CHAPTER 1

INTRODUCTION

1.1 PROJECT OVERVIEW

Nowadays internet is a global system of interconnected computer networks that use the standard Internet protocol suite often called TCP/IP (Transmission Control Protocol/Internet Protocol), although not all protocols use TCP to serve billions of users worldwide. It is a network of networks that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless and optical networking technologies. Internet has been the most useful technology of the modern times which helps us not only in our daily lives, but also our personal and professional lives developments. The internet helps us achieve this in several different ways. For the students and educational purposes, the internet is widely used to gather information so as to do the research or add to the knowledge of various subjects. Even the business professionals and the professions like doctors, access the internet to filter the necessary information for their use. The internet is therefore the largest encyclopedia for everyone, in all age categories. The internet has served to be more useful in maintaining business, agriculture sector, government office, researching and development, management, organization, health sector, information, communication, entertainment, marketing, and individual. Moreover, each of the networks provides an abundance of resource and uses. (Karthik/2016), Web-based school management system is design to provide more suitable between Admin, teachers and students. It's very gracefully handles all requirements for school management easier. As the member of student increase, so the manual system is no longer efficient and difficult to update or search information. So, it's better than if the school takes the web base management system to used replace the manual system. Web-based school management system can be accessed anytime and anywhere in the world. It enables the school's director, teachers, students and the manager to contact with each other all time. (Deena, 2010)

According to Jariya Islam Suksa School at Moo 2 Huvainamyen Tambon Botong Nongjik District Pattani Province 94170 was established in 1992 by Mr. Muhammadjafa and Mrs. Fatimah Waesame-ae find out the network to construct the school for the poor children in rural areas as a free education. To offer the equal chance with the children in town community. By using the integrate curriculum of Islamic studies from Bangkok which developed for more than twenty years, and extend to Pattani province. Present, this school compose of two building of one floor, under constructing one building of second floors. Lack of comfort room and bathroom. Teaching free for all. Parents who have enough money donate for food and milk/snack 300 Bath/month. Orphanage and poor children are excepted. The income of the school is from the selling of the books which the school produce for using in school and sell in network school both in Bangkok and in provincial. (Waesama, 1992).

1.2 PROBLEM STATEMENT

Nowadays, Jariya Islam Suksa School use manual system to manage information. This school doesn’t have centralized database to keep information. So, sometime the information might be lost or complicated to recovery of admin, teachers, students, data or information it will take long time to perform every process because data store by different part and no longer efficiency. Admin, teachers, students at Jariya Islam Suksa School face the problem that they cannot check any information of school.

According to this web base we will replace from the manual system to be Web-Based School Management System that use technology of database to keep a large date of the admin, teachers, students and information of the school and much more and also students can check or see the grad as well as they can improve their skill in the term of using technology internet.

1.3 RESEARCH OBJECTIVE

The objective of the project will help to achieve as the result as following:

1. To develop a Web-Based School Management System for Jariya Islam Suksa School.
2. To create centralizes database that can keep data in one place and produce high efficiency system for searching, processing information by using a computer.

1.4 SCOPE AND LIMITATION

The scope and limitation of the project are as the followings:

- Project will be created Web-Based School Management System for Jariya Islam Suksa School and will develop in English language.
- In addition, system will be helped to arrange all information about school that is involved to admin, teachers and students and other data.

1.5 SIGNIFICANCE / CONTRIBUTION OF STUDY

It is our hope that the work will achieve the followings:

- This project will help to manage all information and aid to promote of the school by online after completing the system.
- After completing this system, the user's workload will be reduced and increase the efficiency in their tasks and user can access anytime and anyplace.
- Comfortable for users to see or check any information.

1.6 DOCUMENT ORGANIZATION

Chapter 1: Introduction

This chapter is describing introduction about Web-Based School Management System for Jariya Islam Suksa School to be digital system. And the problem statement that we try to improve it.

Chapter 2: Literature Review

This chapter is describing about the various theories and book that relate to this and we used it as a guide line to develop Jariya Islam Suksa School Management System as Web-Based.

Chapter 3: Methodology

This chapter is describing about the methods in which the study uses to develop Web-Based School Management System**.**

CHAPTER II
LITERATURE REVIEW

The school management system of Jariya Islam Suksa School at Botong Sub-district, Nongjik District, Pattani Province is the scope of this study the documents and works related to the research as follows.

1 SCHOOL MANAGEMENT

School management is a necessary section in any instructional system. School administrators all over the world are constantly working in many activities effectiveness manage school works and give a better educational activities to students while education is provision of a number of learning activities to students in order to provide knowledge, morality, values, attitudes, and skills with the ultimate goal of making them useful part of society, this method includes the method of planning, organizing, directing and controlling the activities of an educational institution or any school. (Sebestine, 2013)

2 SCHOOL MANAGEMENT SYSTEM

School Management System is a big database system that can use for controlling the school's day to day business. School Management System permits users to keep all their school's information electronically, involving information on students, employees, properties, teaching materials, etc. Most significantly, this information can be easily shared with permitted users, records can be easily searched, and reports can be easily generated. (Praveen, 2011)

School Management Information Systems are digital technology that has been utilized in schools to assist many administrative works such as checking attendance, evaluation records, statements, budget management, and resource and staff allocation. As stated by information systems in schools can give administrators with the information required for informed planning, policy-making, and assessment (Visscher, 1996). Moreover, management

information systems have transferred school management in the sectors of leadership, decision-making, workload, human resource management, communication, responsibility, and planning (Gurr,200). Also, these systems can help the school manager in deciding the aims of the school, expressing strategic plans, administering resources, and assessing staff review as well as organizational achievement. (Telem and Buvitski, 1999)

In the beginning 2000s, principals started the use of information systems improving to manage daily duties. Usually, to improve managerial effectiveness by preparing information, and getting preponderance in competitions by directing strategies to support ongoing student evaluation, particularly by facilitating formative and summative evaluations to manage changes in the instruction method, the learning environment, and deciding the needs of students. In many positions, school management information system is used to simplify or automate routine classroom managerial tasks such as reporting attendance and keep communication with parents. Strategically, school management information system assists managers to decide the purposes of schools, make long-time plans, share resources, form instructional methods of the future, and evaluate shows of teachers and the success of the school. Schools use SMISs to make arrangements such as student placing in courses and programs at the middle and high school levels.

School management information systems are too beneficial to digitize data, easier communication between teachers, administrators, parents, and other stakeholders, and grant easy entree to data about student achievement, whereby progressing administrative efficiency and decreasing educator’s workload. In other words, school management information systems increase effectiveness and efficiency by saving time and facilitating development of alternative solutions for complicated problems. (Vissher and Wild, 1997; Pegler, 1992)

3 RELATED WORK

3.1 LEARNING MANAGEMENT SYSTEM

Learning Management Systems (LMS) play an important role in the Web-based e-learning situation. It relates learning contents and learners with each other in a standardized way. It controls users, learning equipment in the form of aims in Content Management System and learning events. It manages and managers learning to improve and maintain track of learning achievement. It manages and managers administrative duties. LMS is a software system that is easy for managerial duties as well as student participation in e-learning materials. (Recesso, 2001)

3.2 LEARNING MANAGEMENT SYSTEM AND HIGHER EDUCATION

Higher education is operating to combine next-generation instruction technology into its learning activities and to get effectively in higher education because of technology is critical and universality; in special, technologies such as Learning Management System are no longer mere assistants to teaching and learning, but have become important tools for the educational method. Furthermore, LMSs have appeared from a basic function to a critical one in higher education. Present college students are technologically savvy and demand their faculty to use technology and Learning Management Systems. (Ganjalizadeh and Molina, 2006)

3.3 WHY LEARNING MANAGEMENT SYSTEM

LMS increases the classroom and its activities online, whereby connecting students to each other and their teachers; enabling web-based sharing of research materials, library resources, and even textbooks; and combining learning activities with administrative systems. Through LMS technology faculty members can now expand their teaching with powerful

online tools, and students can use these tools to increase their contact with teachers, fellow students, and information (Klonoski, 2008). Higher education institutions, especially those with funds restrictions are very attracted to open source LMS because of their cost savings and more control (Ganjalizadeh and Molina, 2006). Next-generation LMSs provide student information system combination, learning object containers, branding, content sharing, and an enhanced user interface (Klonoski, 2008). Higher education institutions and their faculty members must continue to examine and explore new pedagogical methods and the technologies to assist them. Open-source software movements are in tune with the collaborative nature and intelligent freedom quality of academic institutions worldwide. After all, learning management systems, especially open-source ones, have a necessary role in closing the digital divide through education. At the same time, however, educations must defend themselves with suitable technical, right, and organizational plans in opposition to possible patent lawsuit (Ganjalizadeh and Molina, 2006). Learning management systems is a software application for the management, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content (Ellis, 2009). States that: "Learning Management Systems (LMSs) play a central role in the Web-based e-learning plan. It joins learning contents and learners together in a standardized way. It controls users, learning materials in the form of objects in Content Management System (CMS) and learning events. It controls and administers learning progress and maintain track of learning achievement. It manages and administers administrative tasks. LMS is a software system created to make easier administrative tasks as well as student participation in e-learning materials (Recesso,2001). Learning management system is software created and produced to track and administer computer-based practice and education. Education is key to productivity and that means way to the right content and the right program for the content. Crucial to a learning management system are the objects of developing knowledge, developing new skills and knowledge, and increasing productivity on the job. Ellis (2009) states, while there are various meanings of a learning management system, the basic description is a software application that automates the management, tracking, and recording of training events. Nevertheless, it is not that simple. A strong LMS should be able to follow:

- centralize and automate management
- use self-service and self-guided services
- gather and deliver learning content quickly
- unite training initiatives on a scalable web-based program

- help portability and standards
- personalize content and permit knowledge reuse (Ellis, 2009)

Learning Management System contains features for management, evaluation, course administration, probably content management, and authoring. All Learning Management Systems manage the log-in of registered users, manage course catalogs, timetable, news, photos, class, teachers, students, record data from learners, provide reports to management and other information. A learning management system is described as software that has been used in a learning content presentation that has an important role and complexity in the e-learning situation. A forward e-learning system has to carry out with the following conditions (Kis, 2007 ; Kritikou, 2008). In many institutions, LMSs are doing used to help and improve learning. As stated by Lookout on Borderless Higher Education, some higher education institutions continue to develop in-house systems or buy into open source alternatives, but an ever-larger majority is buying licenses for proprietary programs. In another learn that supports the results of Observatory on Borderless Higher Education saw that many institutions find it quite easy to start with a business LMS, but they face many obstacles such as; linguistic, evaluation tools, rightness to destination groups and pricing. Nevertheless, open-source LMS may have an influence on the future of the LMS market with its cost-effectiveness and advanced features. In this study, we focus on Learning Management Systems that are more and more often used to build online learning. LMS is a software system created to facilitate managerial tasks as well as student participation in e-learning subjects. This term explains a wide range of systems that create and grants into online education services for students, teachers, and administrators. These services normally include access control, provision of learning content, communication tools, and administration of user groups. (Renaux, 2005)

3.4 EFFECTIVENESS OF LEARNING CONTENT MANAGEMENT SYSTEM (LCMS)

Organizations that have a big quantity of learning content that they want to use in numerous subjects and different formats may need a Learning Content Management System. Hall (2001) explains that learning content management system is an environment where developers can create, store, reuse, manage and deliver learning content from a central object repository, normally a database. LCMS usually work with content that is based on a learning

object model. These systems normally have good search abilities, enabling developers to find immediately the text or media needed to build training content. Learning Content Management Systems frequently try to achieve a division of content which is often designated in XML from the exhibition. This enables many LCMS to announce to a wide range of arrangements, programs, or devices such as print, Web, and even Wireless Information Devices (WID) such as Palm and Windows CE handhelds, all from the same source material (Hall, 2001). Learning content management systems provide online content to be stored, managed, and reused through combined database functionality. The LCMS is a complicated piece of software that marks learning objects then prepares and gives them in endless combinations (Jones, 2001). A different definition of learning content management system is a software application that enables trainers and training managers to manage both the administrative and content-related functions of training. An LCMS combines the subject management abilities of an LMS (learning management system) with the content production and storage abilities of the Content Management System. (Leiserson, 2003)

3.5 FEATURES OF LEARNING MANAGEMENT SYSTEM AND LEARNING CONTENT MANAGEMENT SYSTEM

Learning Content Management System indicates content management, authoring and includes many specialties of an LMS. LCMS is a system used to arrange and easier collaborative content making. Newly, the term has been connected almost completely with programs for controlling the content of web sites (Renaux, 2005) LCMS and LMS can be integral and each solves a uniquely different challenge. LMS focus on creating learning possible and tracking learners. LCMS focus on stored online content to be managed and reused through combined database functionality. While there is some overlap in the functionality between an LMS and an LCMS, the two enterprise applications have a different focus: LMS makes the process of scheduling classes, creating catalogs and registering learners more effective. LCMS on the other hand, focus only on transfer. In the broadest terms, the LMS helps get you to the classroom door and the LCMS manages the experience inside the classroom (Jones, 2001). LMS and LCMS could each be a suitable solution depending on the needs of virtual school or universities. By surely understanding the differences, the core functionalities of each and the benefits of combining or

keeping applications separate, training and education professionals can help guide decision-makers toward the best solution.

CHAPTER III

METHODOLOGY

In this chapter explains about all process of analyzed and design in this system. According to the methodology for this project, the developer used Software Development Life Cycle (SDLC) because it breaks down the entire life cycle of software development thus make is easier to evaluate each part of software development and also makes it easier for programmers to work concurrently on each phase.

This model is a kind of software development life cycle (SDLC) that is framework defines tasks performed at each step in the software development process. As show in figure 2.1 below (Sainab, 2018)

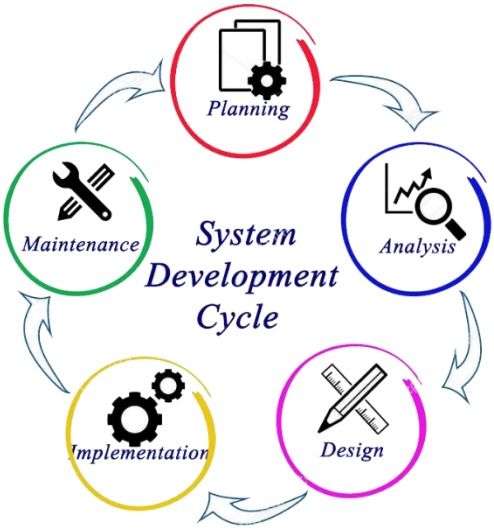

Figure 2.1: SDLC Phase

(From: VAEEMA, February 26, 2017)

3.1 PLANNING

The first step in the planning process is to determine the idea that I am going to develop, the idea is web-based school management system. This idea is gained when I was working in Jariyah Islam Suksa School. I studied and search for preview studied, do interview with end user to find out the problem and solution in develop web-based school management system. In the of planning step, I create a project schedule or Grantt chart to set the task that should be done at a specific time.

3.2 ANALYSIS

The proposed web-based school management system was designed purely from the users' viewpoint without considering the restraint of hardware (such as computers hardware and software). In addition, system frameworks required to attain such designs was clarified. After checking requirement specifications included in the basic plan, the overview of the project structure was represented through the system architecture, system structure chart, use case diagram, use case specification, sequence diagram, and activity diagram (Figures: 3.1-3.72) so that the alternation and flows of data can be easily assumed.

