# Appendix

Appendix A: System analysis using UML

Is one of the tools for Object Oriented Analysis (OOA) used in the analysis is a tool and not systematic analysis, and contains a set of schemes, namely [32]:

1. Use-case Diagram: Shows actors, use-cases, and the relationships between them.

2. Class Diagram: Shows relationships between classes and pertinent information about classes themselves.

3. Object Diagram: Shows a configuration of objects at an instant in time.

4. Interaction Diagrams: Show an interaction between a group of collaborating objects. Two types: Collaboration diagram and sequence diagram

5. Package Diagram: Shows system structure at the library/package level.

6. State Diagram: Describes behavior of instances of a class in terms of states, stimuli, and transitions.

7. Activity Diagram: Very similar to a flowchart—shows actions and decision points, but with the ability to accommodate concurrency.

8. Deployment Diagram: Shows configuration of hardware and software in a distributed system.

1) Use case diagrams:

Where users of the system divided into three types according to their use of the system are:

1. System Administrator.
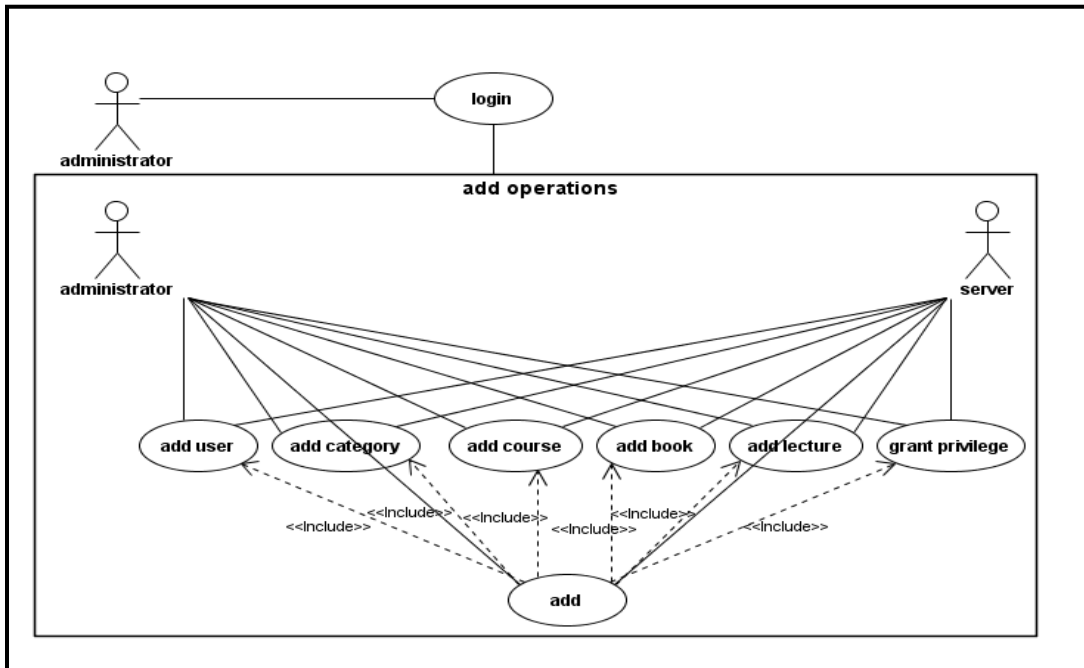
2. Teacher.

3. Student.
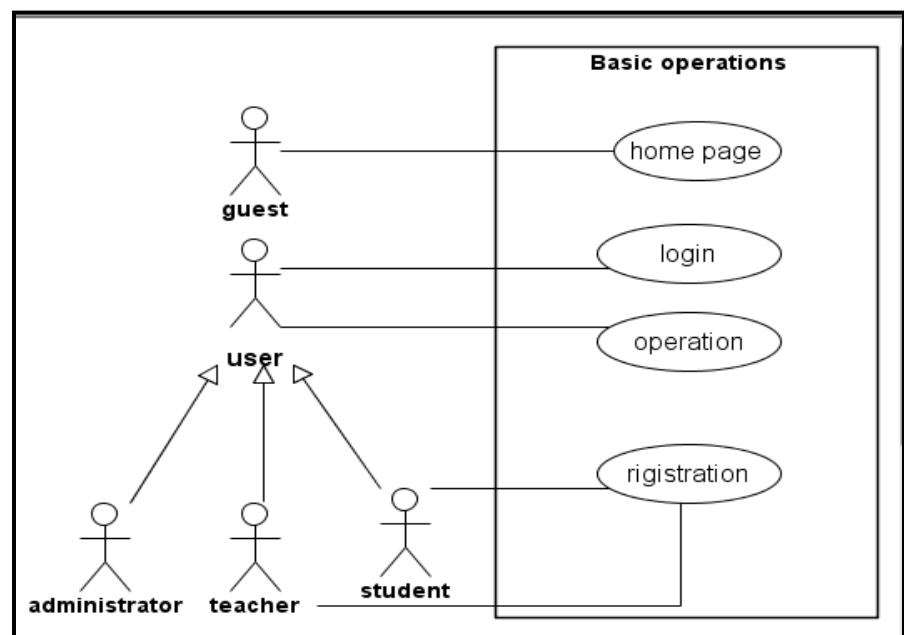
This Figure explains the types of users and their operations within the system

