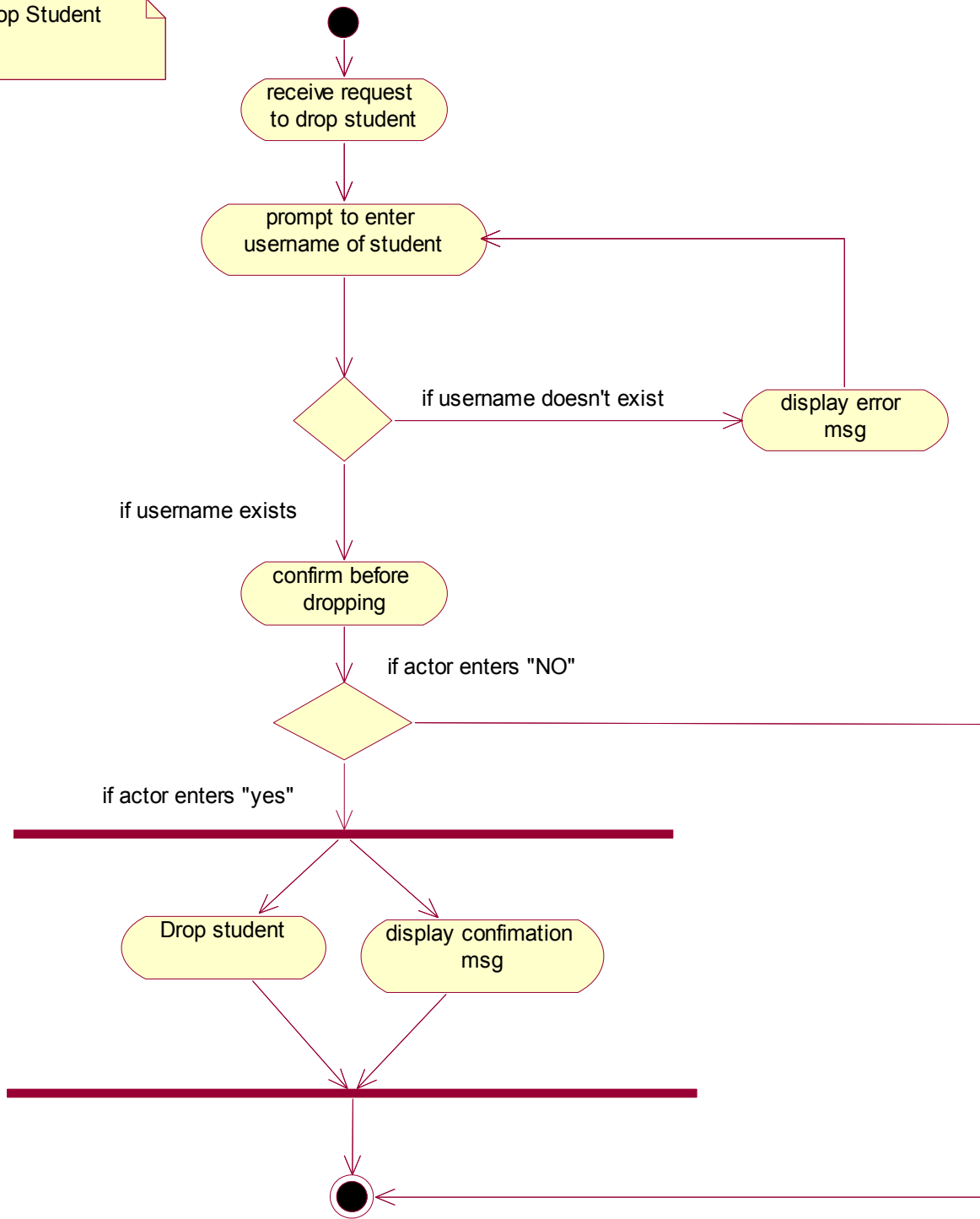
Delete Question



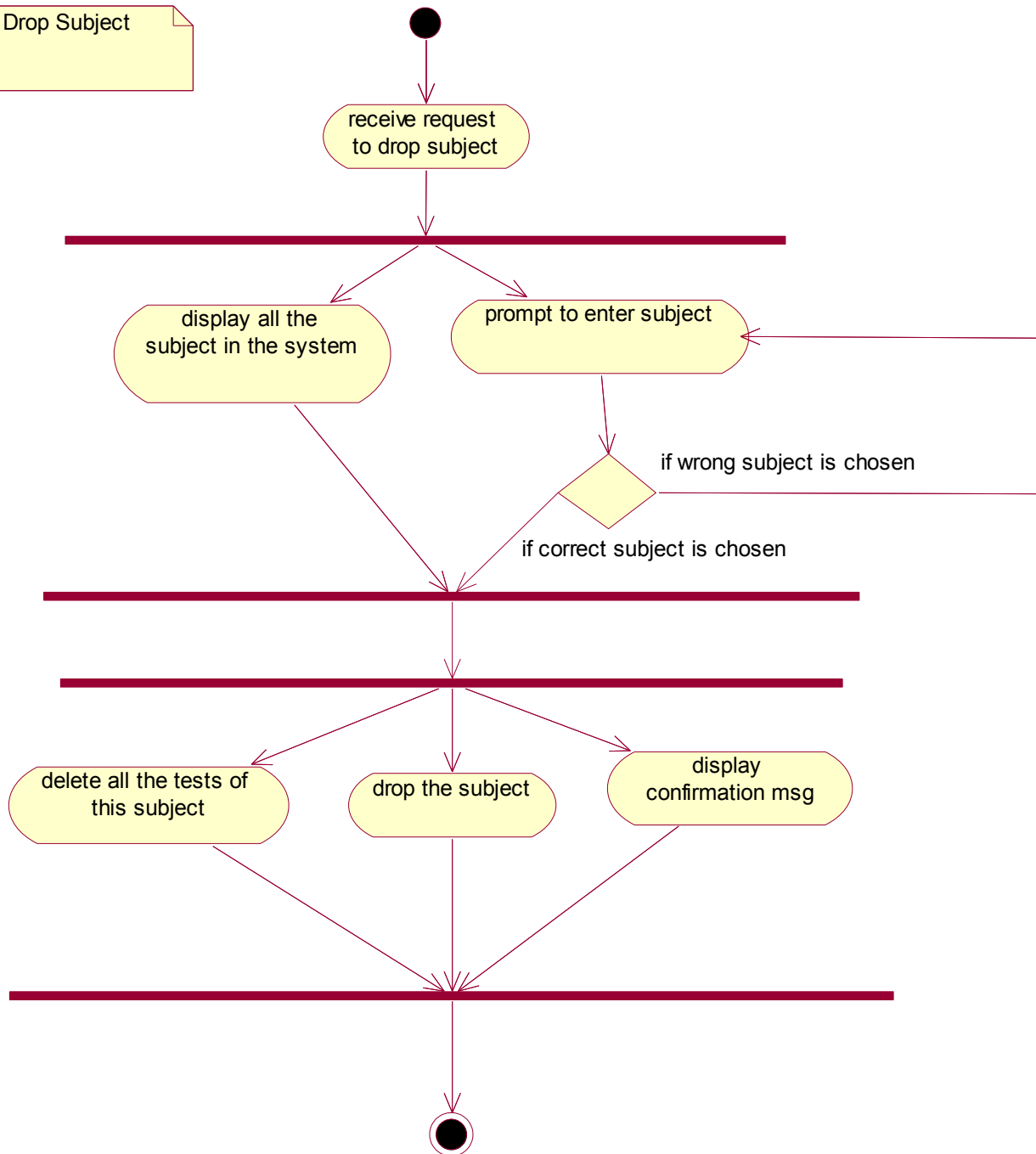