3.2.1 SYSTEM ARCHITECTURE OVERVIEW

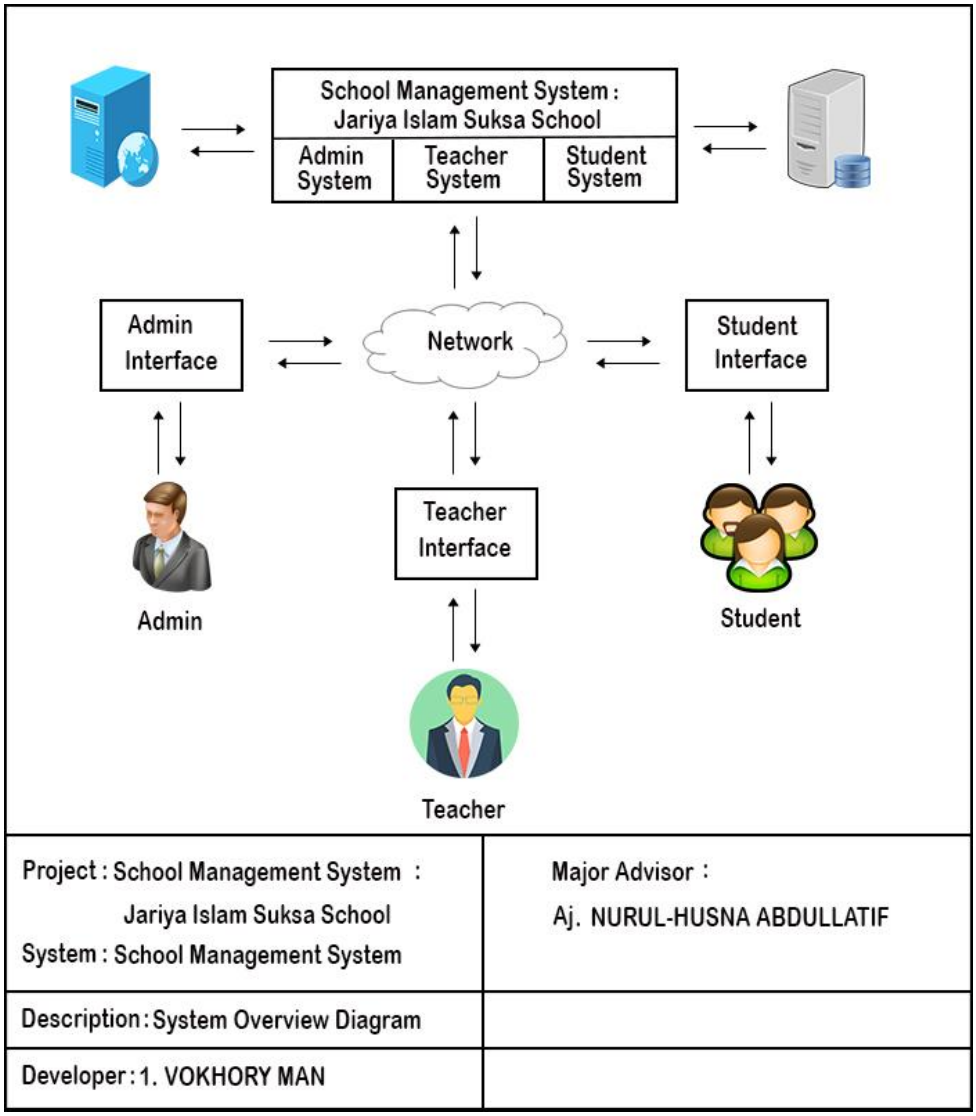

Figure 3.1: *System Architecture Overview of JIS management system*

3.2.2 SYSTEM STRUCTURE CHART

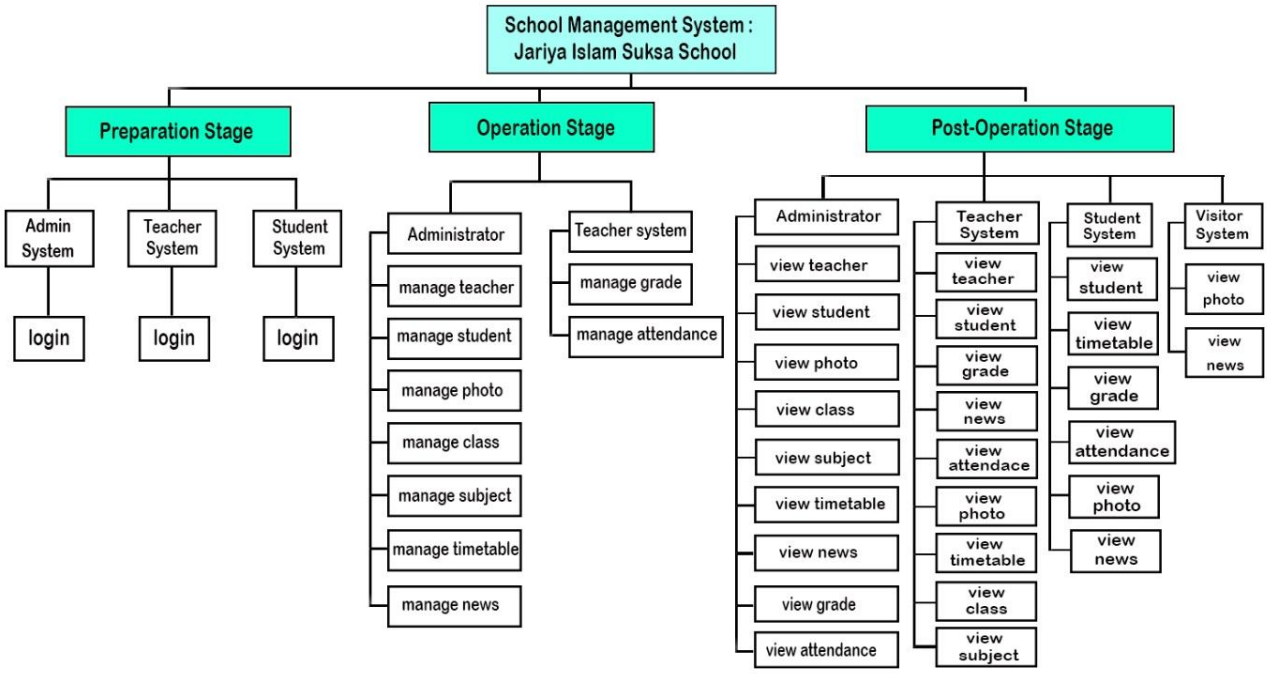

Figure 3.2: *System Structure Chart of JIS management system*

The figure about show that school management system is divided into three stages which are organization stage, operation stage, and post-operation stage

1. **Preparation Stage:** this stage contains the action of three system; administrator system, teacher system and student system.

A. Administrator System

a) Login: This process provide authentication to administrator so that will be secure and reliable.

B. Teacher System

a) Login: This process provide authentication to teacher so that will be secure and reliable.

C. Student System

a) Login: This process provide authentication to student so that will be secure and reliable.

2. **Operation Stage:** this stage contains the action of three system; administrator system, teacher system.

A. Administrator System

a) This process allows the administrator to manage teacher, student, photo gallery, class, subject, timetable, news such as add, update and delete.

B. Teacher System

a) This process allows teacher to manage grade and attendance student such as add, update, delete.

3. **Post-Operation Stage:** this stage contains the action of three system; administrator system, teacher system and student system and visitor system.

A. Administrator System

a). This process allows administrator to view; teacher, student, photo gallery, class, subject, timetable, news.

B. Teacher System

a). This process allows teacher to view; teacher, student, grade, attendance, photo gallery, class, subject, timetable, news.

C. Student System

– This process allows student to view; student, grade, attendance, photo gallery, timetable, news.

D. Visitor System

– This process allows visitor to view; photo and news.

3.2.3 PROCESS ANALYSIS AND DESIGN

LIST OF REQUIREMENTS

- M-Mandatory requirement (something the system must do)
- D-desirable requirement (something the system preferably should do)
- O-optional requirement (something the system may do)

NO	Requirement ID	Requirement Description	Priority
	REQ-01	**Log in**	
1.	REQ-01-01	Admin log in	M
2.	REQ-01-02	Teacher log in	M
3.	REQ-01-03	Student log in	M
	REQ-02	**Manage the students**	
4.	REQ-02-01	Admin can add new student.	M
5.	REQ-02-02	Admin can update the student's information.	O
6.	REQ-02-03	Admin can delete the students from the system.	O
	REQ-03	**Manage the Teacher**	
7.	REQ-03-01	Admin can add new teacher.	M
8.	REQ-03-02	Admin can update the teacher's information.	O
9.	REQ-03-03	Admin can delete the teacher's information.	O
	REQ-04	**Manage photo gallery**	
10.	REQ-04-01	Admin can add photo albums.	M

11.	REQ-04-02	Admin can update photo albums.	O
12.	REQ-04-03	Admin can delete photo albums.	O
	REQ-05	**Manage class**	
13.	REQ-05-01	Admin can add the class	M
14.	REQ-05-02	Admin can update the class	D
15.	REQ-05-03	Admin can delete the class	O
	REQ-06	**Manage subject**	
16.	REQ-06-01	Admin can add the subject	M
17.	REQ-06-02	Admin can update the subject	D
18.	REQ-06-01	Admin can delete the subject	O
	REQ-07	**Manage time table**	
19.	REQ-07-01	Admin can add the time table	M
20.	REQ-07-02	Admin can update the time table	D
21.	REQ-07-03	Admin can delete the time table	O
	REQ-08	**Manage news**	
22.	REQ-08-01	Admin can add the news	M
23.	REQ-08-02	Admin can update the news	D
24	REQ-08-03	Admin can delete the news	O
	REQ-09	**Manage grade**	
25.	REQ-09-01	Teacher can add the grade	M
26.	REQ-09-02	Teacher can update the grade	D
27.	REQ-09-03	Teacher can delete the grade	O
	REQ-10	**Manage Attendance**	
28.	REQ-10-01	Teacher can add attendance	M

29.	REQ-10-02	Teaches can update attendance	D
30.	REQ-10-03	Teacher can delete the attendance	O
	REQ-11	**View student**	
31.	REQ-11-01	Admin can view the student	D
32.	REQ-11-02	Teacher can view the student	D
33.	REQ-11-03	Student can view the student	O
	REQ-12	**View Teachers**	
34.	REQ-12-01	Admin can view teacher	D
35.	REQ-12-02	Teacher can view teacher	O
36.	REQ-12-03	Student can view teacher	O
	REQ-13	**View time table**	
37.	REQ-13-01	Admin can view the time table	D
38.	REQ-13-02	Teachers can view the time table	D
39.	REQ-13-03	Students can view the time table	D
	REQ-14	**View class**	
40.	REQ-14-01	Admin can view the class	D
41.	REQ-14-02	Teachers can view the class	D
	REQ-15	**View subject**	
42.	REQ-15-01	Admin can view the subject	D
43.	REQ-15-02	Teachers can view the subject	D
	REQ-16	**View grade**	
45.	REQ-16-01	Teachers can view grade	D
46.	REQ-16-02	Students can view grade	D

	REQ-17	**View photo gallery**	
47.	REQ-17-01	Admin can view photo gallery	O
48.	REQ-17-02	Teachers can view photo gallery	O
49.	REQ-17-03	Students can view the photo gallery	O
50.	REQ-17-04	Visitors can view the photo gallery	O
	REQ-18	**View attendance**	
51.	REQ-18-01	Teacher can view attendance	O
52.	REQ-18-02	Student can view attendance	O
	REQ-19	**View News**	
53.	REQ-19-01	Admin can view news	O
54.	REQ-19-02	Teachers can view news	O
55.	REQ-19-03	Students can view news	O
56.	REQ-19-04	Visitors can view news	O