a. System Administrator: through the login process System Administrator login to the system to perform the following operations:
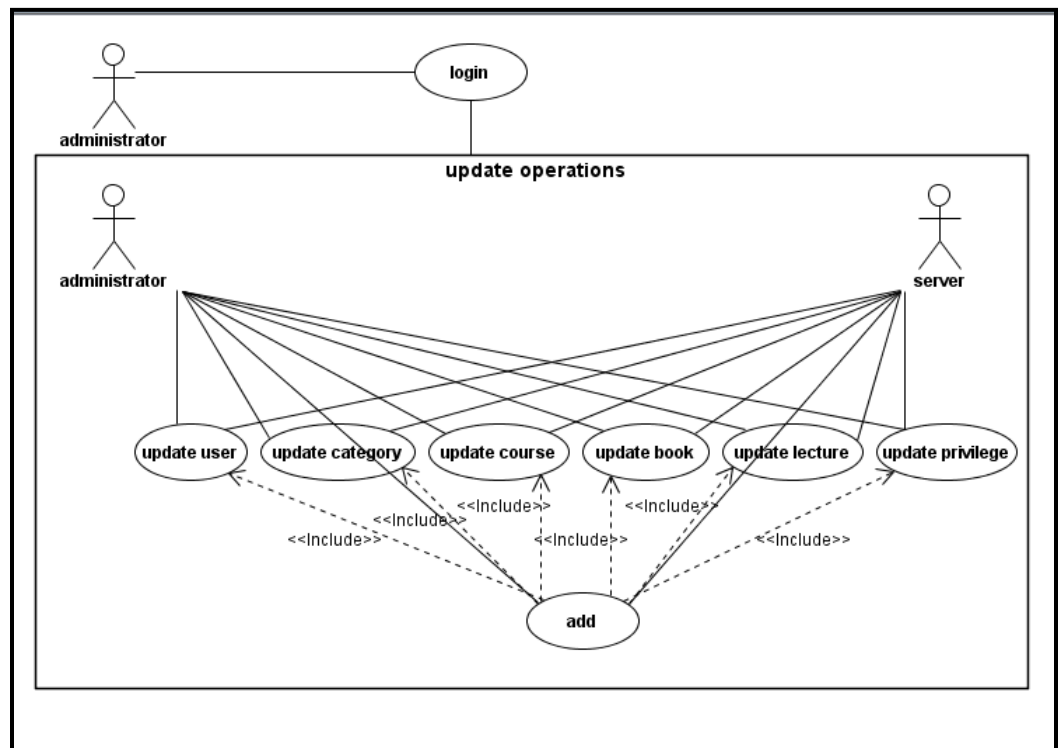
First: a process added

- Add user
- Add an educational resource category.
- Add course.
- Add a book.
- Add a lecture.

This Figure explains the additions made by the system administrator
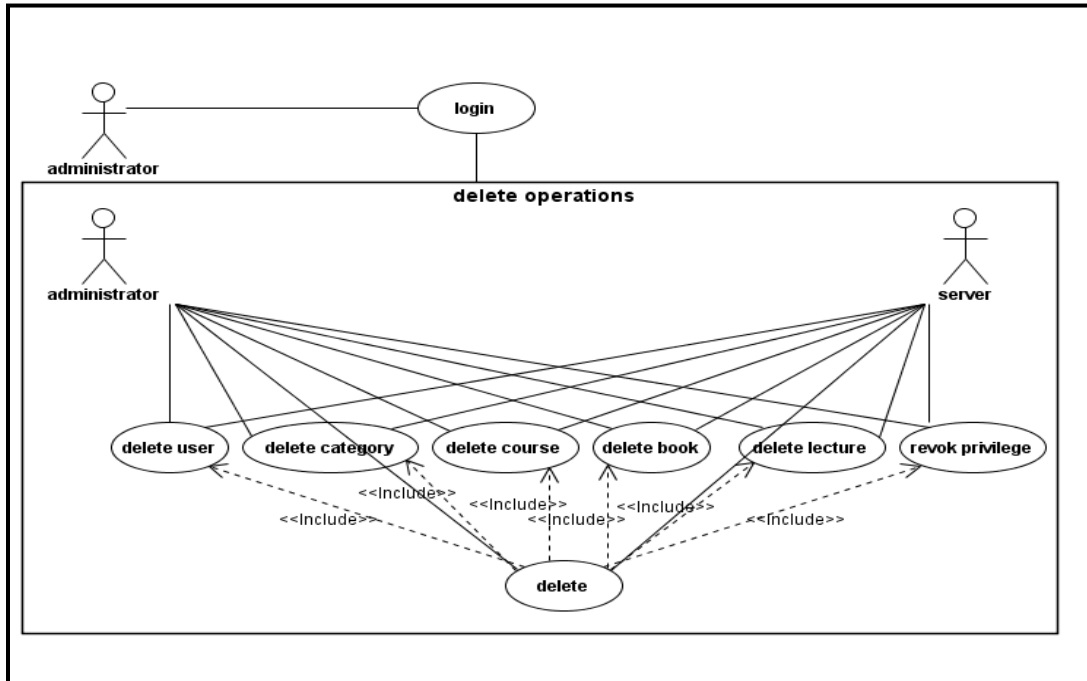
Second: to carry out the update:

- update user.
- update the educational resource category.
- update the course.
- update a book.
- update lecture.

This Figure explains Operations update that carried out by the system administrator

Third: deletion operations:

- Delete user.

- Delete an educational resource category.

- Delete course.

- Delete a book.

- Delete a lecture.