Delete Test



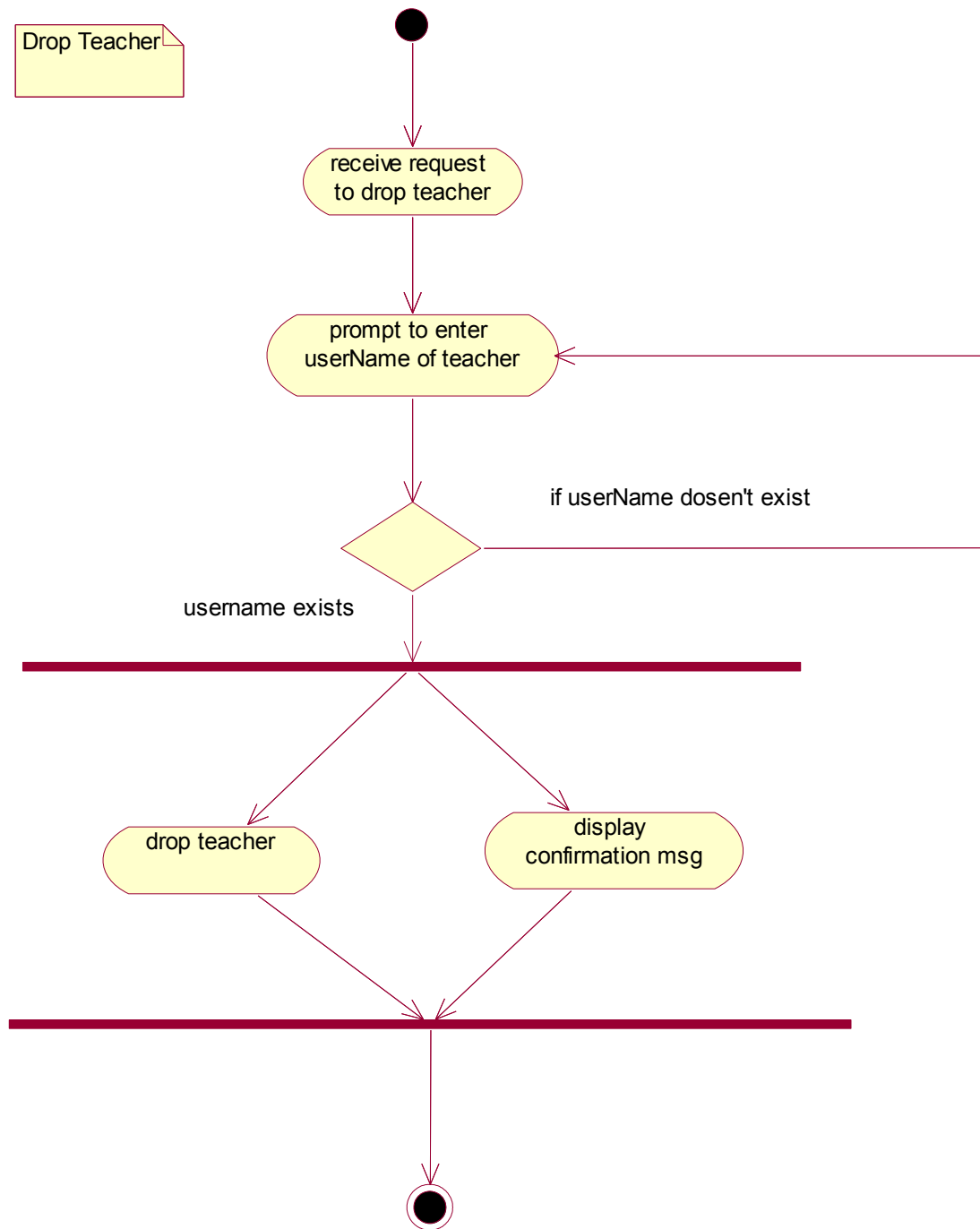
Drop Student



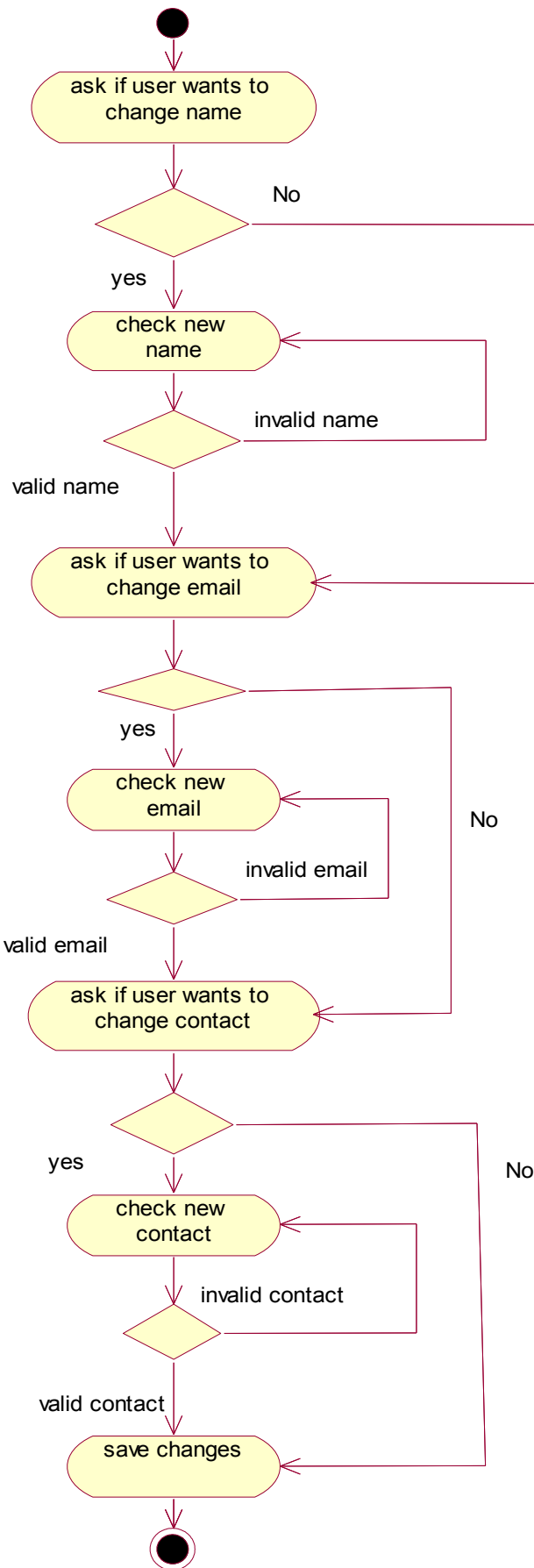