Table 3.1: *List of Requirement of JIS management system*

3.2.4 USE CASE DIAGRAM

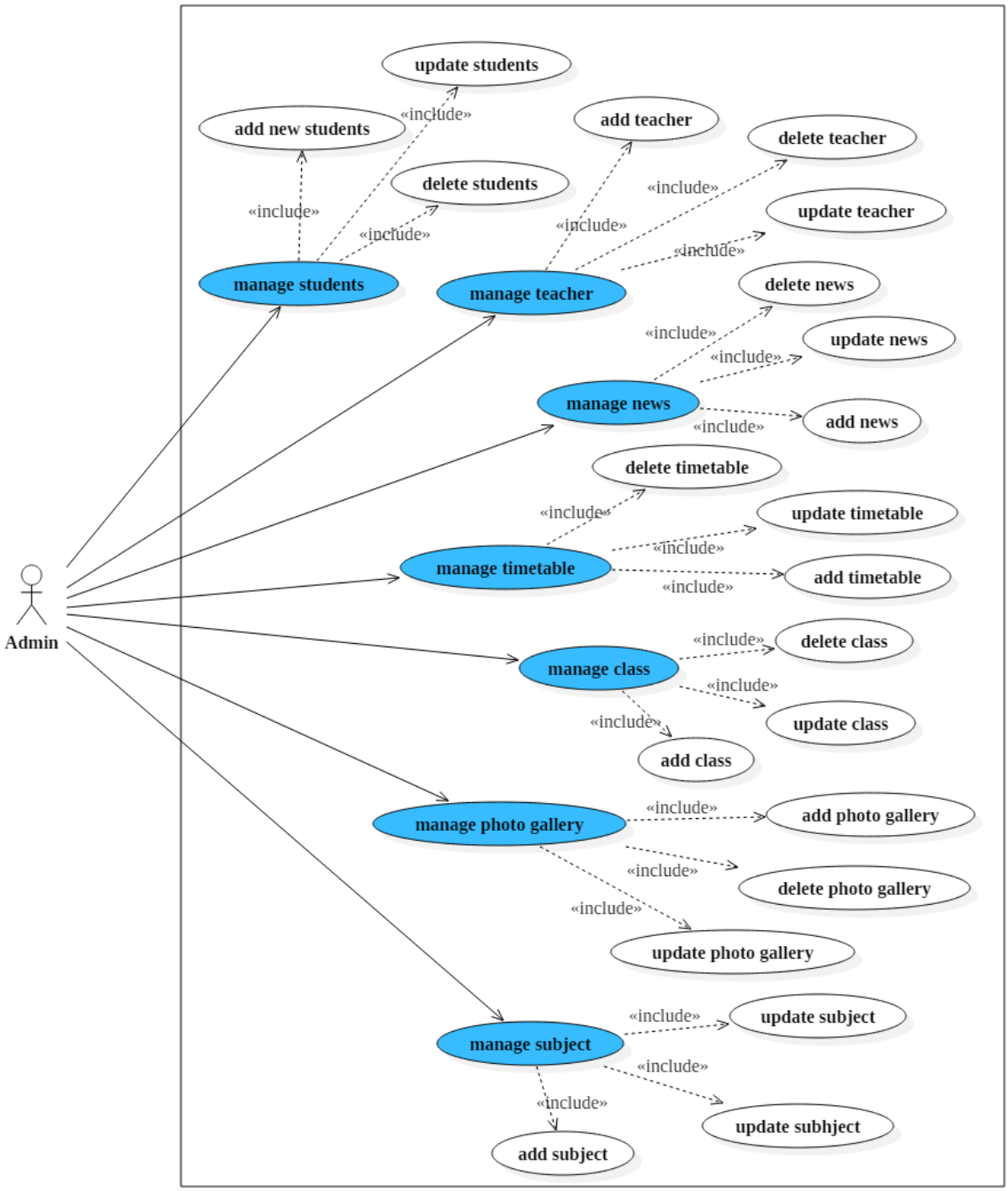

Figure 3.3: Use Case Diagram of JIS Management System

- **Use Case Diagram of Teacher**

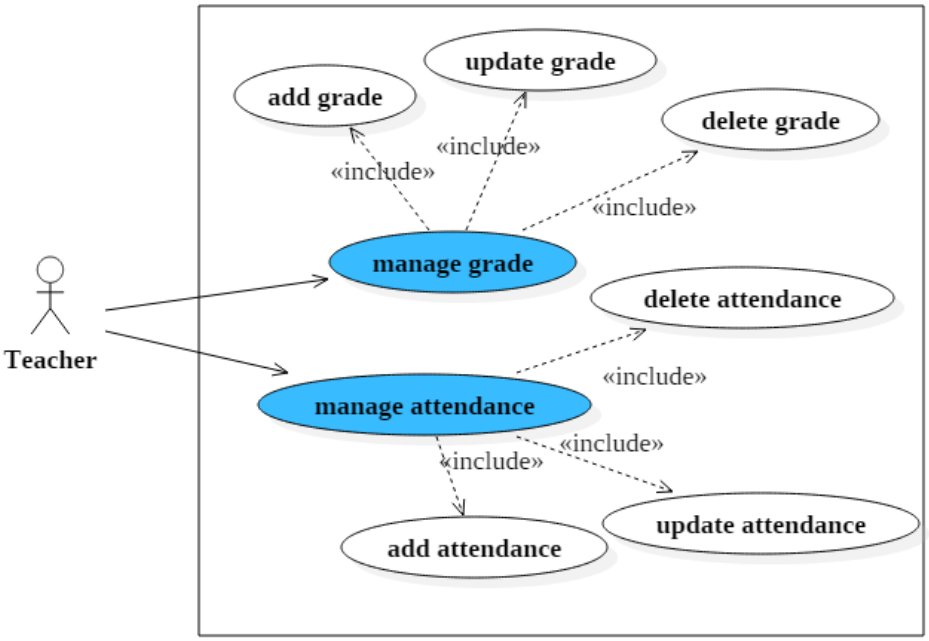

Figure 3.4: Use Case Diagram of Teacher Management Page

- **Use Case Diagram of users view page**

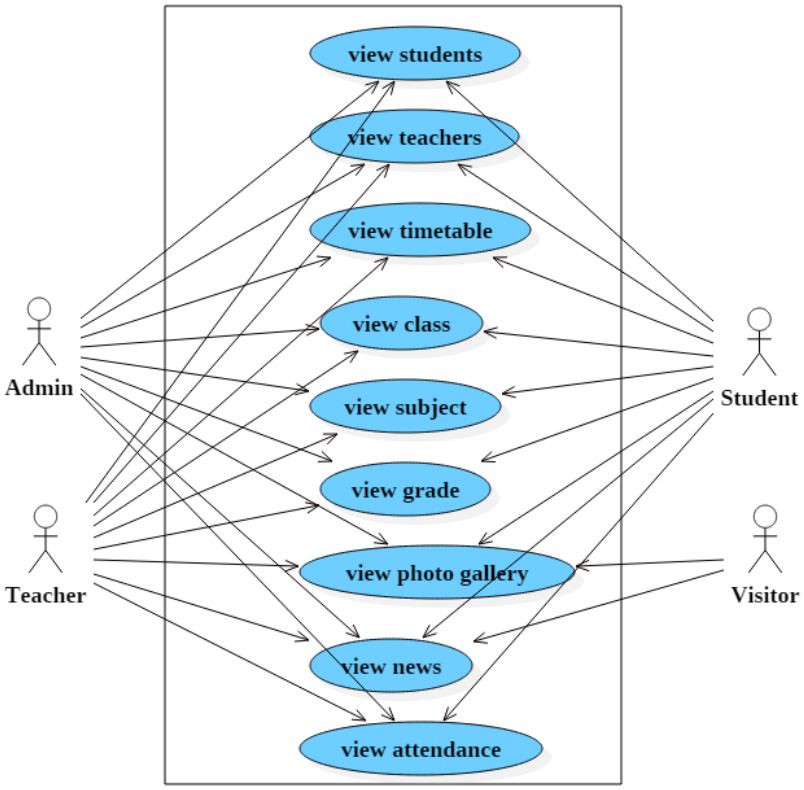

Figure 3.5: Use Case Diagram of Users View Page

3.2.5 USE CASE SPECIFICATION

I. USE Case: Login (ER_01)

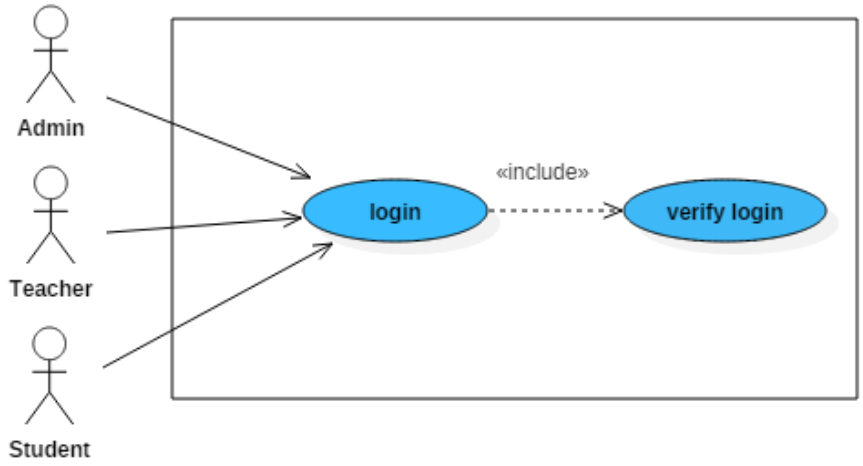

Figure: 3.6: Use Case Diagram of the users' login page

1) Brief Description

This use case will be used to allow user (Admin, Teachers, and Students) to enter system

2) Precondition

The users must have user id and password to log in.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_01_01)

- This use case process when user type key board in user id and password on main page.
- User enter user id and password on the user login page.
- Users press login button.
- The system will run to check the user id and password.

- This use case end when the system displays the control panel page.

4.2 Alternative Flow:

A-1: Cancel

The system will cross out the login process.

4.3 Exception Flow:

E-1: Invalid user id and password

This system will disclose error message to the users.

5) Post Condition

The users can enter to system.

6) Limitation

The password must hold at least 5 characters.

II. Use Case: Manage Student (ER_02)

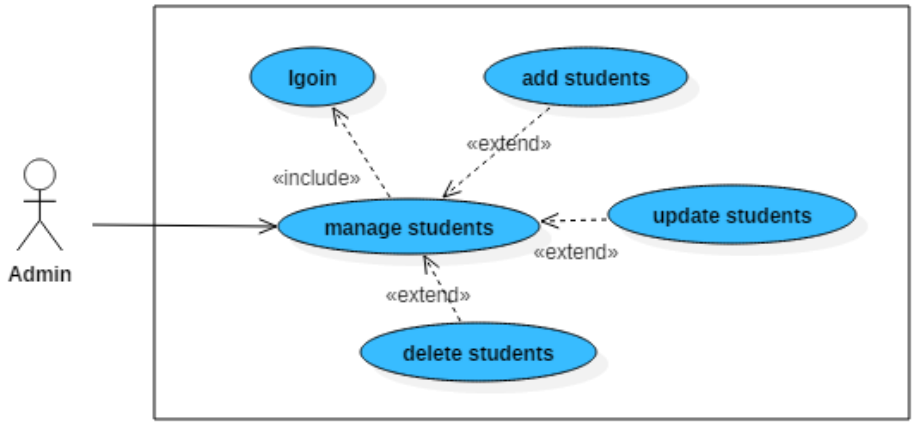

Figure: 3.7: Use Case Diagram of the admin manage students page

1) Brief Description

This use case will permit admin to arrange students consist of add, update, delete student's information students of the system.

2) Precondition

The Admin need to login to the system.

3) Characteristic of Activation

Implementation depends on Admin demand.

4) Flow of Control

4.1 Basic Flow (ER_02_01)

- The Admin selects managing the information of student link on the control panel page.
- The Admin press on button to add new student. [A-1: Update student], [A-2: Delete student]
- The system show adds student form to permit Admin to add student detail.
- The Admin inserts the student's information.
- The Admin presses OK button.
- The system will run to check the entering data. [E-1: Invalid entering data]
- This use case end when the system shows successful message that new students has done add.

4.2 Alternative Flow:

A-1: Update students (ER_02_02)

This system will update students process.

A-2: delete students (ER_02_03)

This system will delete students process.

A-3: Cancel

This system will cancel add students process.

4.3 Exception Flow:

E-1: Invalid entering data the system will perform error message and Admin have to re-enter data.

5) Post Condition

The Admin can manage students (add new students).

6) Limitation

No limitation

III. Use Case: Manage Teacher (ER_03)

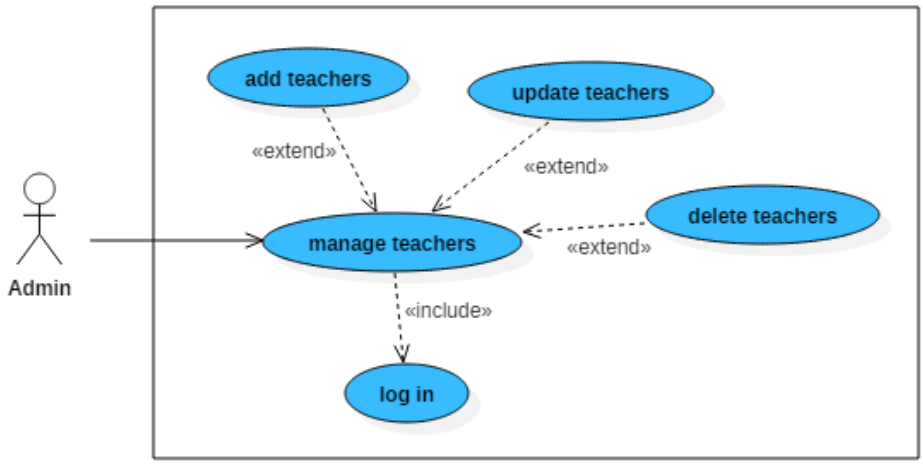

Figure: 3.8: Use Case Diagram of the admin manage teachers page

1) Brief Description

This use case will use to permit Admin to arrange teachers such as, add, update new teacher's information and delete the teacher from the system.

2) Precondition

The Admin need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_03_01)

- The Admin selects managing the information of teacher link on the control panel page.

- The Admin press adds new teachers. [A-1: update teachers], [A-2: delete teachers].
- The system shows update teachers form page to allow the director update new teachers information.
- The Admin inserts the teacher's information.
- The Admin presses OK button **(**cancel).
- The system will check the entering data. [E-1: Invalid entering data]
- This use case end when the system performs successful message that teacher has done updated.

4.2 Alternative Flow:

A-1: Update teachers (ER_03_02)

This system will update teacher's process.

A-2: delete teacher (ER_03_03)

This system will delete teacher process.

A-3: Cancel

This system will cancel update teacher.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will show error message and the user have to re-enter the information.

5) Post Condition

The Admin can manage teacher's information.

6) Limitation

No limitation

IV. Use Case: Manage photo gallery (ER_04)

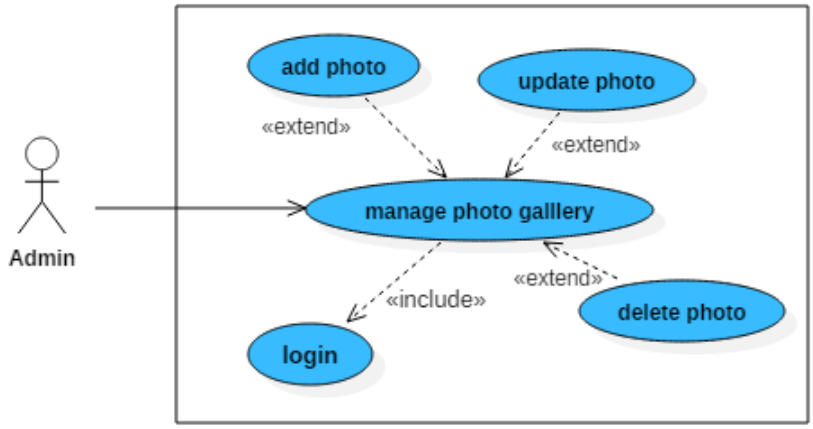

Figure: 3.9: Use Case Diagram of the admin manage photo page

1) Brief Description

This use case will use to permit the dire Admin actor to arrange photo gallery consist of add new photo gallery, update photo gallery and delete photo gallery from the system.

2) Precondition

The Admin need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_04_01)

- The Admin selects managing the photo gallery link on the control panel page.
- The Admin press inserts new photo gallery. [A-1: inserts photo gallery], [A-2: delete photo gallery].
- The Admin select file that need to upload.
- The Admin presses OK button **(**cancel).
- The system will check the entering data. [E-1: Invalid entering data]

- This use case end when the system performs successful upload file that photo gallery has done deleted.

4.2 Alternative Flow:

A-1: Update photo gallery (ER_04_02)

This system will update photo gallery process.

A-2: delete photo gallery (ER_04_03)

This system will delete photo gallery process.

A-3: Cancel

This system will cancel add the photo gallery process.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will show error message and the Admin have to re-enter the information.

5) Post Condition

The Admin can manage photo gallery information.

6) Limitation

No limitation

V. Use Case: Manage the Class (ER_05)

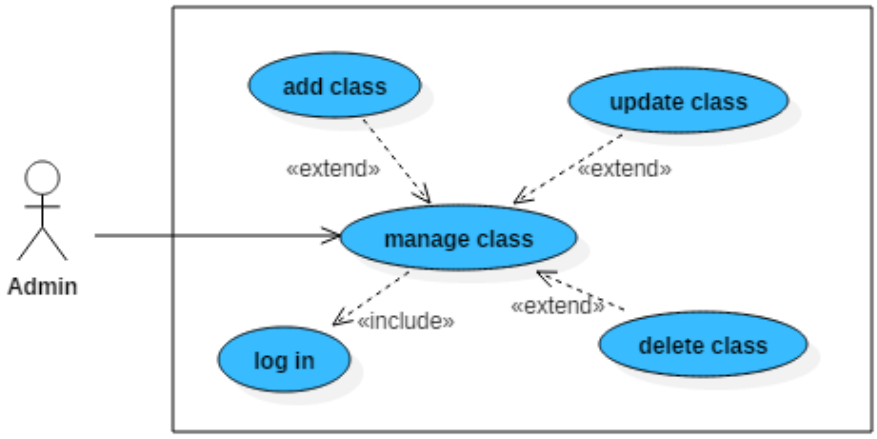

Figure: 3.10: Use Case Diagram of the admin manage class page

1) Brief Description

This use case will use to permit the Admin to arrange class consist of add new detail of the class, update detail of the class and delete detail of the class.

2) Precondition

The Admin need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_05_01)

- The Admin selects to manage the class link on the control panel page.
- The Admin press inserts detail of class. [A-1: Update class], [A-2: Delete class].
- The system shows the add the class form to allow the director to add new detail.
- The Admin inserts class information.
- The Admin presses OK button **(**cancel).
- The system will check the entering data. [E-1: Invalid entering data]
- This use case end when the system performs successful message that new class has done update.

4.2 Alternative Flow:

A-1: Update class (ER_05_02)

This system will update class process.

A-2: delete class (ER_05_03)

This system will delete class process.

A-3: Cancel

This system will cancel add the class process.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will show error message and the Admin have to re-enter the information.

5) Post Condition

The Admin can manage class's information.