This Figure shows deletions by the system administrator

b. Teacher: through the login process the Teacher login to the system to carry out a set of operations authorized within the system, namely:
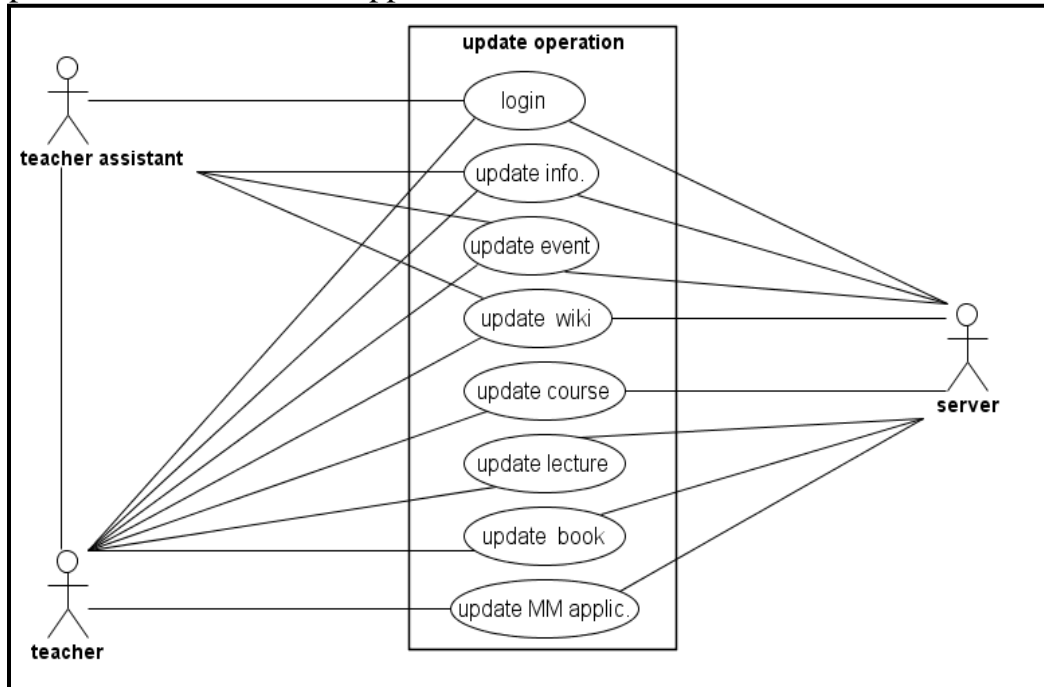
First: conducting added

- Add information.
- Add Event.
- Add wiki.
- Add course.
- Add a lecture.
- Add a book.
- Add audible and visual applications.
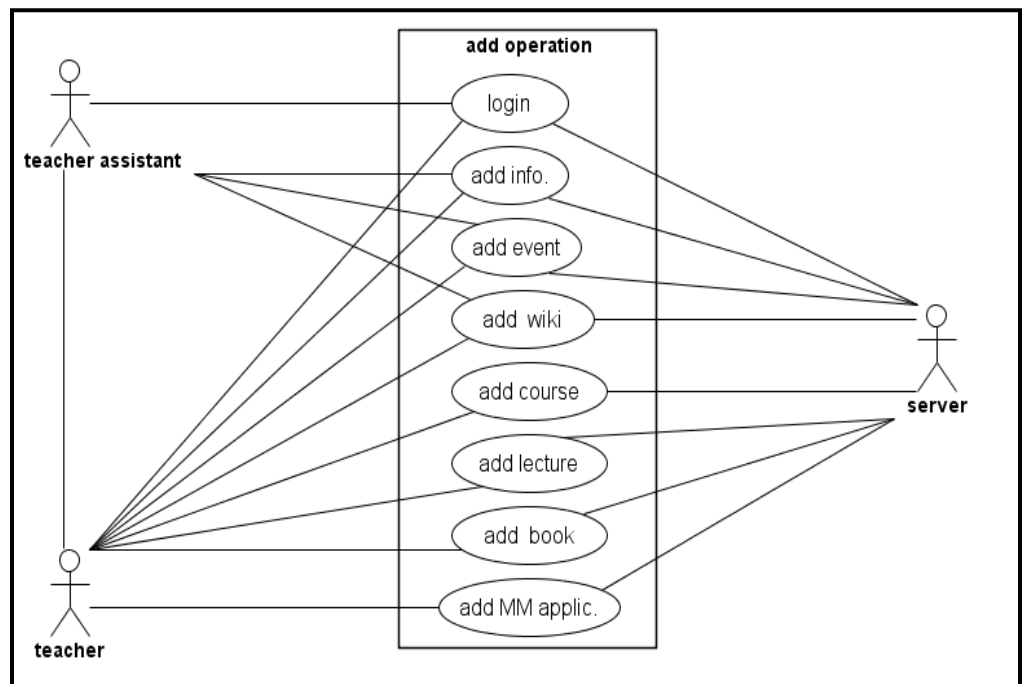
This Figure shows operations additions by the teacher within the system

Second: to carry out Update:

- Update information.
- Update Event.
- Update wiki.
- Update course.
- Update lecture.
- Update audible and visual applications.