Drop Subject



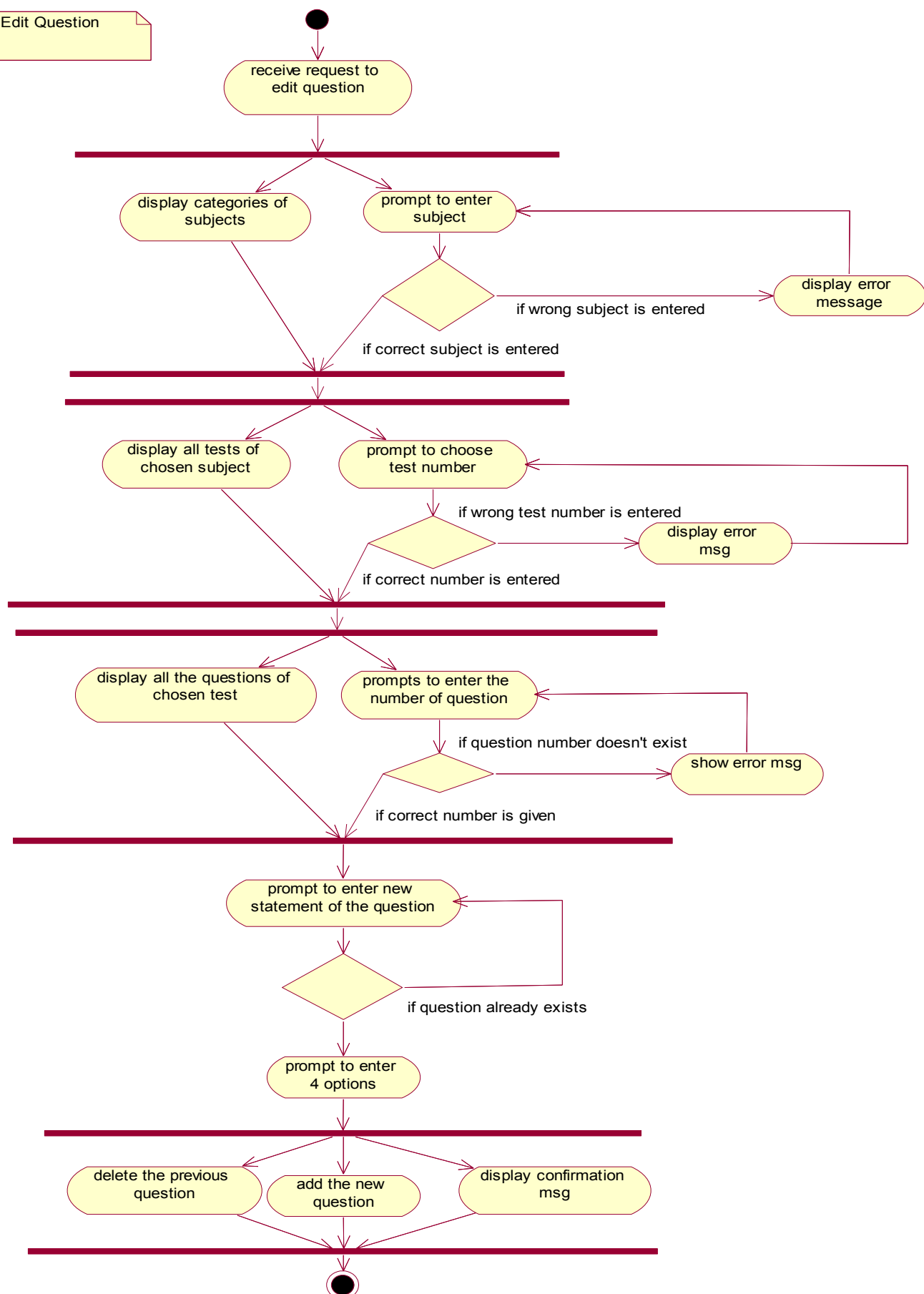
Drop Teacher



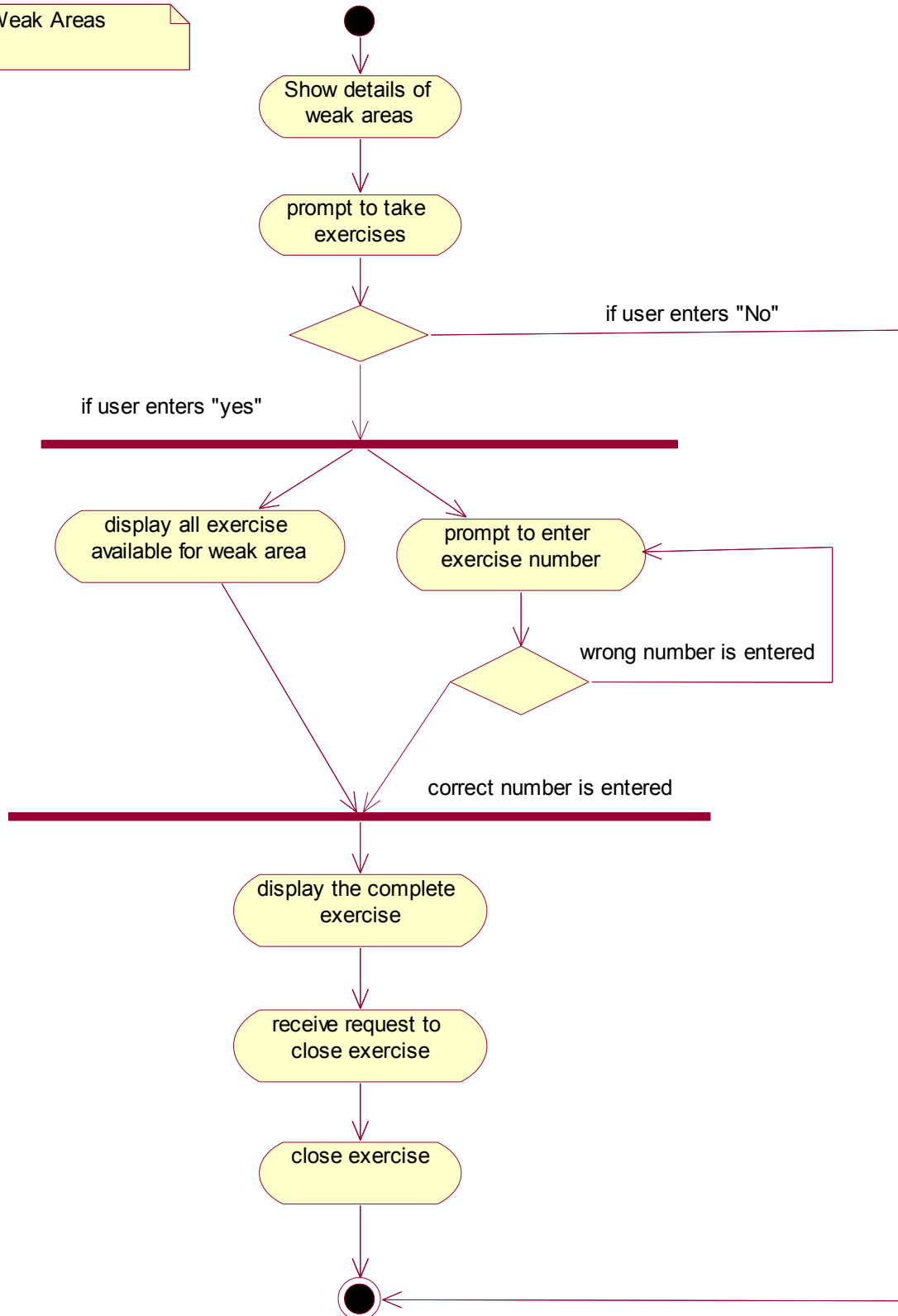