6) Limitation

No limitation

VI. Use Case: Manage the subject (ER_06)

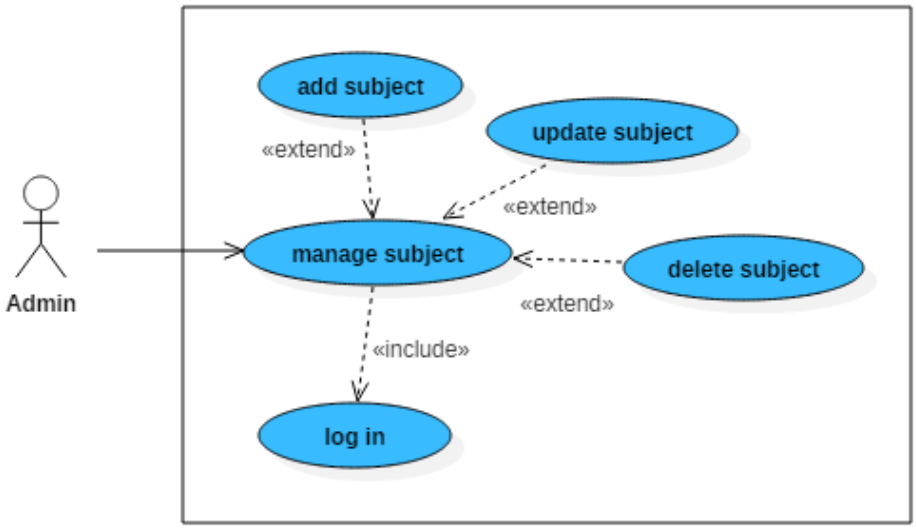

Figure: 3.11: Use Case Diagram of the admin manage subject page

1) Brief Description

This use case will use to permit the Admin to arrange subject consist of add new detail of the subject, update detail of the subject and delete detail of the subject from the system.

2) Precondition

The Admin need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_06_01)

- The Admin selects to manage the subject link on the control panel page.
- The Admin press inserts detail of subject. [A-1: Update subject], [A-2: Delete subject].
- The system shows the add the subject form page to permit the Admin to add new detail of subject.
- The Admin inserts subject's information.
- The Admin presses OK button **(**cancel).
- The system will check the entering data. [E-1: Invalid entering data]
- This use case end when the system performs successful message that new subject has done update.

4.2 Alternative Flow:

A-1: Update subject (ER_06_02)

This system will update subject process.

A-2: delete subject (ER_06_03)

This system will delete subject process.

A-3: Cancel

This system will cancel add the subject process.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will show error message and the Admin have to re-enter the information.

5) Post Condition

The Admin can manage inserts subject's information.

6) Limitation

No limitation

VII. Use Case: Manage the time table (ER_07)

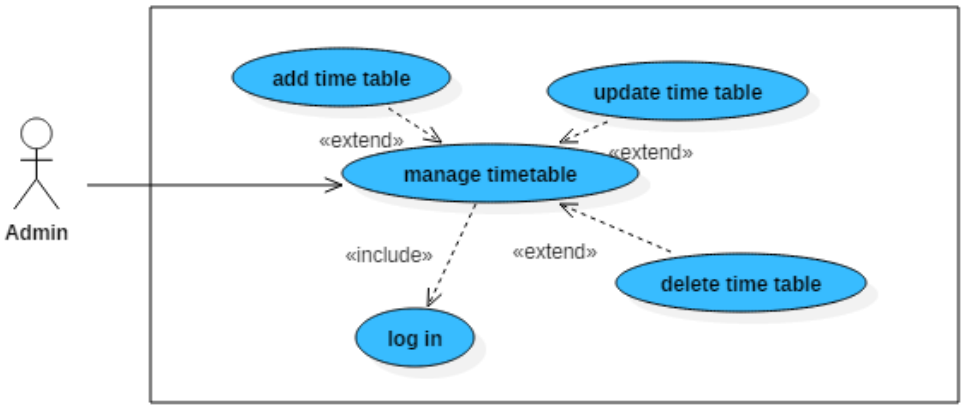

Figure: 3.12: Use Case Diagram of the admin manage time table page

1) Brief Description

This use case will use to permit the Admin to arrange time table consist of add new the time table, update time table and delete the time table from the system.

2) Precondition

The Admin need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_07_01)

- The Admin selects to manage the time table link on the control panel page.
- The Admin press inserts detail of time table. [A-1: Update subject], [A-2: Delete subject].
- The Admin selects new the time table's file.
- The Admin presses OK button **(**cancel A-3).
- The system will check the entering data. [E-1: Invalid entering data]
- This use case end when the system performs successful message that new time table has done insert.

4.2 Alternative Flow:

A-1: Update time table (ER_07_02)

This system will update time table process.

A-2: delete time table (ER_07_03)

This system will delete time table process.

A-3: Cancel

This system will cancel add the time table process.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will show error message and the director have to re-enter the formation.

5) Post Condition

The Admin can manage inserts time table's information.

6) Limitation

No limitation

VIII. Use Case: Manage News (ER_08)

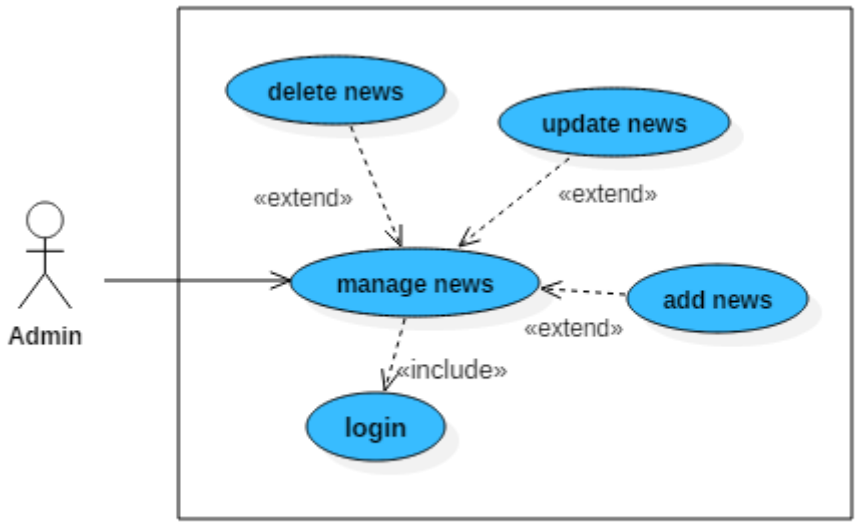

Figure: 3.13: Use Case Diagram of the admin manage news page

1) Brief Description

This use case will permit to the Admin to arrange news consist of add news, update news and delete news from the system.

2) Precondition

The Admin need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_08_01)

- The Admin selects to manage the news on the control panel page.
- The Admin press inserts news. [A-1: Update news], [A-2: Delete news].
- The system shows update news form page to permit the Admin to insert new news.
- Admin add the news.
- The Admin presses OK button **(**A-3: cancel).
- The system will check the entering data. [E-1: Invalid entering data]

- This use case end when the system performs successful message that information has done inserted.

4.2 Alternative Flow:

A-1: Update news (ER_08_01)

This system will update news process.

A-2: Delete news (ER_08_03)

This system will delete news process.

A-3: Cancel

This system will cancel the add news process.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will perform error message and the teacher have to re-enter the information.

5) Post Condition

The Admin can manage inserts grade's information.

6) Limitation

No limitation

IX. Use Case: Manage grade (ER_09)

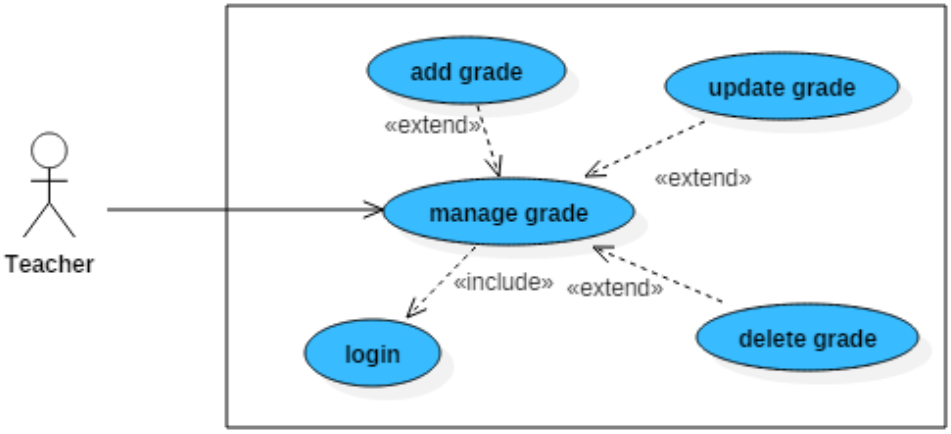

Figure: 3.14: Use Case Diagram of the manage grade page

7) Brief Description

This use case will permit to the teachers to arrange grade consist of add new grade, update new grade and delete grade from the system.

8) Precondition

The teachers need to login to the system.

9) Characteristic of Activation

Implementation depends on user's need.

10) Flow of Control

4.1 Basic Flow (ER_09_01)

- The teacher selects to manage the grade link on the control panel page.
- The teacher press inserts grade. [A-1: Update grade], [A-2: Delete grade].
- The system displays add grade form page to permit the teacher to inserts grade's information.
- Teacher insert the grade's information.
- The teacher presses OK button **(**cancel).
- The system will check the entering data. [E-1: Invalid entering data]
- This use case end when the system performs successful message that information has done inserted.

4.2 Alternative Flow:

A-1: Update grade (ER_19_02)

This system will update grade process.

A-2: Delete grade (ER_19_03)

This system will delete grade process.

A-3: Cancel

This system will cancel the add grade process.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will perform error message and the teacher have to re-enter the information.

11) Post Condition

The teacher can manage inserts grade's information.

12) Limitation

No limitation

X. Use Case: Manage Attendance (ER_10)

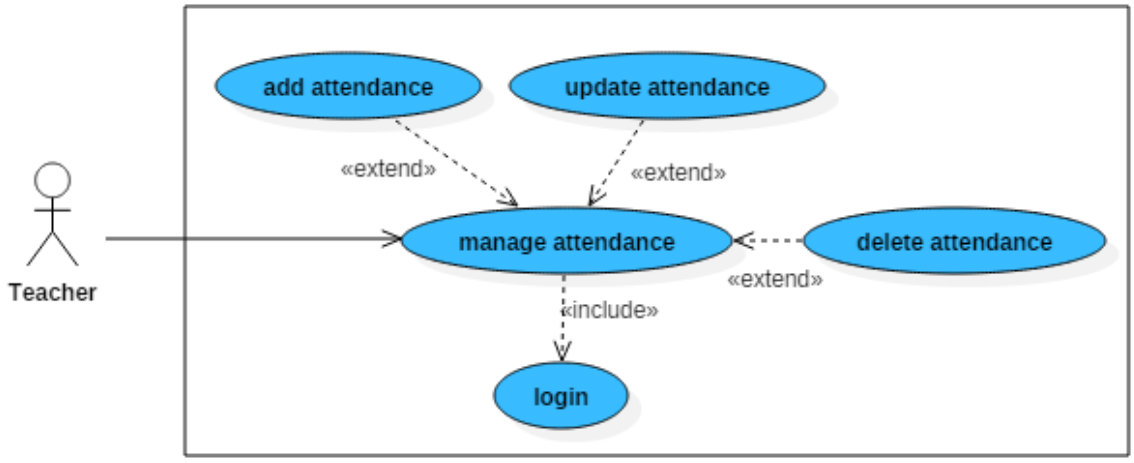

Figure: 3.15: Use Case Diagram of the teacher manage grade page

1) Brief Description

This use case will permit to the teachers to arrange attendance consist of add new attendance, update attendance and delete attendance from the system.

2) Precondition

The teachers need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_10_01)

- The teacher selects to manage the attendance link on the control panel page.
- The teacher press inserts attendance. [A-1: Update attendance], [A-2: Delete attendance].
- The system displays add attendance form page to permit the teacher to inserts student's attendance.
- Teacher insert the attendance.
- The teacher presses OK button **(**cancel).
- The system will check the entering data. [E-1: Invalid entering data]
- This use case end when the system performs successful message that attendance has done inserted.

4.2 Alternative Flow:

A-1: Update attendance (ER_10_02)

This system will update attendance process.

A-2: Delete attendance (ER_10_03)

This system will delete attendance process.

A-3: Cancel

This system will cancel the add attendance process.

4.3 Exception Flow:

E-1: Invalid entering data.

The system will perform error message and the teacher have to re-enter the attendance.

5) Post Condition

The teacher can manage inserts attendance.

6) Limitation

No limitation

XI. Use Case: View students (ER_11)

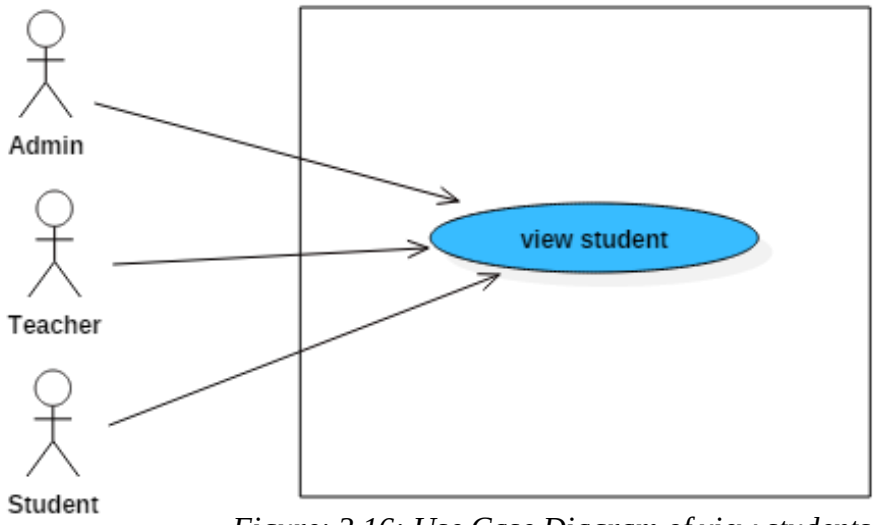

Figure: 3.16: Use Case Diagram of view students page

1) Brief Description

This use case will permit to the admin, teachers, students to view the student's information.

2) Precondition

The users need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_11_01)

- The users press on student's information link on users control panel page.
- Users search student by using class id.
- This use case end when the system performs student's information page.

5) Post Condition

The users may view the student's information.

XII. Use Case: View Teachers (ER_12)

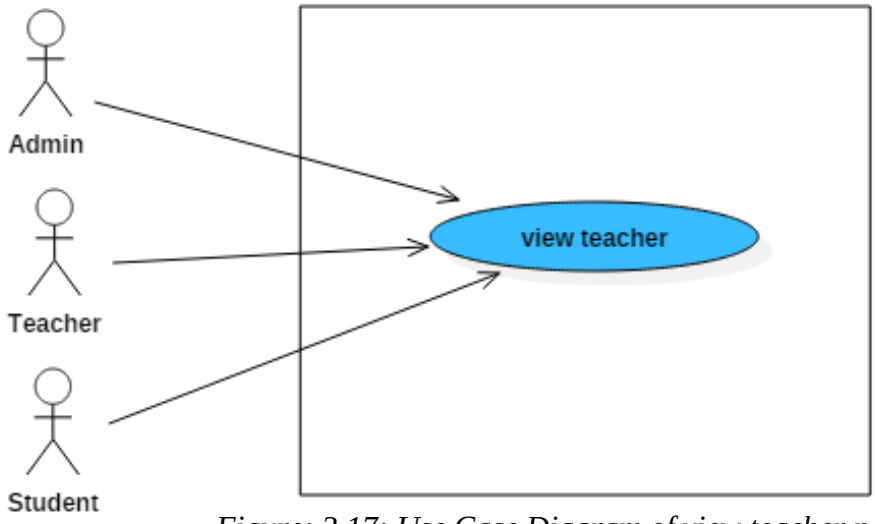

Figure: 3.17: Use Case Diagram of view teacher page

1) Brief Description

This use case will permit to the admin, teachers, students to view the teacher's information.

2) Precondition

The users need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_12_01)

- Users select teacher's information link on users control panel page.
- Users search teachers by using teacher's department.
- This use case will end when system performs teacher's information.

5) Post Condition

The users may view the teacher's information.