This Figure shows operations update by the teacher within the system
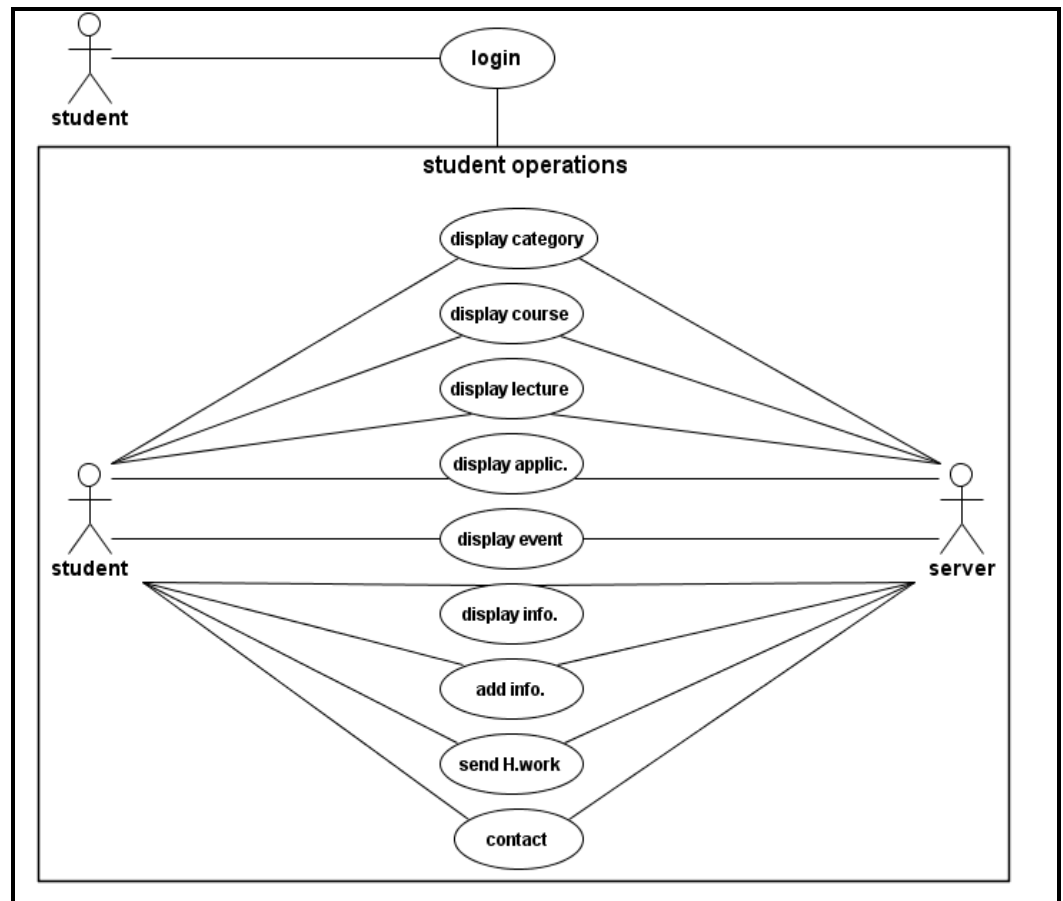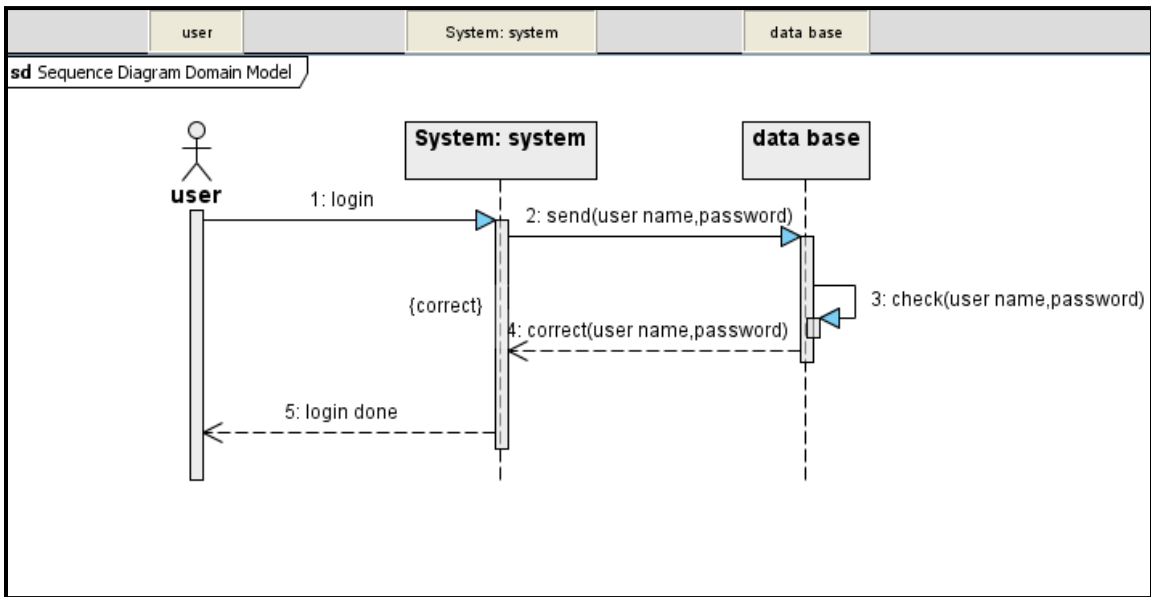
Third: deletion operations:

- Delete information.
- Delete an event.
- Delete wiki.
- Delete course.
- Delete a lecture.
- Delete a book.
- Delete audible and visual applications.
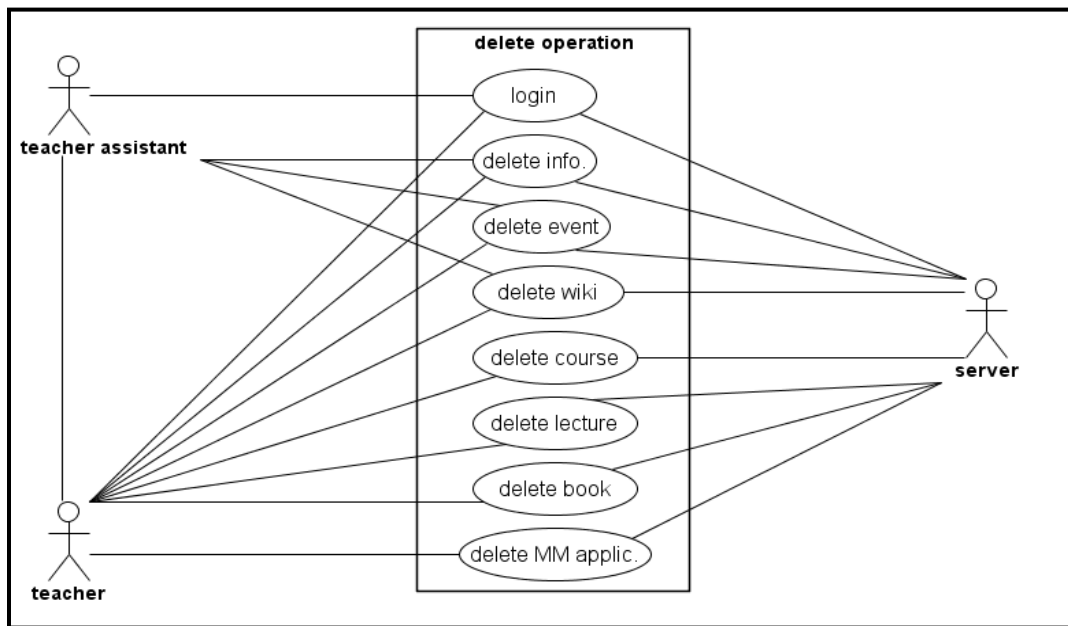
This Figure shows operations delete by the teacher within the system

c. Student: through the login process the student login to the system to carry out a set of operations authorized within the system.