Edit Profile



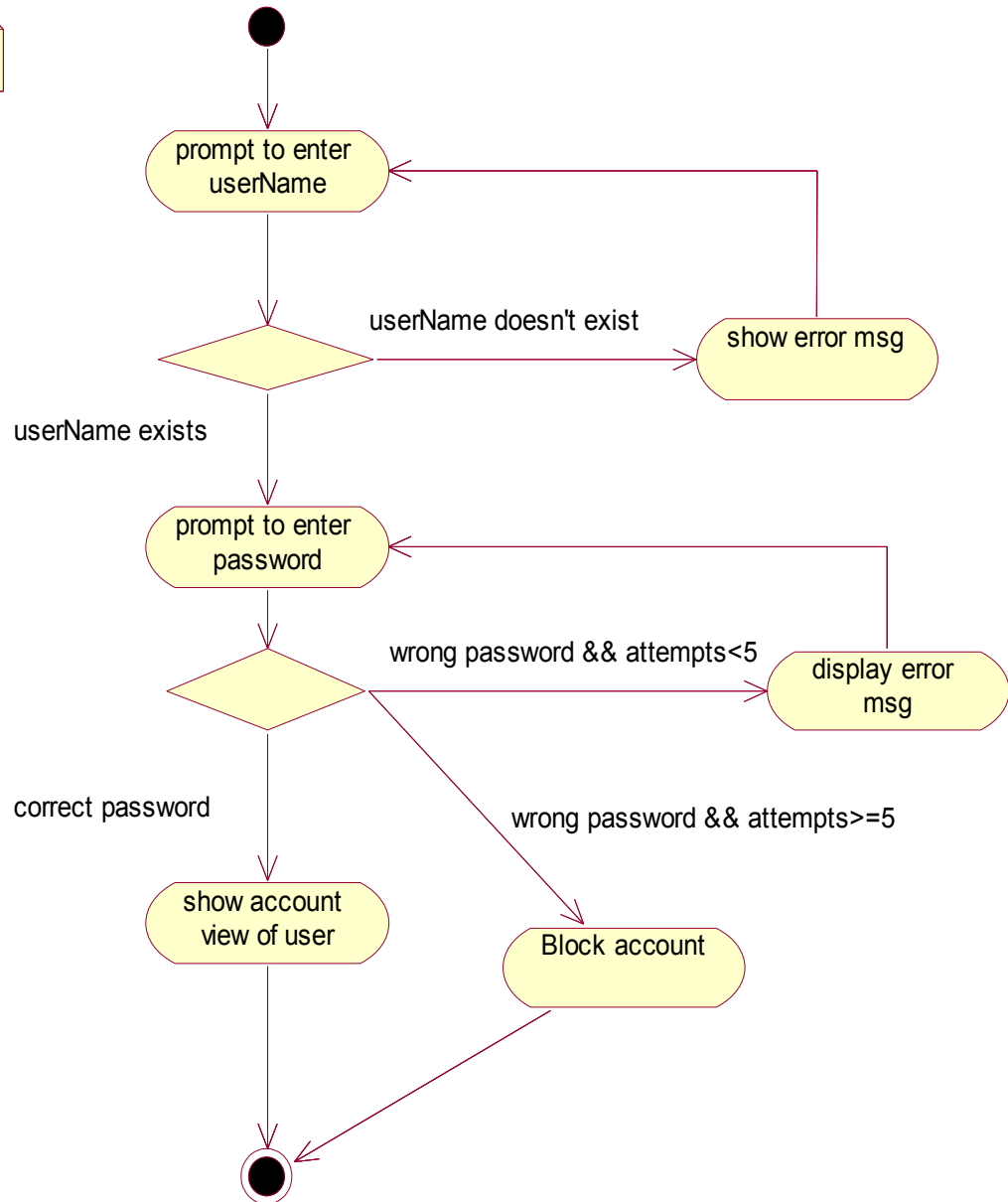
Edit Question