XIII. Use Case: View the time table (ER_13)

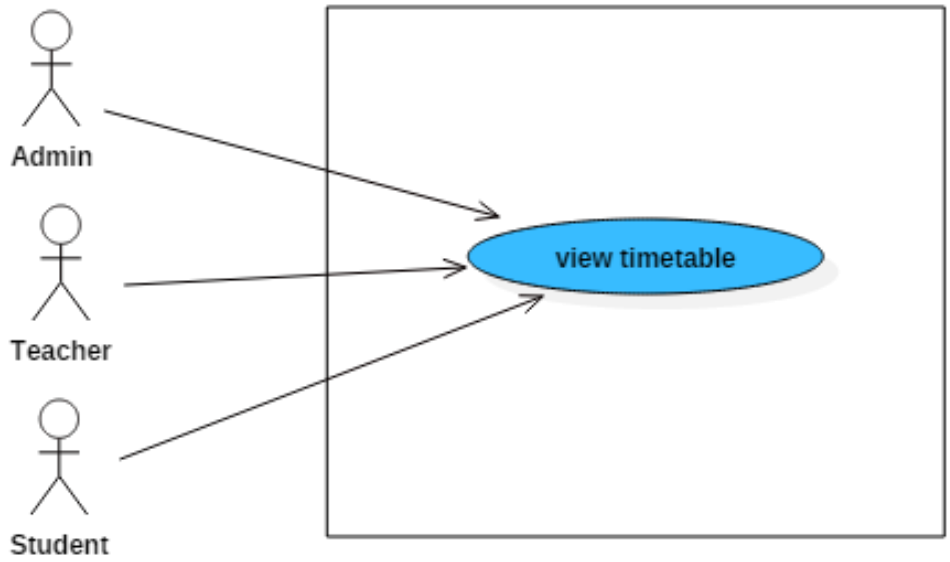

Figure: 3.18: Use Case Diagram of view time table page

6) Brief Description

This use case will permit to the admin, teachers, students to view the time table information.

7) Precondition

The users need to login to the system.

8) Characteristic of Activation

Implementation depends on user's need.

9) Flow of Control

4.1 Basic Flow (ER_13_01)

- Users select download time table link on main page.
- Users select download file.
- This use case will end when system performs time table file.

10) Post Condition

The users may view the time table's information.

XIV. Use Case: View class (ER_14)

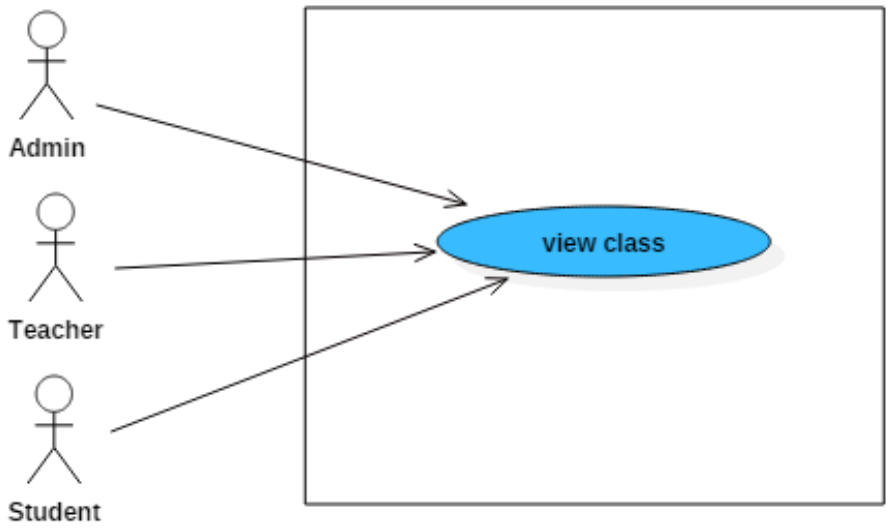

Figure: 3.19: Use Case Diagram of view class page

1) Brief Description

This use case will permit to the admin, teachers, students to view the class's information.

2) Precondition

The users need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_14_01)

- Users select view class link on users control panel page.
- Users search teachers by using class ID.
- This use case will end when system performs class's information.

5) Post Condition

The users may view the class's information.

XV. Use Case: View Subject (ER_15)

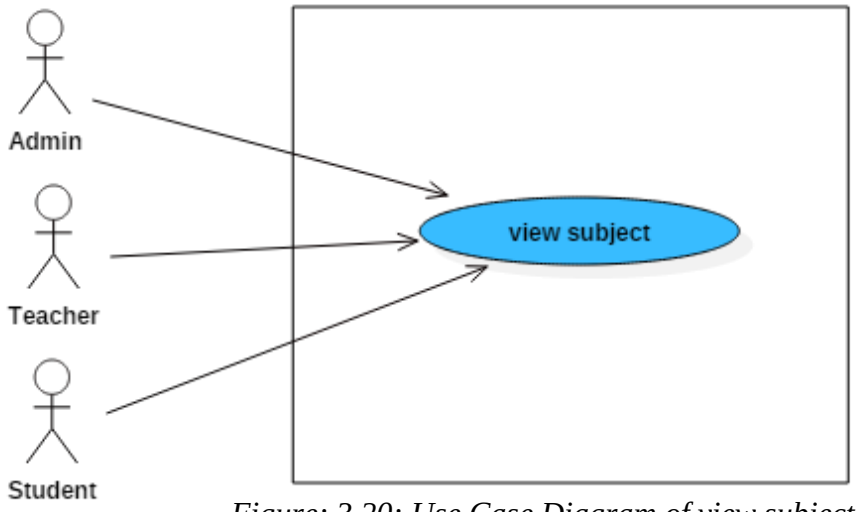

Figure: 3.20: Use Case Diagram of view subject page

1) Brief Description

This use case will permit to the admin, teachers, students to view the subject's information.

2) Precondition

The users need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_15_01)

- Users select view subject link on users control panel page.
- Users search subject by using subject's name.
- This use case will end when system performs subject's information.

5) Post Condition

The users may view the subject's information.

XVI. Use Case: View grade (ER_16)

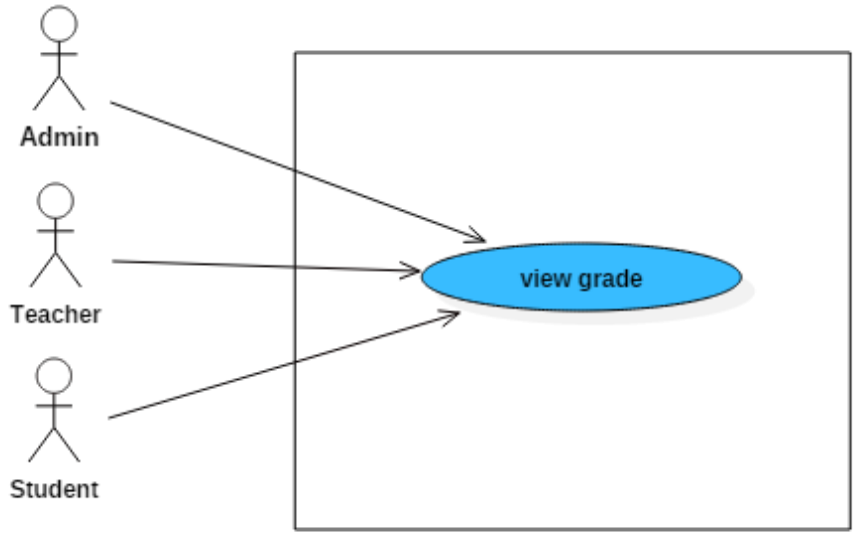

Figure: 3.21: Use Case Diagram of view grade page

1) Brief Description

This use case will permit the teachers and students to view the grade's information.

2) Precondition

The teachers and students need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_16_01, ER_16_02)

- Teachers select view grade link on teacher main page and student select view grade link on student control page.

- Teacher and students search student's grade by using semester id, class id, and course id.
- This use case will end when system performs grade's information page.

5) Post Condition

The teachers and students may view the student's grade.

XVII. Use Case: View photo gallery (ER_17)

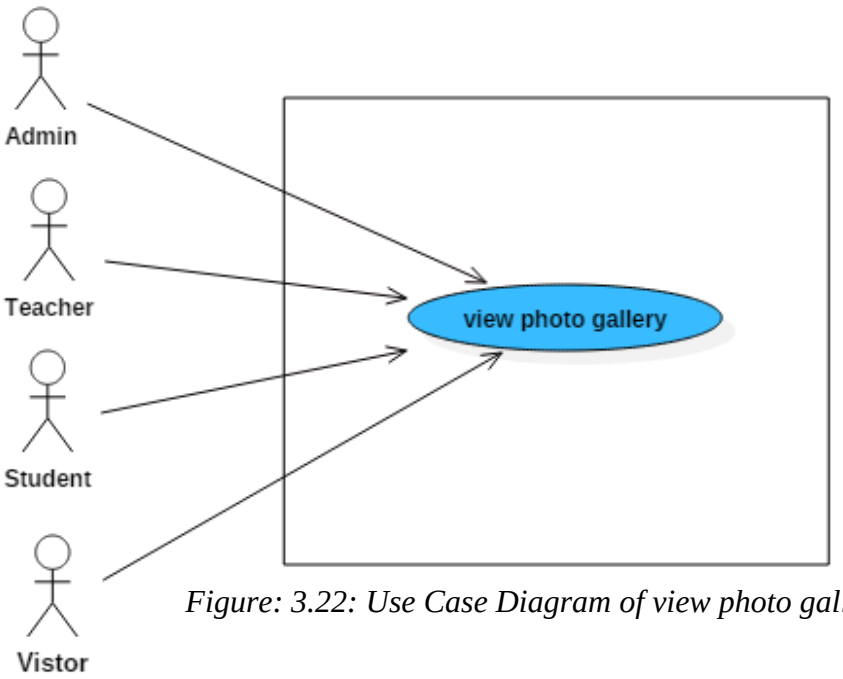

Figure: 3.22: Use Case Diagram of view photo gallery page

1) Brief Description

This use case will permit to the admin, teachers, students to view the photo gallery's information.

2) Precondition

The users need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_17_01)

- Users select view photo gallery's link on main page.
- Users select title photo gallery album on main page.
- This use case will end when system performs photo gallery.

5) Post Condition

The users may view photo gallery's information.

XVIII. Use Case: View Attendance (ER_18)

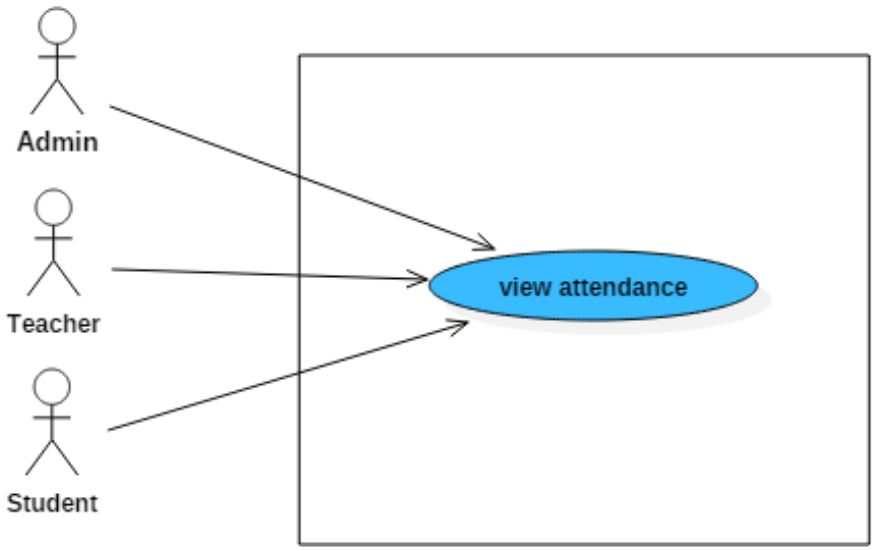

Figure: 3.23: Use Case Diagram of view attendance page

1) Brief Description

This use case will permit to the teachers, students to view the attendance.

2) Precondition

The users need to login to the system.

3) Characteristic of Activation

Implementation depends on user's need.

4) Flow of Control

4.1 Basic Flow (ER_18_01)

- Users select attendance link on main page.
- Users insert attendance on main page.
- This use case will end when system performs attendance page.

5) Post Condition

The users may view the attendance.

XIX. Use Case: View News (ER_19)

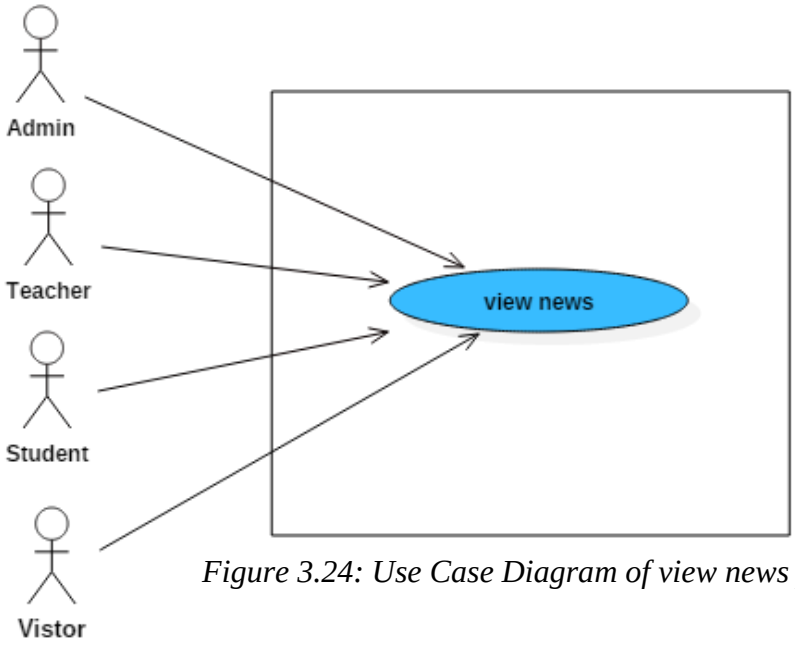

Figure 3.24: Use Case Diagram of view news page

6) Brief Description

This use case will permit to admin, teachers, students and visitor to view the news.

7) Precondition

The users have to enter website before this use case beings.

8) Characteristic of Activation

Implementation depends on user's need.

9) Flow of Control

4.1 Basic Flow (ER_19_01)

- Users press news link on main page.
- This use case will end when system performs news page.

10) Post Condition

The users may view the news.