- Display category
- Display courses
- Display lectures
- Display applications
- Display events
- Display information
- Display work
- Add information
- contact

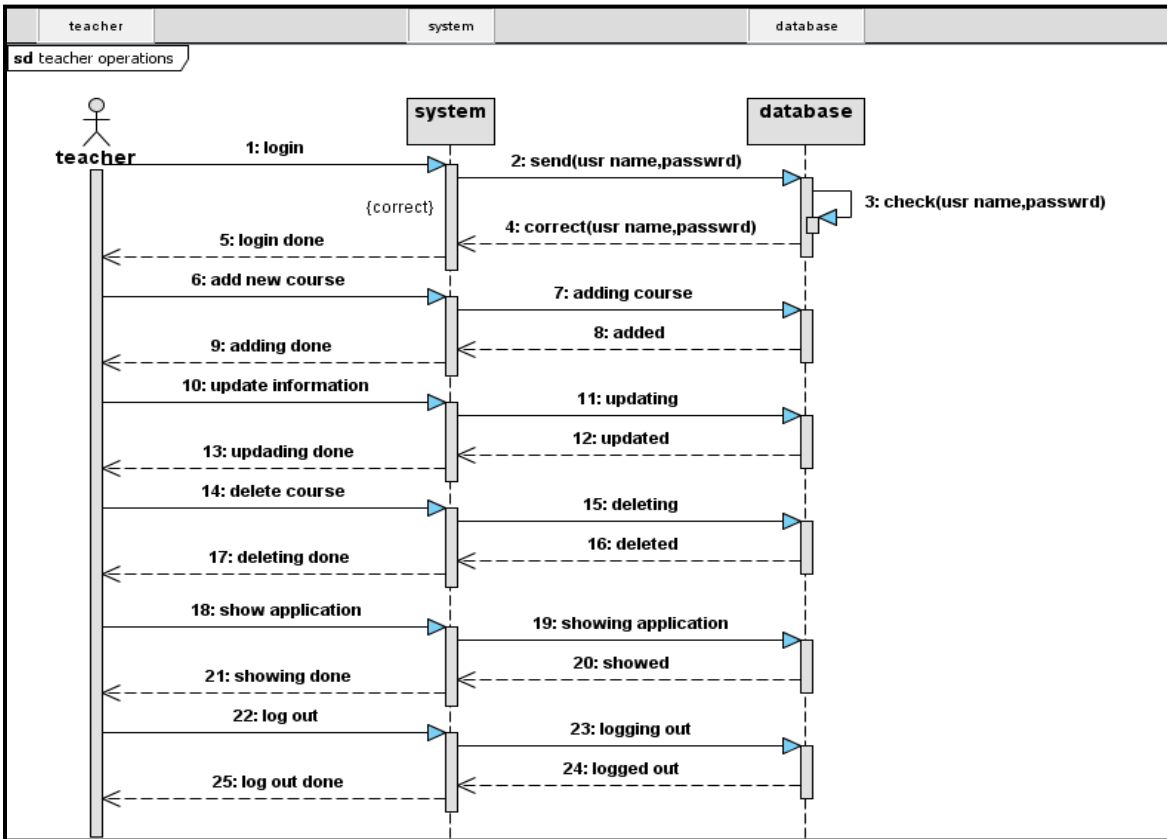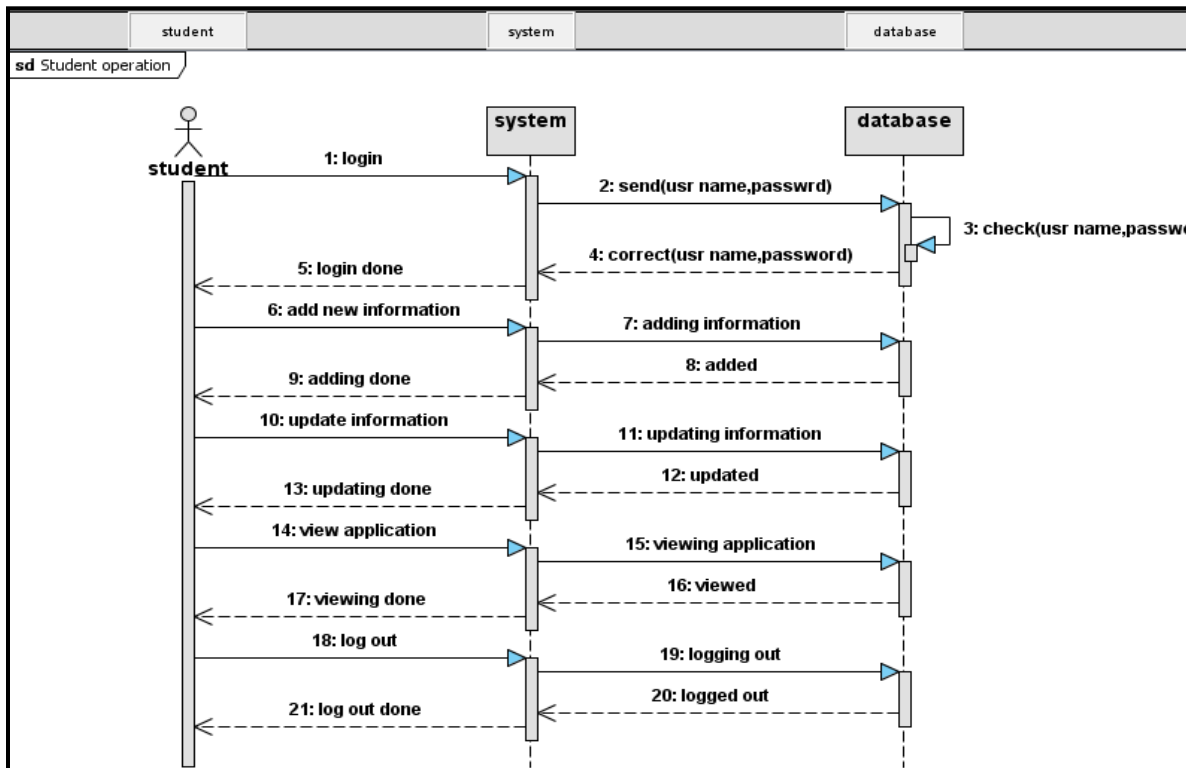**This Figure Illustrates the operations carried out by the student within the system**