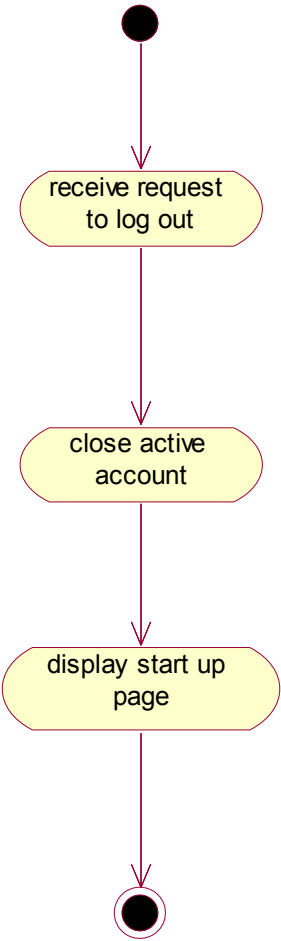
Improve Weak Areas



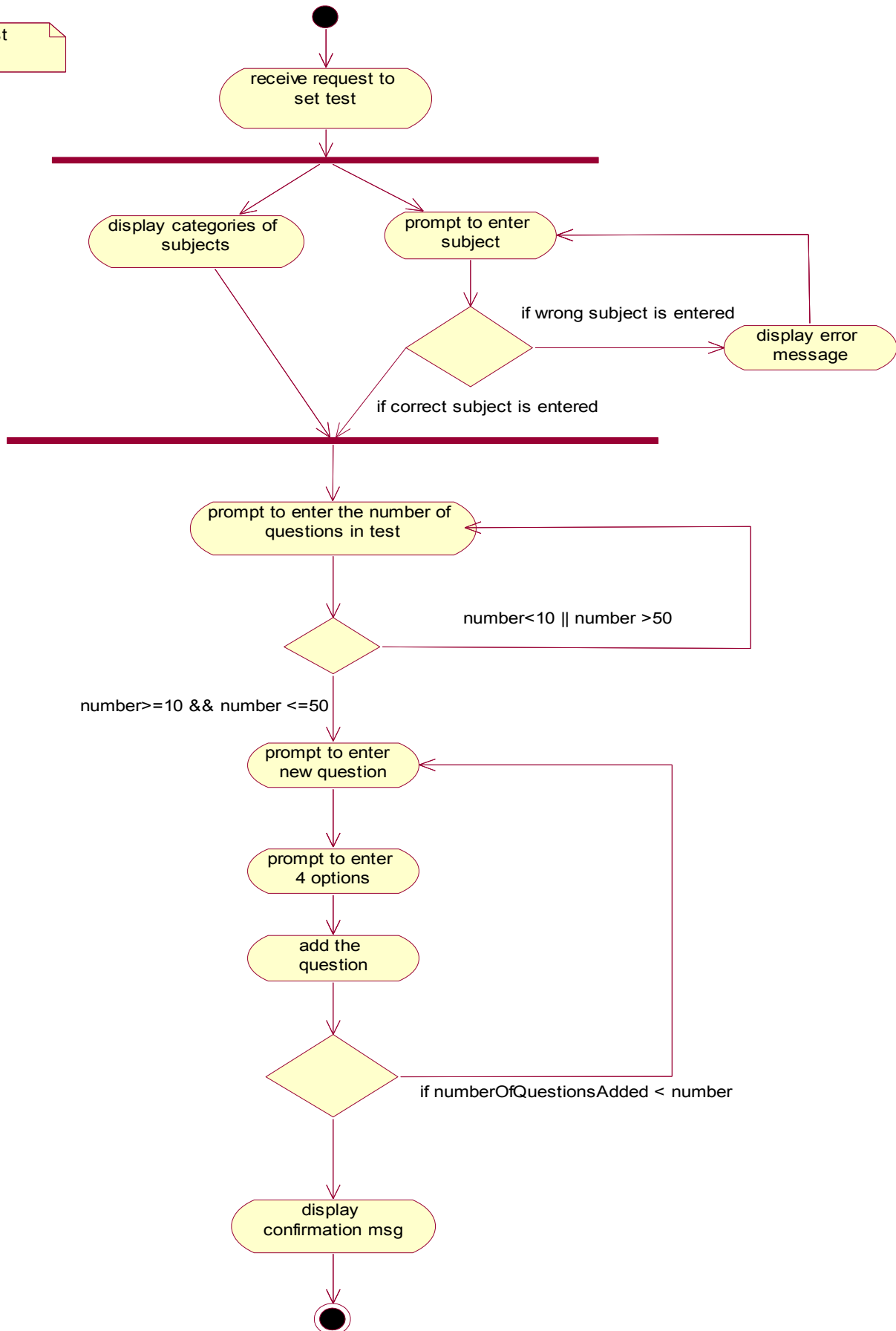
Log In