3.2.6 SEQUENCE DIAGRA

Sequence Diagrams are interaction diagrams that detail how operations are carried out. It is captured the interaction between objects in the context of a collaboration. Sequence Diagrams are time focus and show the order of the interaction visually by using the vertical axis of the diagram to represent time what messages are sent and when. This sequence diagrams, that illustrate the different parts of a system interact with each other to carry out a main function of this web-based school management system. Some of the main function was illustrated in this sequence diagrams are Manage student, manage teacher, manage class, manage subject, manage timetable, teacher mange grade, teacher mange attendance, and user view subject as shown in figure 3.25-3.32

- **Log in**

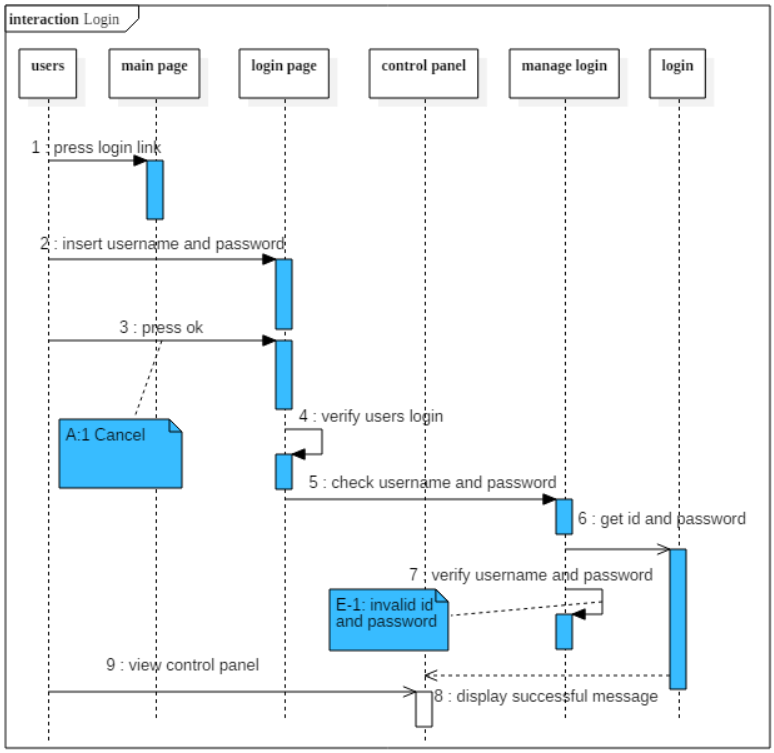

Figure: 3.25: Sequence diagram of user's login page

- **Manage Student**

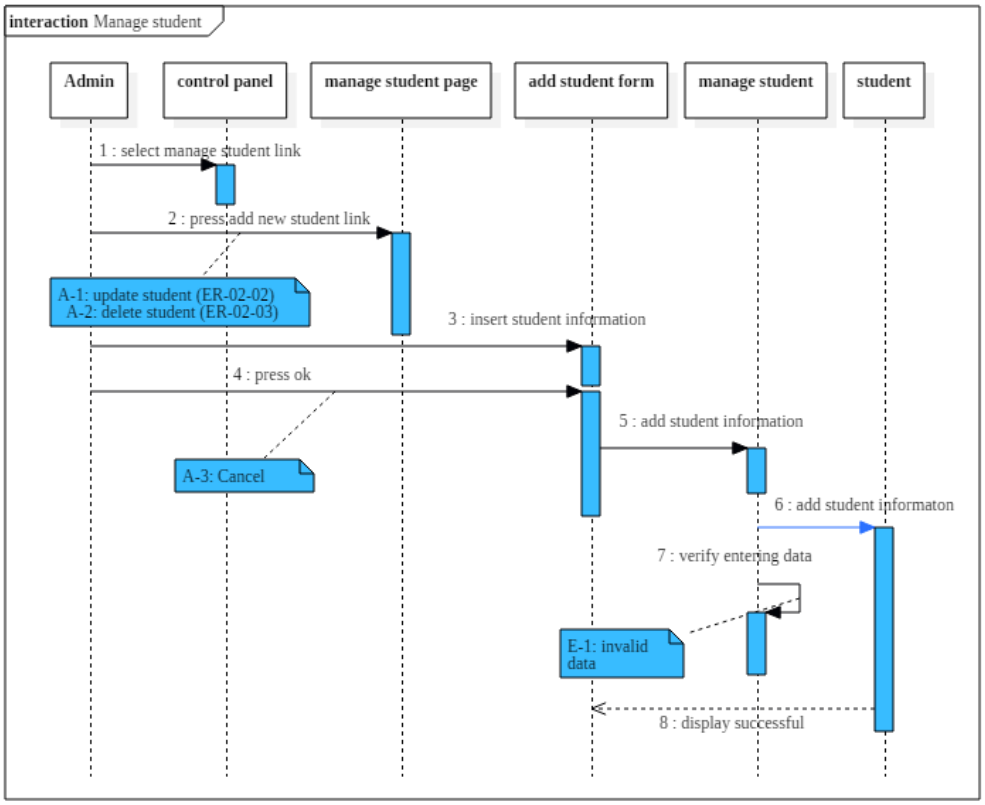

Figure: 3.26: Sequence diagram of manage student page

- **Manage Teacher**

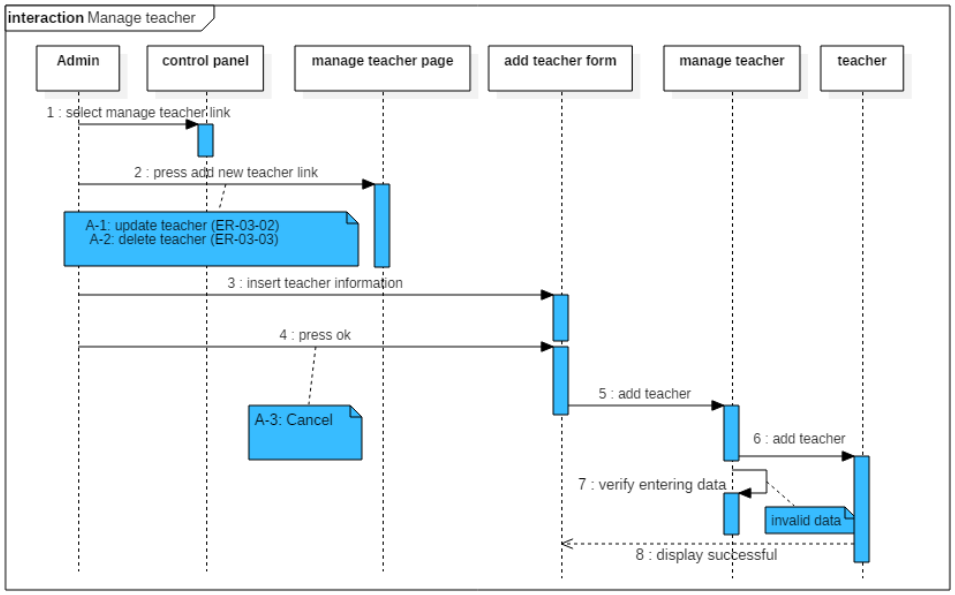

Figure: 3.27: Sequence diagram of manage teacher page

- **Manage Photo Gallery**

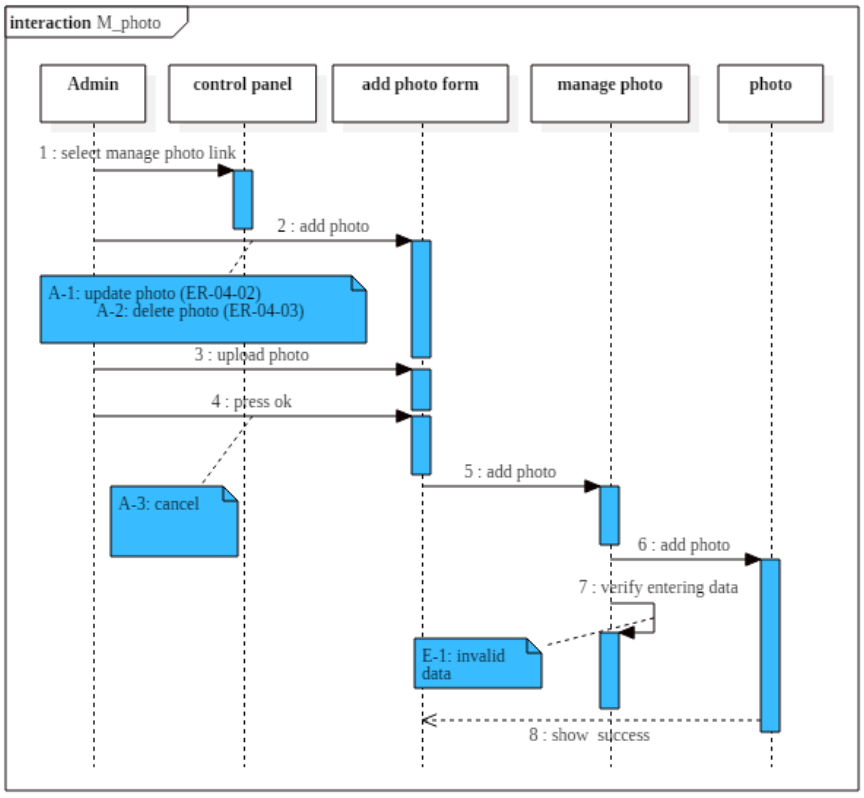

Figure: 3.28: Sequence diagram of manage teacher page

- **Manage class**

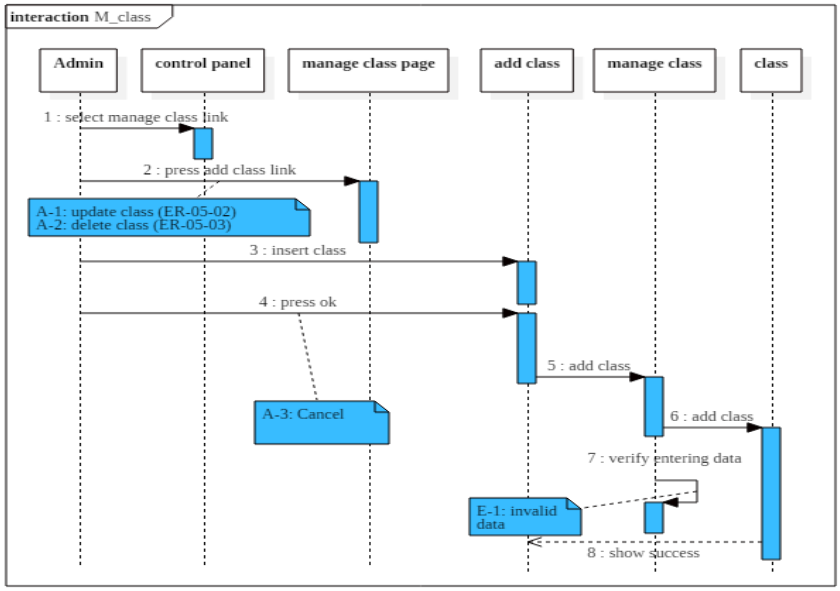

Figure: 3.29: Sequence diagram of manage class page