2) Class Diagram:

the system site
+sysinfo
+open()

user
+name : string
+go()

guest
+name : string
+goto()

admin
+username : string
-password : string
-no : int
+addr : string
+add()
+update()
+delete()

registered user
-no : int
+username : string
-password : string
+addr : string
+date : date
+add()
+reset()

order
+course : string
+lecture : string
+category : string
+application : string
+display()
+add()
+update()
+delete()

login information
+username : string
-password : string
+send()

This Figure explains how (guest, participant, and the system administrator) login and use the system.

System operations

category
-no : int
+name : string
+type : string
+date : double
+open_cate() : string

course
-no : int
+name : string
+teacher : string
+class : string
+date : double
+diplay_course()
+add_course()
+update_course()
+del_course()

<<use>>

MM application
-no : int
+name : string
+type : string
+size : int
+teacher : string
+date : double
+display_MM()
+update_MM()
+add_MM()
+del_MM()

book
-no : int
+name : string
+author : string
+date : double
+publish : string
+class : string
+display_book()
+add_book()
+update_book()
+del_book()

wiki
-no : int
+nme : string
+type : string
+size : int
+date : double
+add_wiki()
+update_wiki()
+display_wiki()
+del_wiki()

administrator
-no : int
+name : string
+degree : string
+operation : string
+address : string
-login()
+add_privilege()
+del_privilege()
+add()
+update()
+delete() : string
+logout()

<<use>>

student
-no : int
+name : string
+specialize : string
+class : string
+address : string
-login()
+contact()
+send_HW()
+display_app()
+logout()

lecture
-no : int
+name : string
+date : double
+course_no : int
+teacher_no : int
+display_lec()
+update_lec()
+add_lec()
+del_lec()

teacher assistant
-no : int
+name : string
+specialize : string
+work : string
+address : string
-login()
+add_app()
+display()
+logout()

teacher
-no : int
+name : string
+type : string
+degree : string
+specialize : string
+course_no : int
+address : string
-login()
+add()
+contact()
+display_info()
+logout()

<<use>>

This Figure Explains class order and characteristics, relations and operations of each class within the system

3) Sequence Diagrams:

This Figure explains operations the system login by the user

This Figure explains the operations carried out by the system administrator

This Figure explains operations carried out by Teacher within the system

This Figure explains the operations carried out by the student within the system

4) Collaboration Diagram:

sd system login

system

4: login done   1: login

3: correct(usrname,paswrd)

2: send(usrname,paswrd)

registered user

server

This Figure explains how access to the system for the registered user within the system

5) Activity Diagram:

System login   Register order

No

Not Accept   Fill form

Yes

Accept

Register condition

No

Yes

Go to end   Accept order

This Figure explains participation operations of the user within the system

This Figure explains search method for books and applications within the system

6) State Diagram:
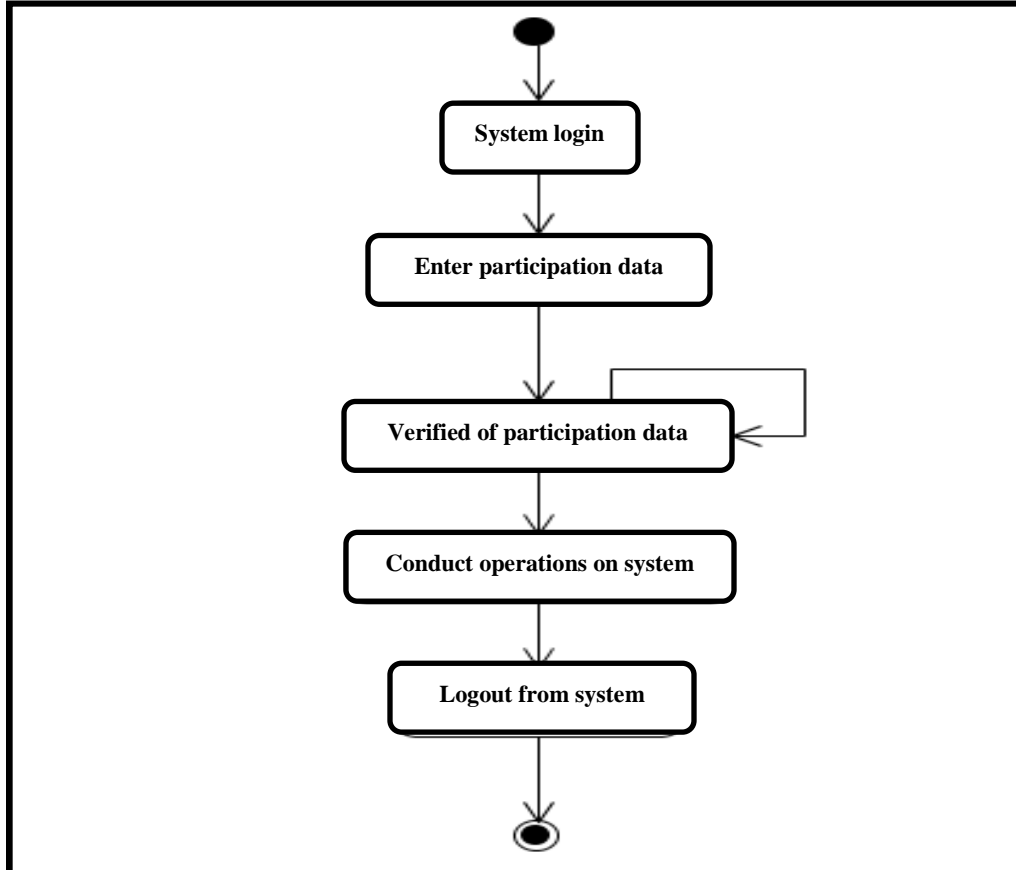
This Figure explains participation procedures and participation operations of the user within the system