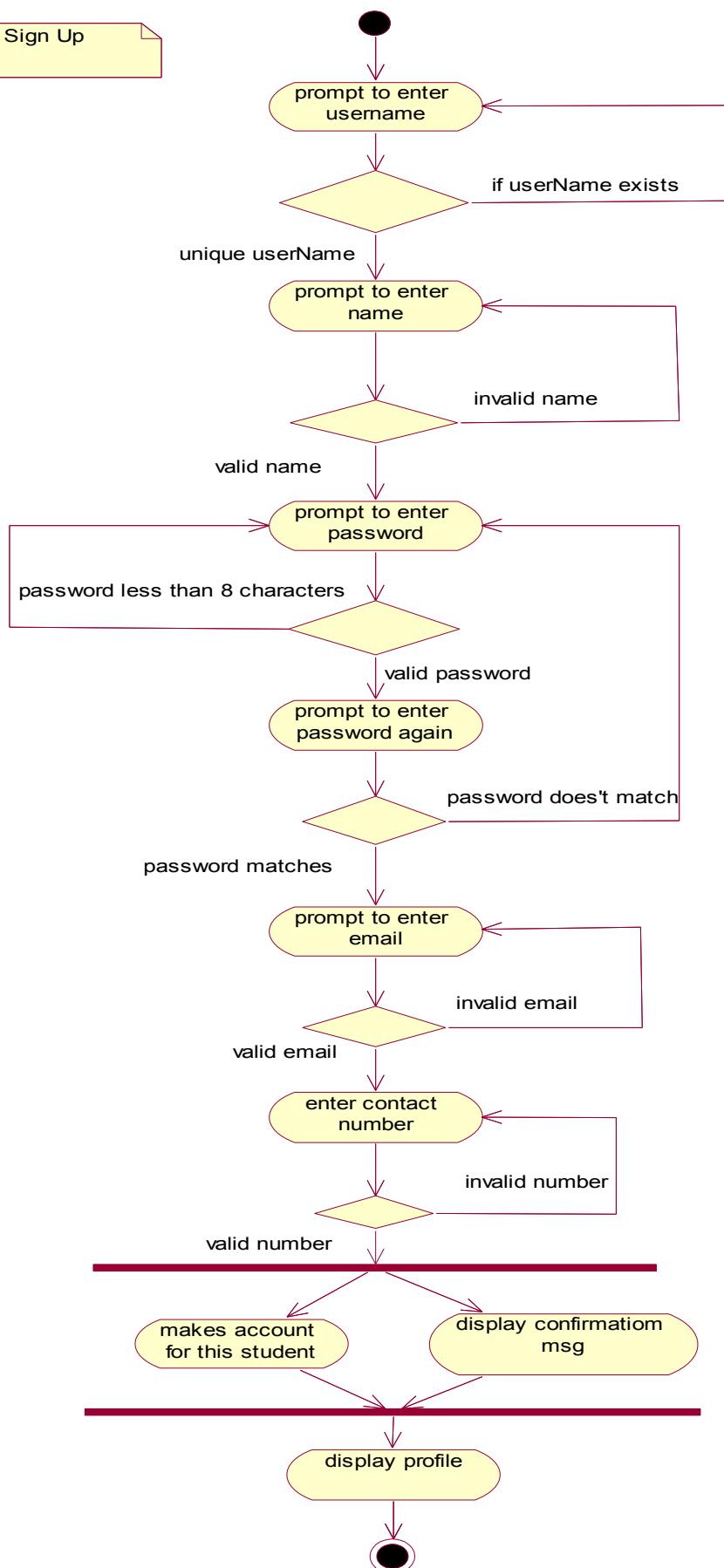
Log Out

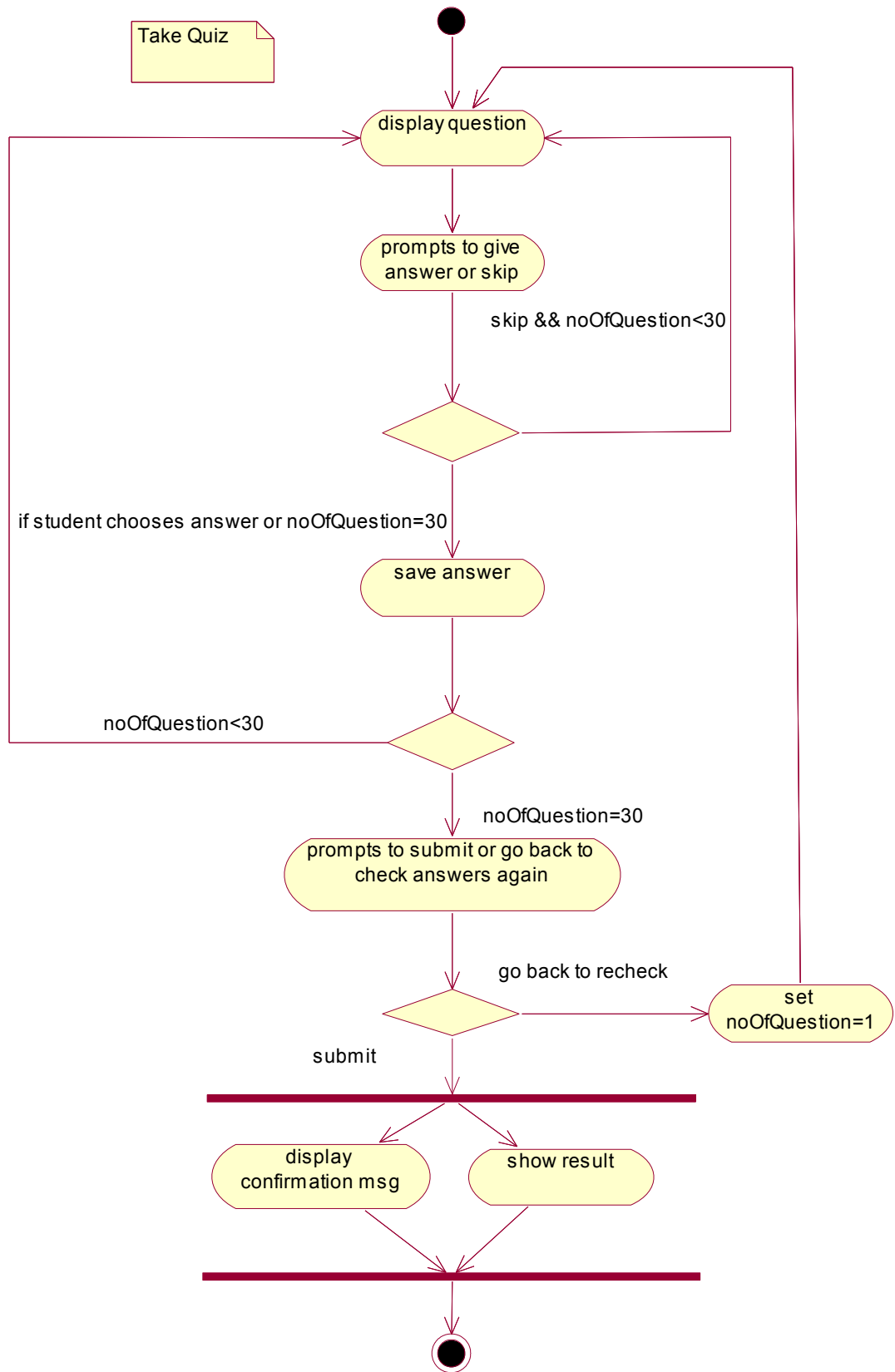


Set Test