- **Manage Subject**

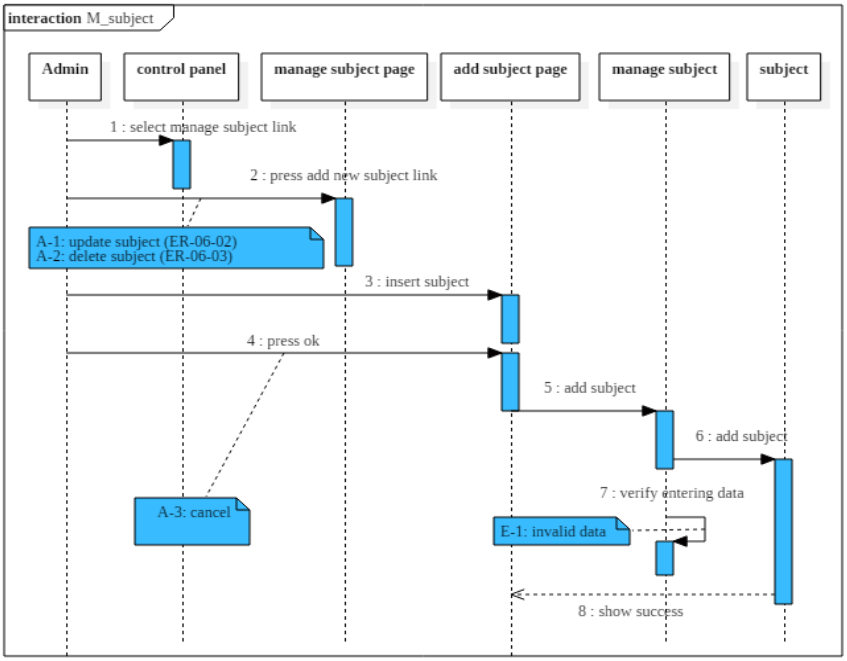

Figure: 3.30: Sequence diagram of manage subject page

- **Manage timetable**

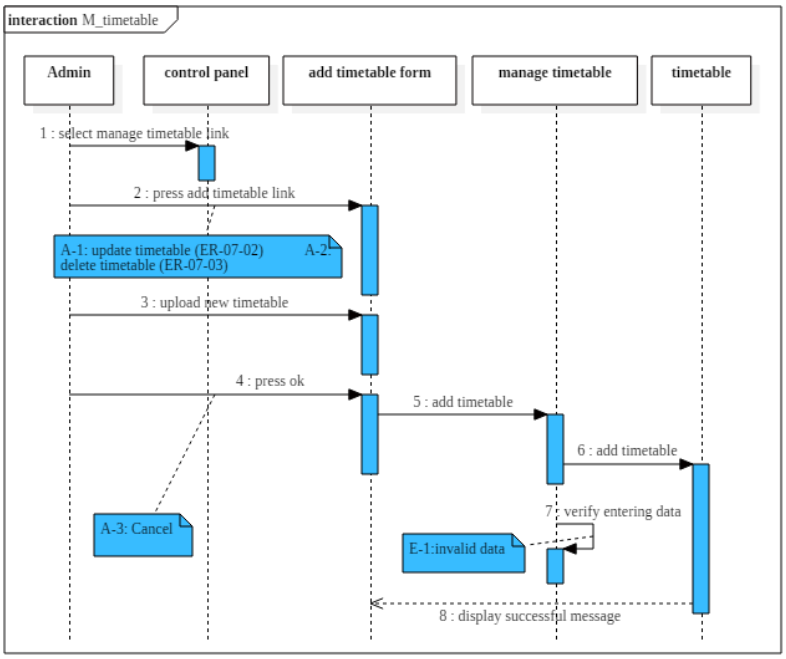

Figure: 3.31: Sequence diagram of manage time table page

- **Manage News**

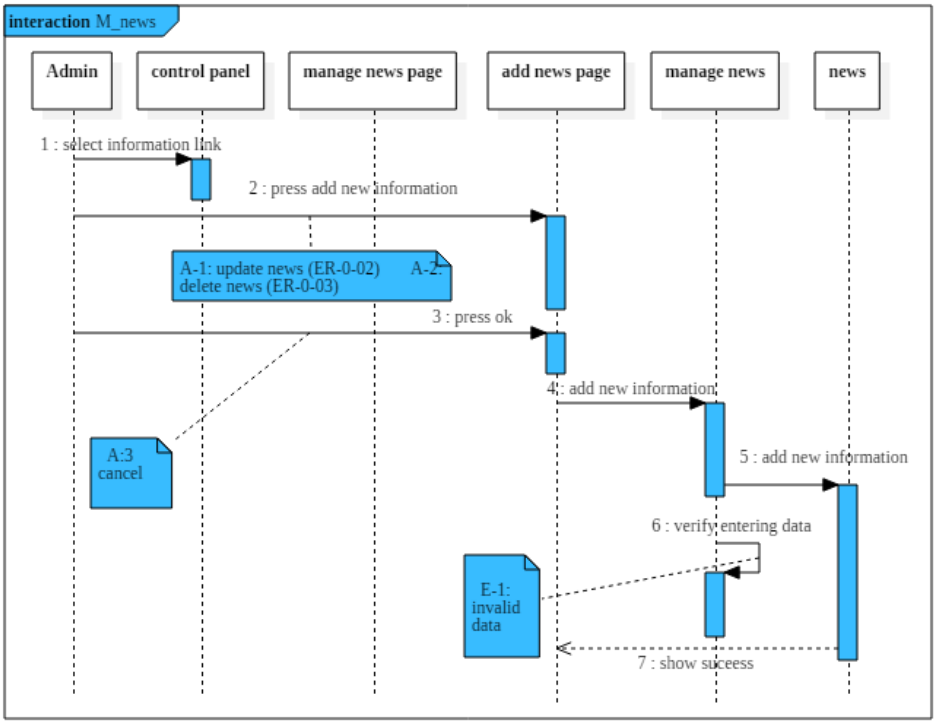

Figure: 3.32: Sequence diagram of manage News page

- **Teacher manage grade**

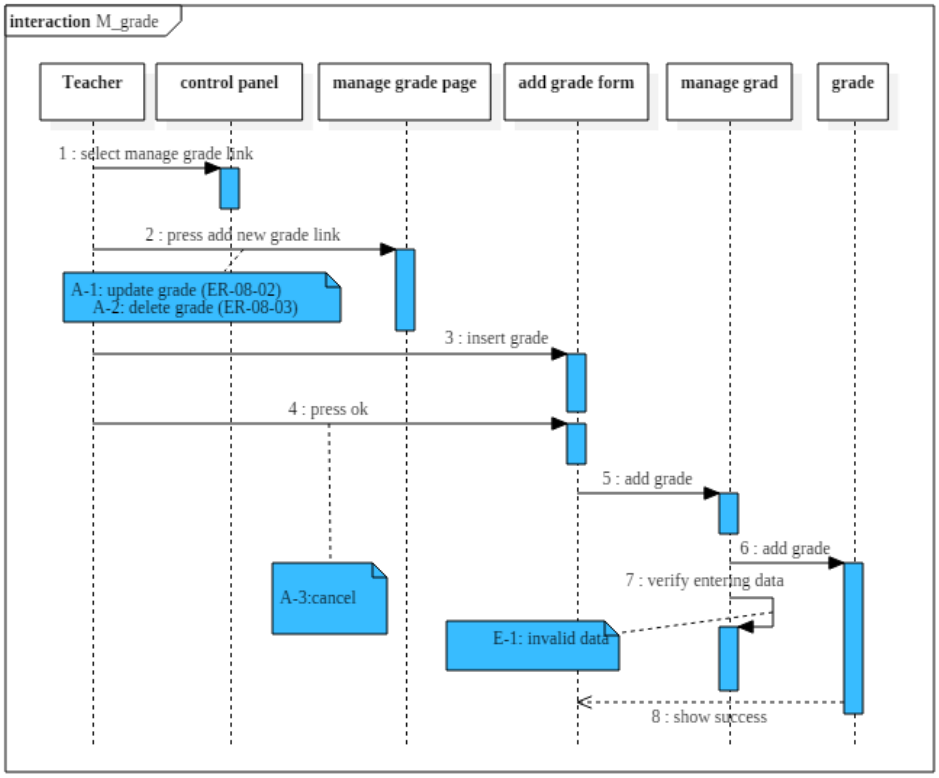

Figure: 3.33: Sequence diagram of teacher manage grade page

- **Teacher manage attendance**

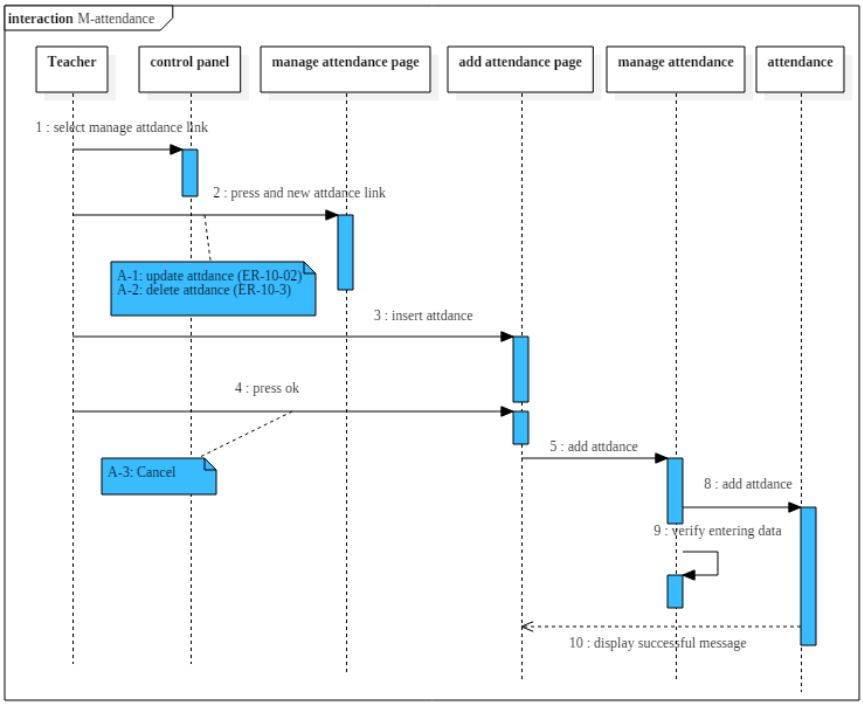

Figure: 3.34: Sequence diagram of teacher manage attendance page

- **Sequence diagram of users view student**

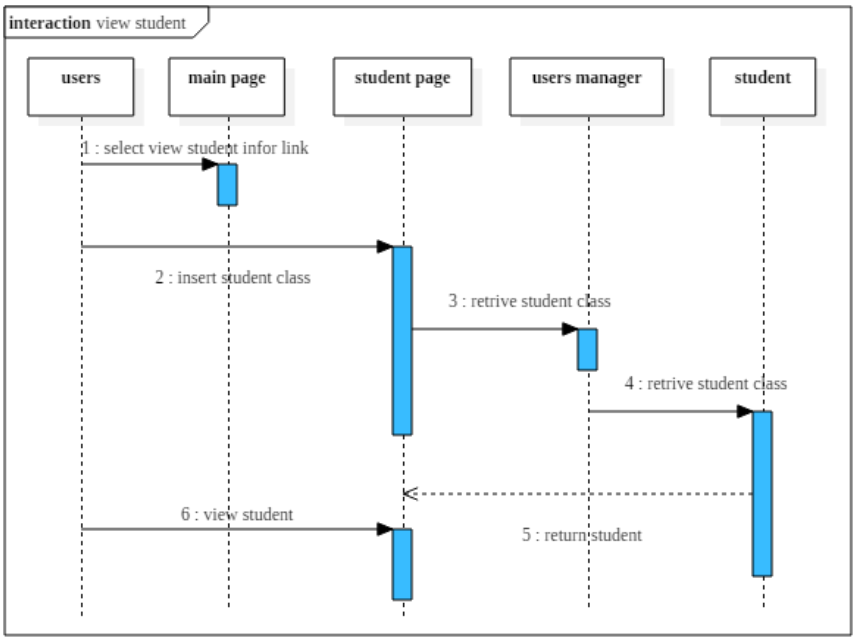

Figure: 3.35: Sequence diagram of users view student page

- **Sequence diagram of users view teacher**

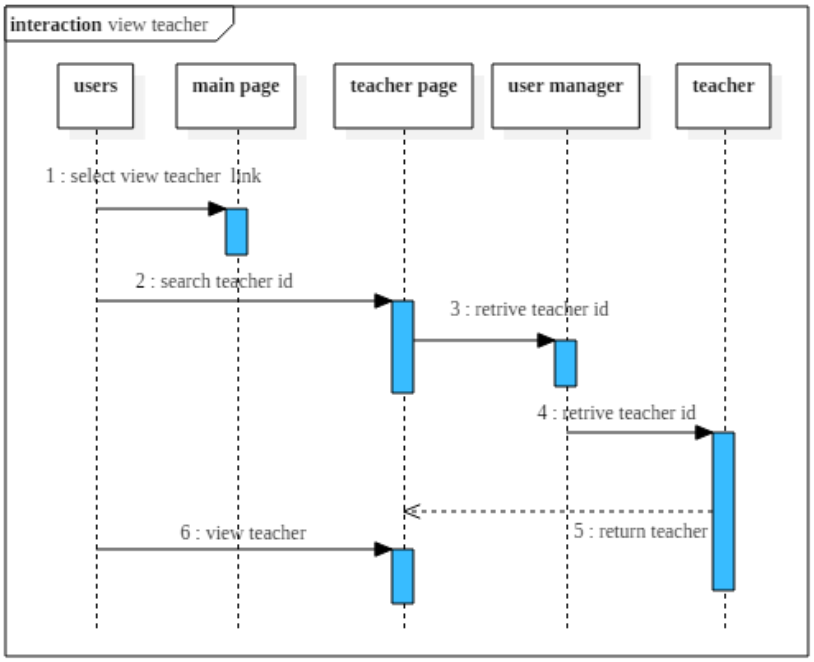

Figure: 3.36: Sequence diagram of users view teacher page

- **Sequence diagram of users view timetable**

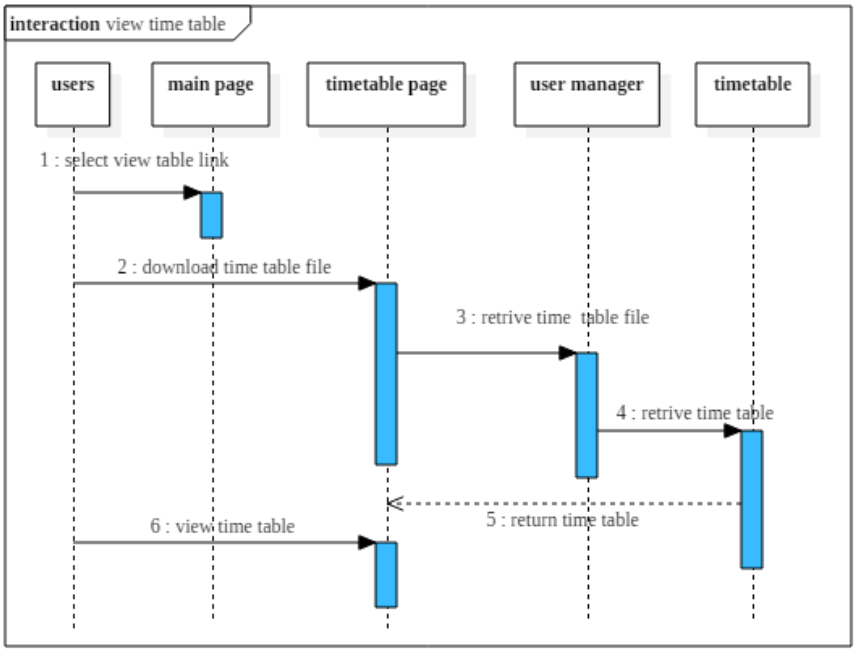

Figure: 3.37: Sequence diagram of users view time table page

- **Sequence diagram of users view class**

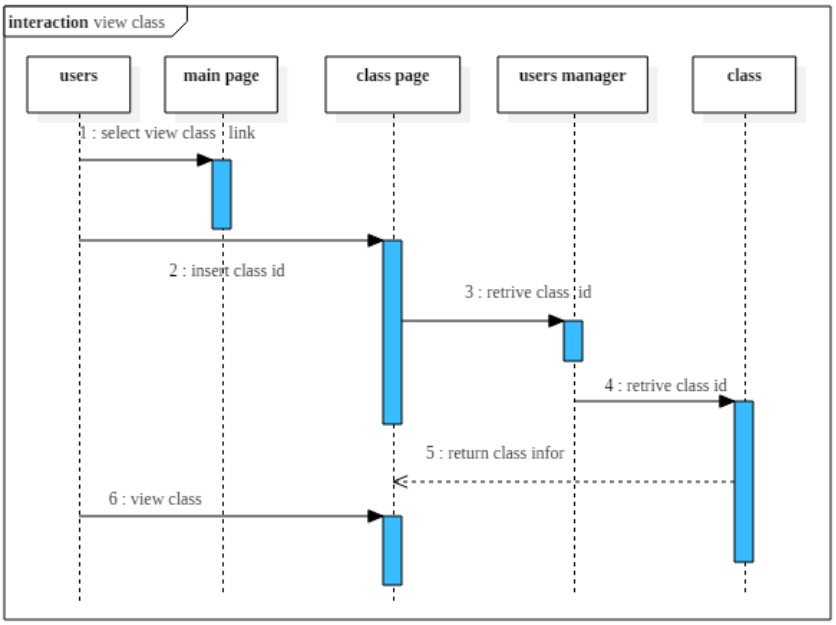

Figure: 3.38: Sequence diagram of users view class page

- **Sequence diagram of users view subject**

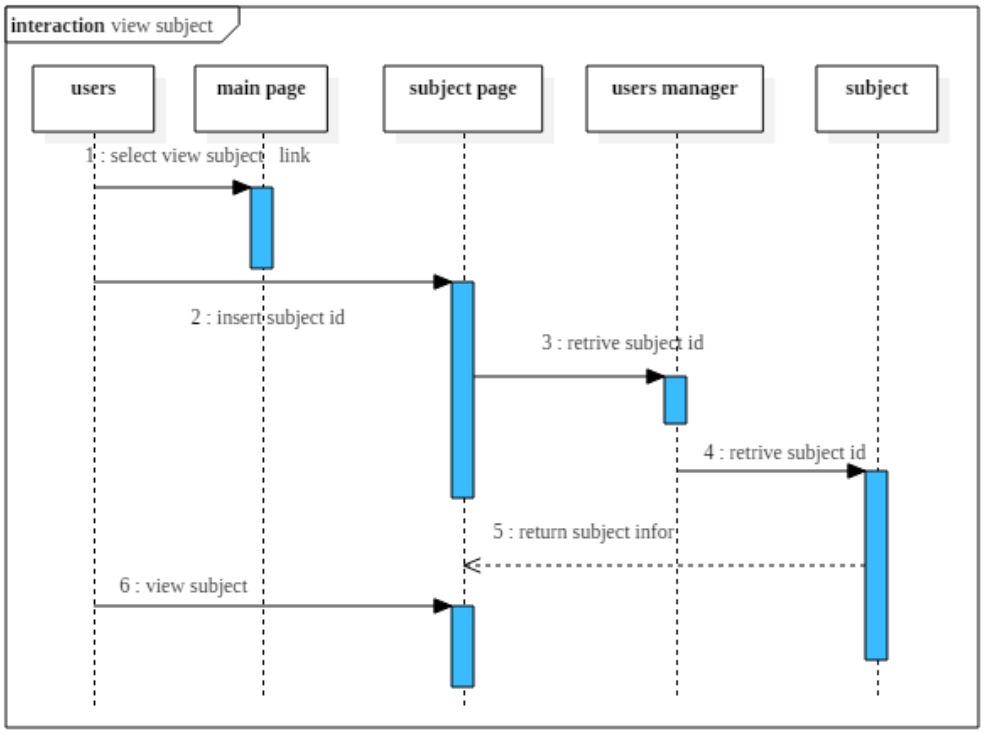

Figure: 3.39: Sequence diagram of users view subject page

- **Sequence diagram of users view grade**