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Appendix B: Table's structures

- System administrator table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Name	username	Char	16	Primary key	
Password	password	Char	16		

- Teachers table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Name	username	varchar	40	Primary key	
Password	password	varchar	20		
Track	specialist	varchar	30		
qualified	tedig	varchar	30		
address	teaddr	varchar	30		

- Students table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Name	stname	varchar	40	Primary key	
Password	stpass	varchar	20		
Track	specialist	varchar	30		
Level	stclass	varchar	30		
address	st_addr	varchar	30		

- Educational resources table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Resource no	Catid	int	10	Primary key	
Resource name	catname	char	40		
Type	cattype	char	30		
Track	specialist	char	30		
Date	Catdate	Date	10		

- Educational courses table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Course no	Coursid	int	10	Primary key	Reference to resources table
Course name	Coursname	char	40		
Teacher	Teacher	char	30		
Track	Specialist	char	30		
Level	Class	char	30		
Date	Coursdate	date	10		

- Educational lectures table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Lecture no	Lecid	int	10	Primary key	Reference to courses table
Lecture name	Lecname	char	40		
Teacher	Teacher	char	30		
Track	Specialist	char	30		
Level	Class	char	30		
Date	Coursdate	date	10		

- Educational books table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Book no	isbn	int	10	Primary key	Reference to courses and lectures
Book name	title	char	40		
Author	author	char	30		
Track	specialist	char	30		
Size	description	float	30		
Version	version	date	10		

- Educational applications table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Application no	Appid	int	10	Primary key	Reference to courses and lectures
Application name	Apptitle	char	40		
Type	Apptype	char	30		
Track	Specialist	char	30		
Size	Size	float	30		
Date	Appdate	date	10		

- Announcements and events table:

Field name	Alias name	Field type	Field length	Constraints	Notices
Search no	no	int	10	Primary key	Reference to teachers and assistances
Search text	text	char	80		
Teacher	tename	char	30		
Track	specialist	char	30		
Level	class	char	30		
Date	date	date	10		

Appendix C: Design screen

1. Check list for design the system

- **Navigation**
  - Every page is given a title.
  - Direct access to user-specified area within the learning module.
  - Index to topics is provided.
  - Search function for topics is provided.
- **Security**
  - The user of the system (teachers, students, administrator) have username and password.
  - Allow to guest use the main pages.
- **Memorability**
  - Semantic meaning of text link is unambiguous.
  - The use of metaphor for the graphic icon is predictable by user.
  - Label is provided for every graphical icon.
- **Reliability**
  - Freedom in tasks is provided.
  - The system takes to recover from errors.
- **Learner Activity**
  - Reflective thinking is provided.
  - Use of primary data sources.
  - The learning material that support student activity being interesting.
- **Goal Orientation**
  - Explicit goals.
  - Usefulness of goals.
- **Consistency**
  - Delivered in user-spoken language.
  - Consistent languages, terminology.
  - Layout, font and style for every page are consistent.
  - Follow the usual convention of the web, such as changing color for visited link, location of navigation bar.

2. Development

The systematic use of scientific and technical knowledge to meet specific objectives or requirements of web based system [44].

Here present the tools that used for development of the system like database language and implementation language and others tools used in this phase.

I used the tools below to develop my system:

- PHP & MySQL
- Macromedia Dreamweaver
- Adobe Photoshop

3. Design screen

1, Main screen

This screen represent the main interface of the system, which starts off into the system in order to take advantage of the internal system resources, sources of educational courses and books, lectures and other educational files contained in the system.

2. Student registration login screen:

in this screen recording data entry student of the user name and password if the student account already in the system, but if the new user who shall choose the link hyperlinks (not verified) for the purpose of recording data up within the system to take advantage of the system resources of the Interior, If The user guest who shall enter the main interface of the system directly to find out information about this system.

3. New student registration screen:

In this screen a student enters data registration and subscription in order to get an account within the system to take advantage of the internal system resources.

4. System administrator login:

this screen Describe login system manager and it was selected from a list of options and click on the Go button and then enter your user name (system administrator) and password in order to access the window main control where everyone group operations carried out by the system administrator.

5. Basic operations of Teacher screen

This screen is a window control of key processes carried out by Teacher within the system.

6. Basic operations Screen for the system administrator:

This screen is a window control system for the home and where everyone group operations carried out by the system administrator.

7. Teaching assistant operations screen

This screen is a window control of key processes carried out by the teaching assistant within the system.

8. Search screen in system:

This is the screen as the main window to search for educational resources, books, lectures, files and data inside the system, and when you enter a particular character progress window suggestions for material to be searched for in order to facilitate access to these terms available and selecting the desired ones.