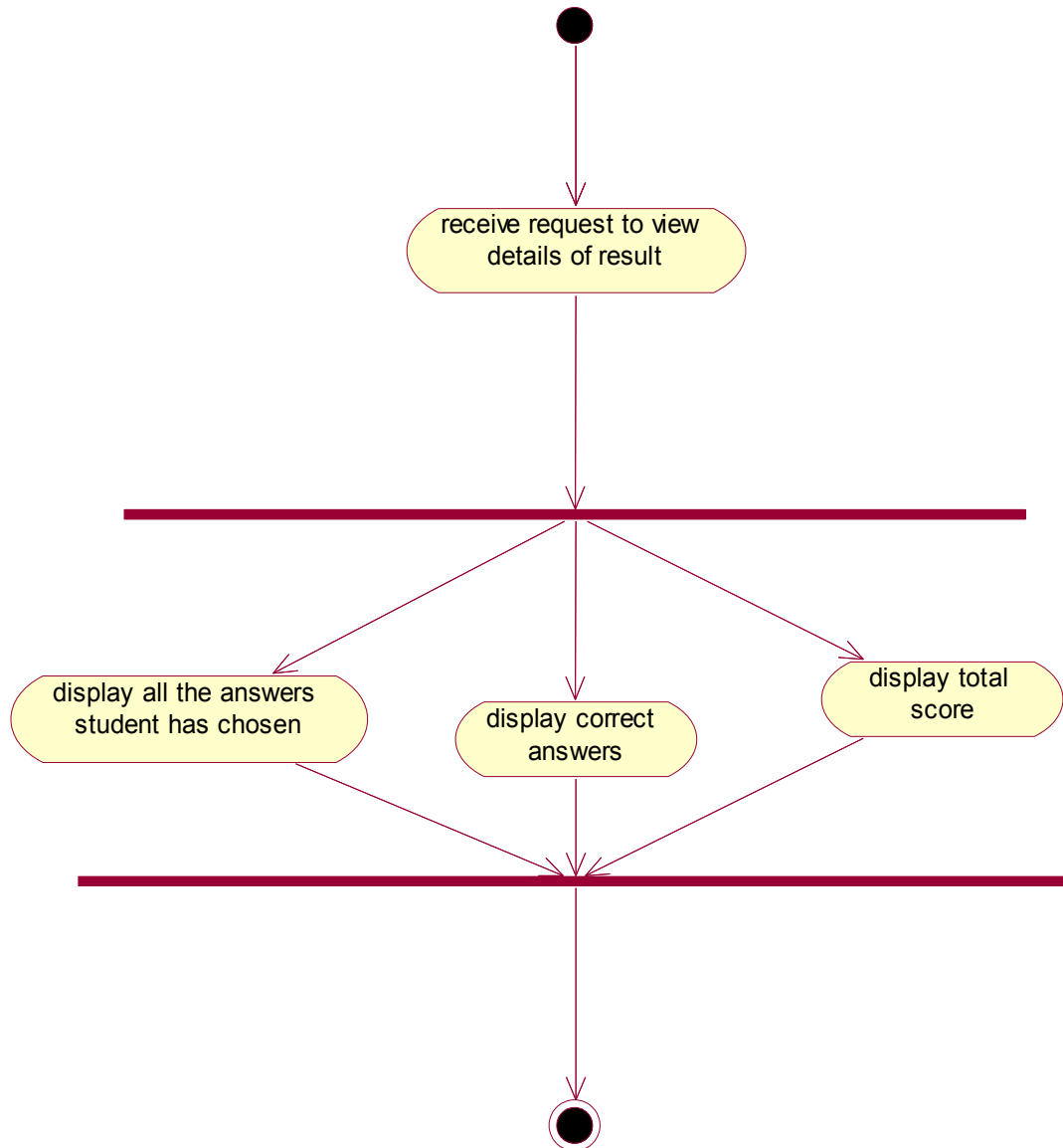


Sign Up

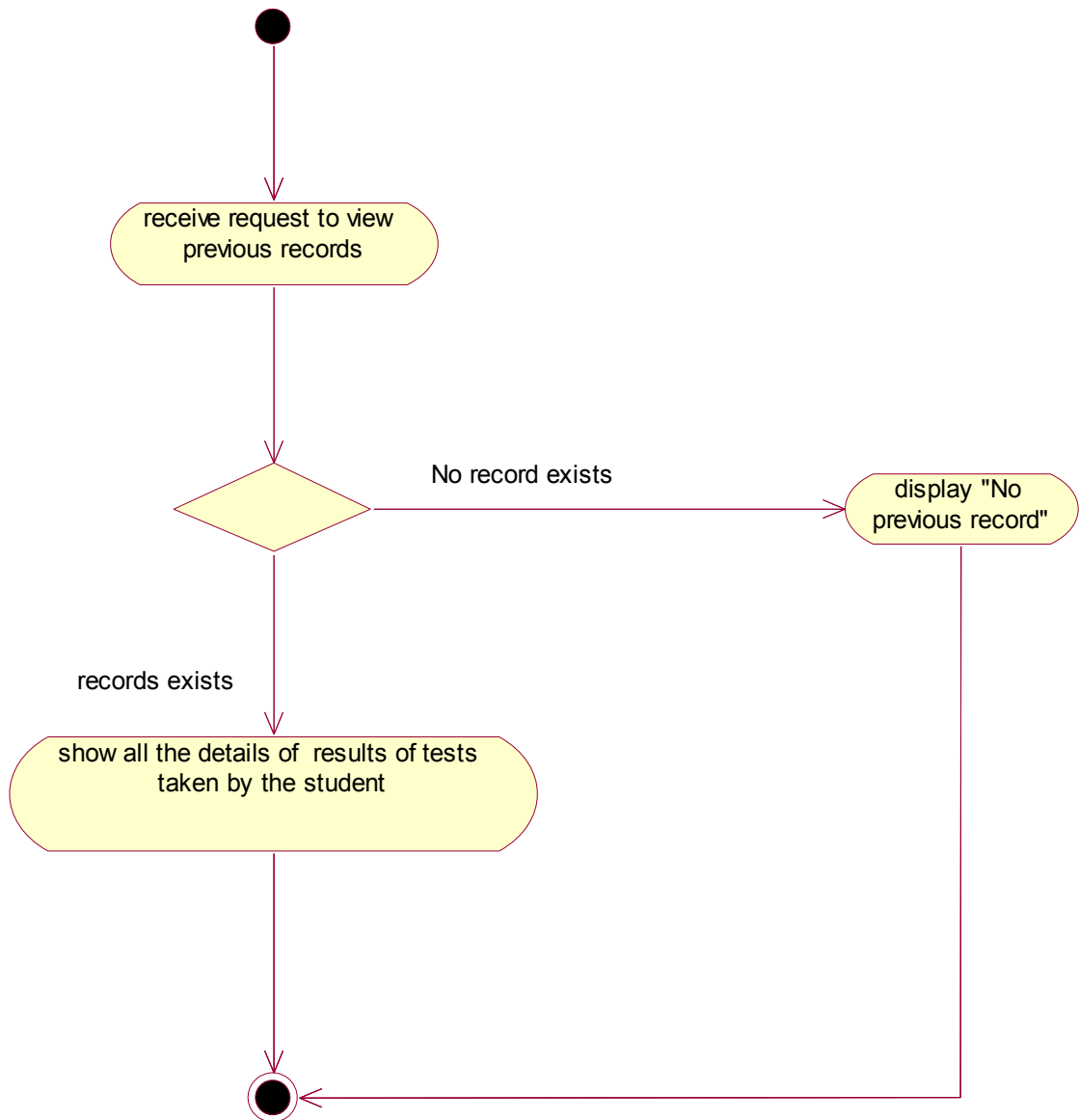




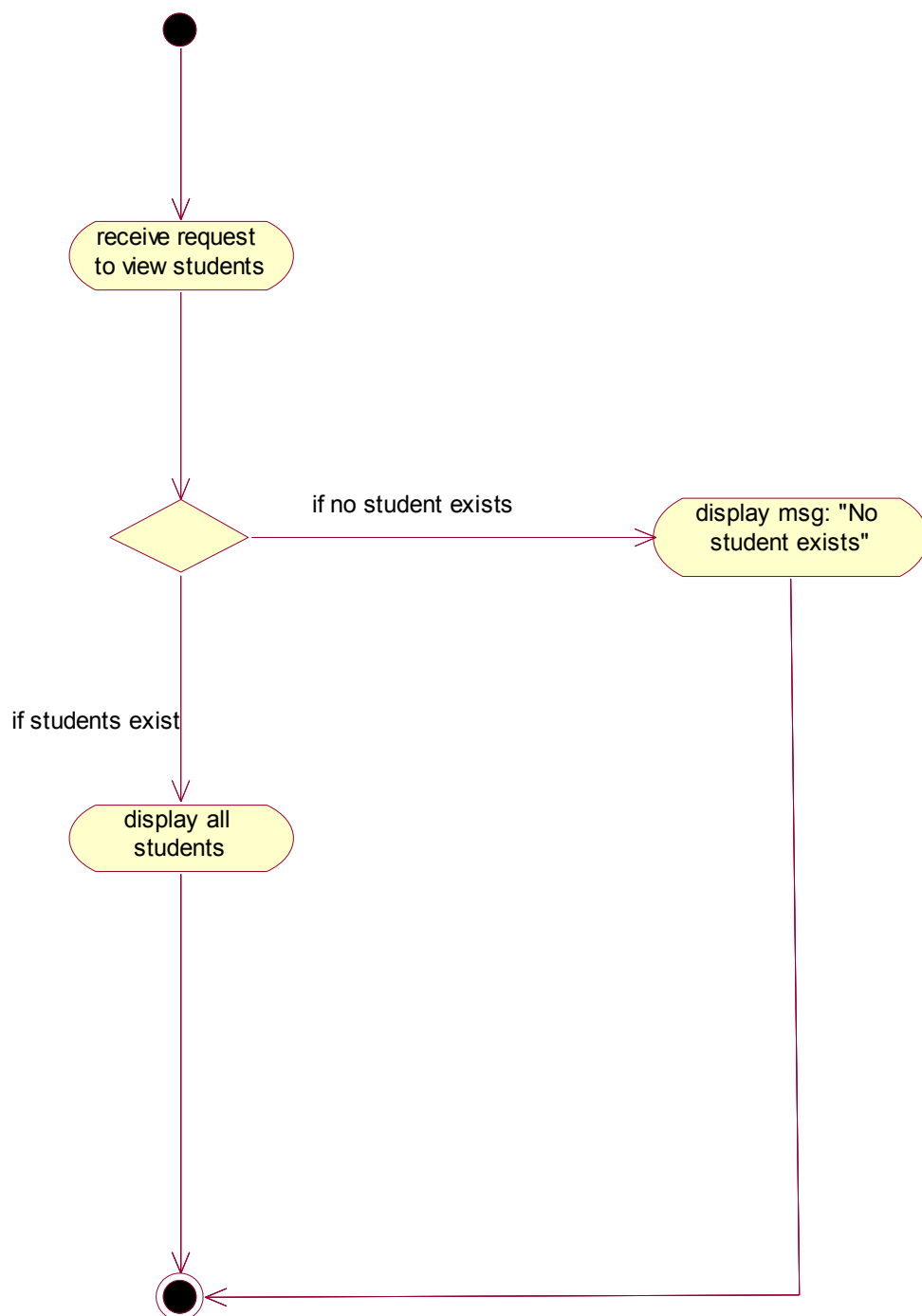
View Details Of Result



View Previous Records



View Students



View Teachers