9. Services contact screen:

Using this screen is common in the system by typing messages, suggestions and posts and sent to manage the system. And also links to access the faculty page or university or the system administrator.

10. Educational resources screen:

This screen displays reports from all sources within the educational system by departments or disciplines in the faculty which includes inside a series of books, lectures, courses, and is accessed after logging system.

11. Books and Lectures screen:

no	address	teacher	level	date	size
3	PHP نظم Mysqlو	أستاذ أنس	الأولى	2011-08-10	200kb
2	أساليب البرمجة	أستاذ عوض علي	الثانية	2011-02-11	400kb
666	مبادئ قواعد البيانات	أستاذ مختار محمد	الأولى	2011-03-12	250kb
4	حماية ملفات الويب	أستاذ أنس علي	الخامسة	2011-05-15	150kb

This screen displays all reports books, lectures and courses and various applications files within the educational resources by disciplines and levels, which are accessed by users within the system.

12. Teacher login screen:

this screen Describe Login teacher of the system as it was selected from a list of options and click on the Go button and then enter your user name and password in order to access the main window control where everyone group operations carried out by teacher within the system.

13. Edit Educational resources screen:
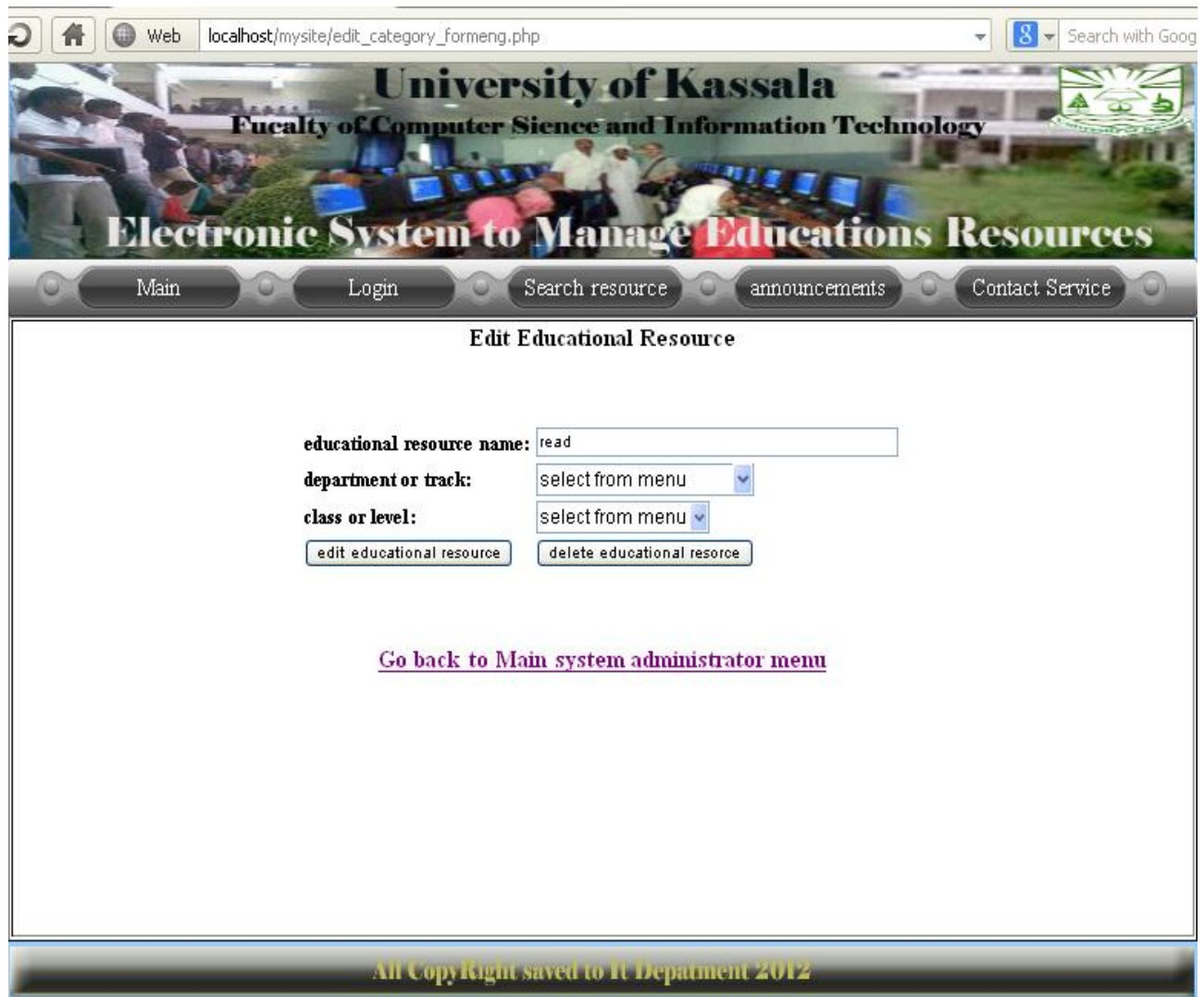
This screen represents a model for the management of educational resources for the purpose of conducting modification and deletion of existing educational resources within the system.

14. Student management screen:

This screen displays reports on student data subscribers in the system by disciplines or departments, as well as the operations control data of students by teachers or the system administrator to make additions and deletions and the amendment to this data.

15. Event management screen

This screen displays data reports events and advertising targeted to college students in the system by disciplines and levels, as well as control operations in the event data and declarations by teachers or the system administrator to make additions and deletions and the amendment to this data.

16. Screen messages from participants:

This screen displays reports for messages and proposals received from individual users within the system and directed to a system administrator or teachers, as well as control processes these messages and proposals by the teachers or the system administrator to perform the deletion.