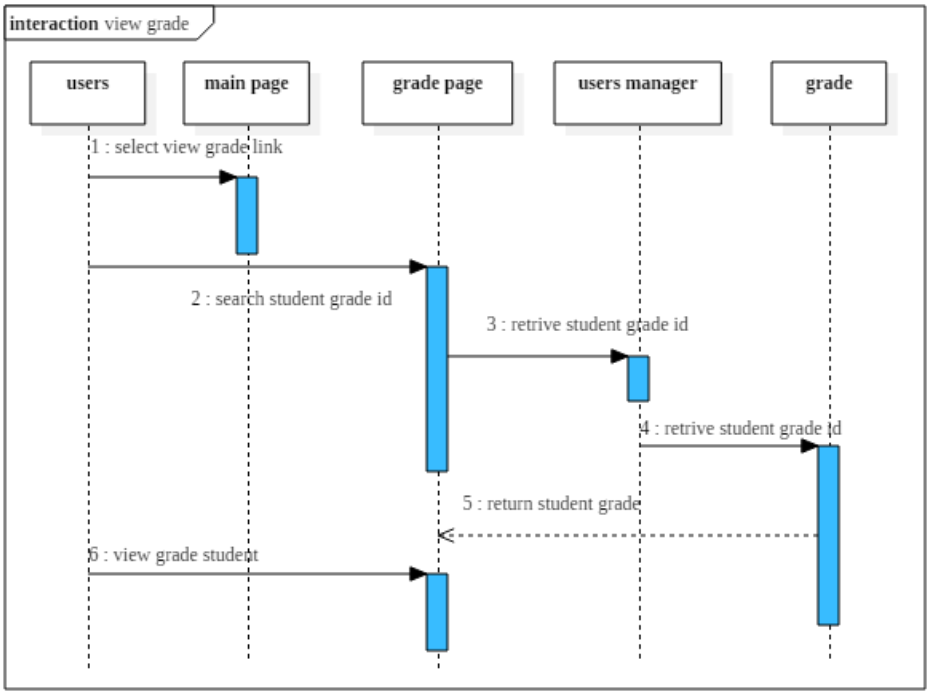

Figure: 3.40: Sequence diagram of users view grade page

- **Sequence diagram of users view photo gallery**

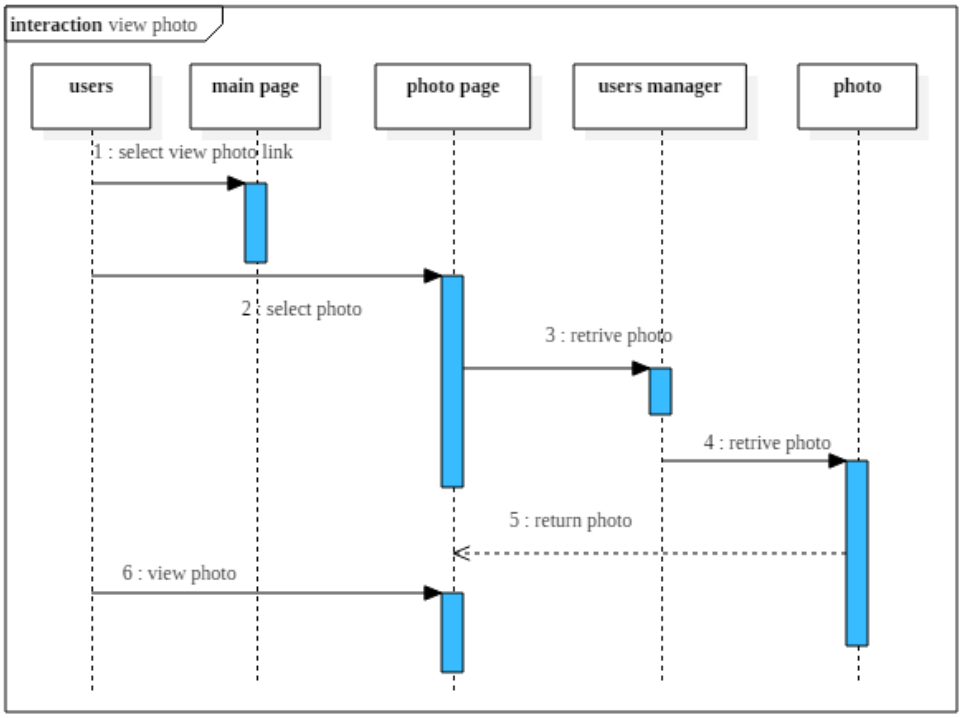

Figure: 3.41: Sequence diagram of view photo gallery page

- **Sequence diagram of users view attendance**

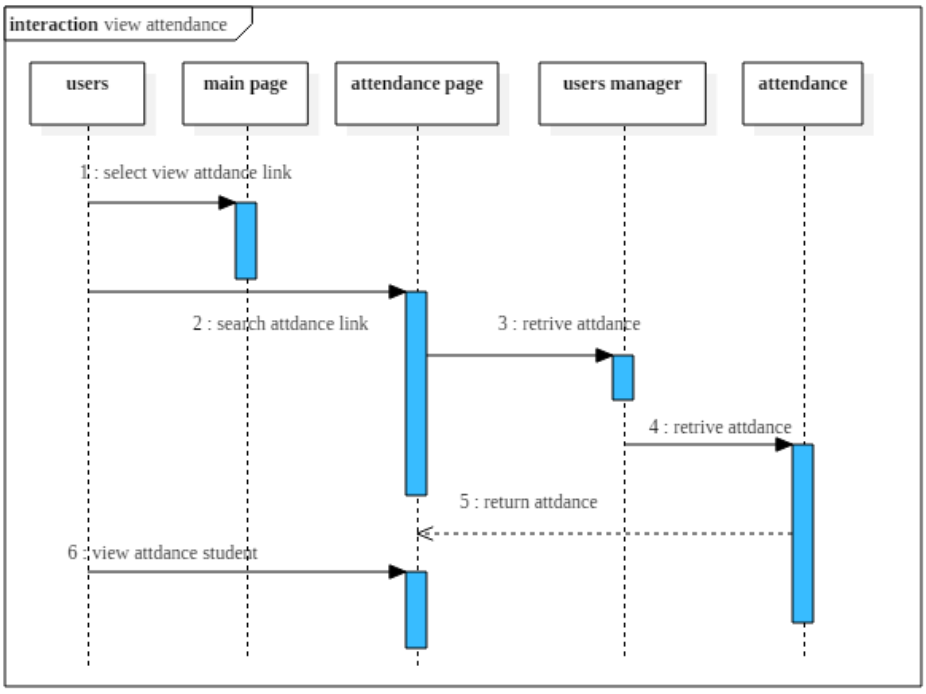

Figure: 3.42: Sequence diagram of view photo gallery page

- **Sequence diagram of users view News**

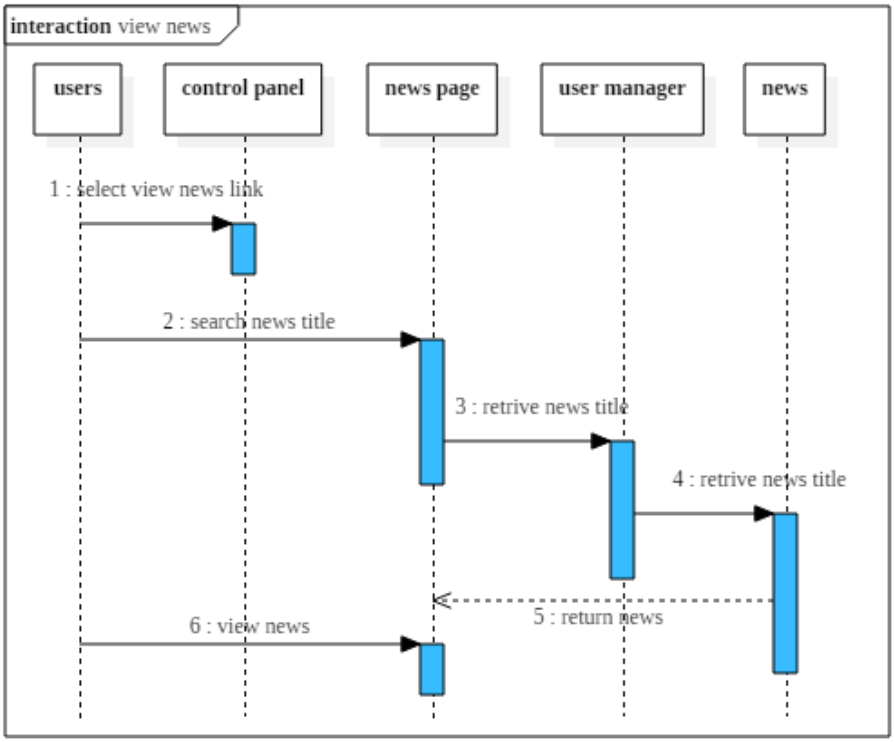

Figure: 3.43: Sequence diagram of users view news page

3.2.7 ACTIVITY DIAGRAM

An activity diagram visually presents a series of actions or flow of control in a system similar to a flowchart or a data flow diagram. Activity diagrams are often used in business process modeling. They can also describe the steps in a use case diagram. In this part of activity, is explained some of the main function of this system were admin manage teacher, which include of add teacher, update teacher, and delete teacher. and other function is admin manage subject which include of add subject, update subject, and delete subject as shown is figure 3.33-3.38 below.

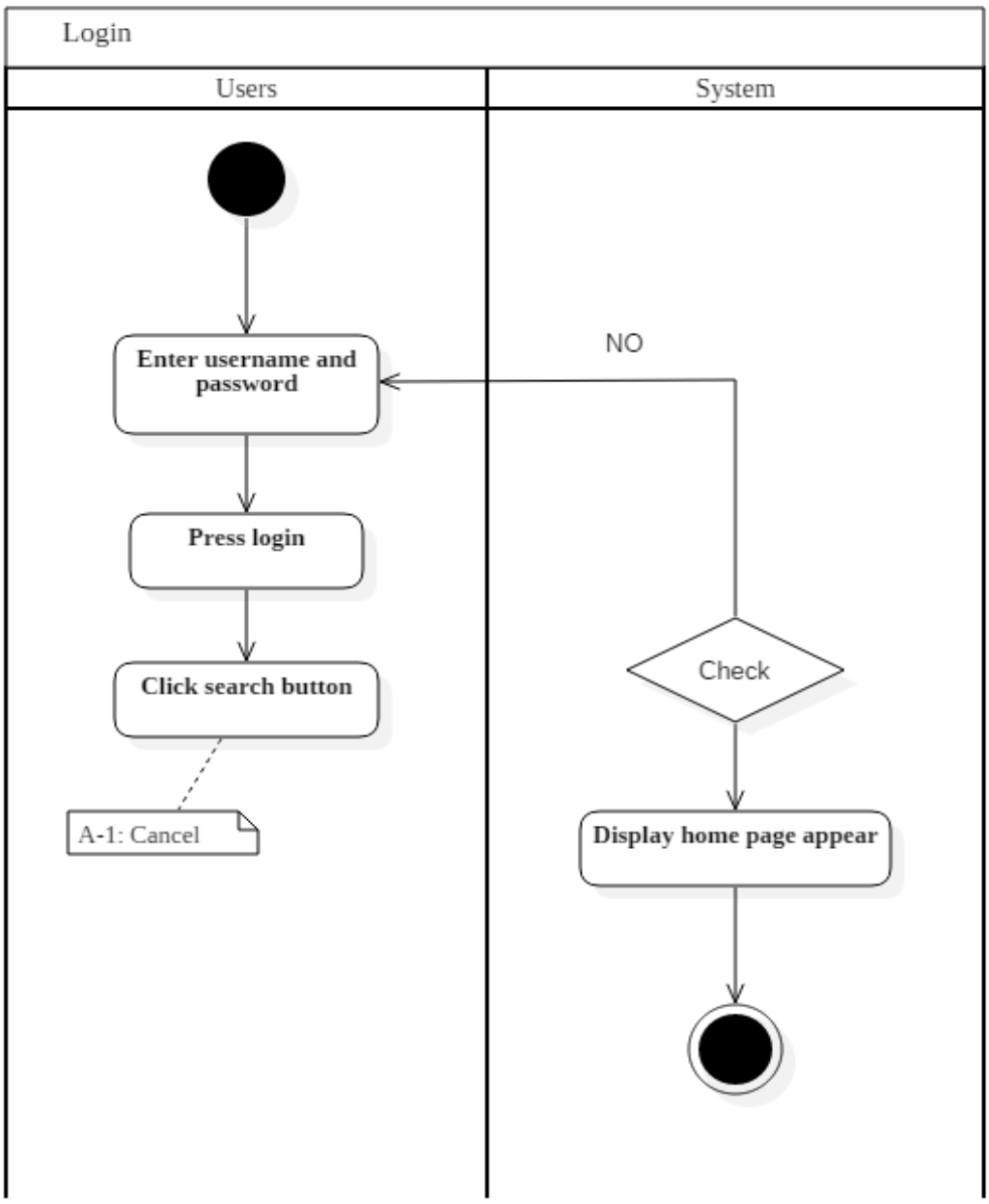

Figure: 3.44: Activity Diagram of Admin, Teacher and Student login

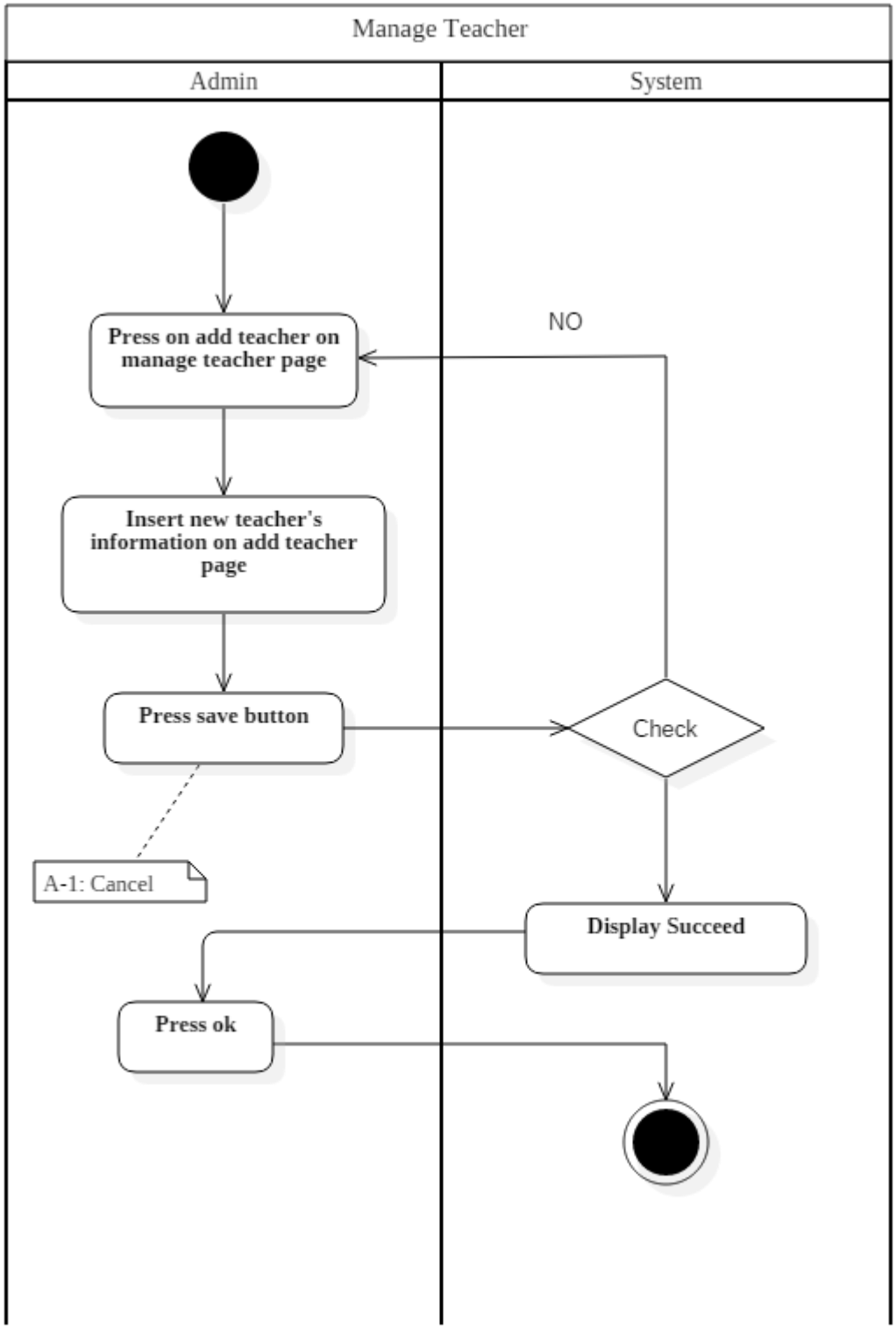

*Figure: 3.45: Activity Diagram of Admin manage **Add** teacher*

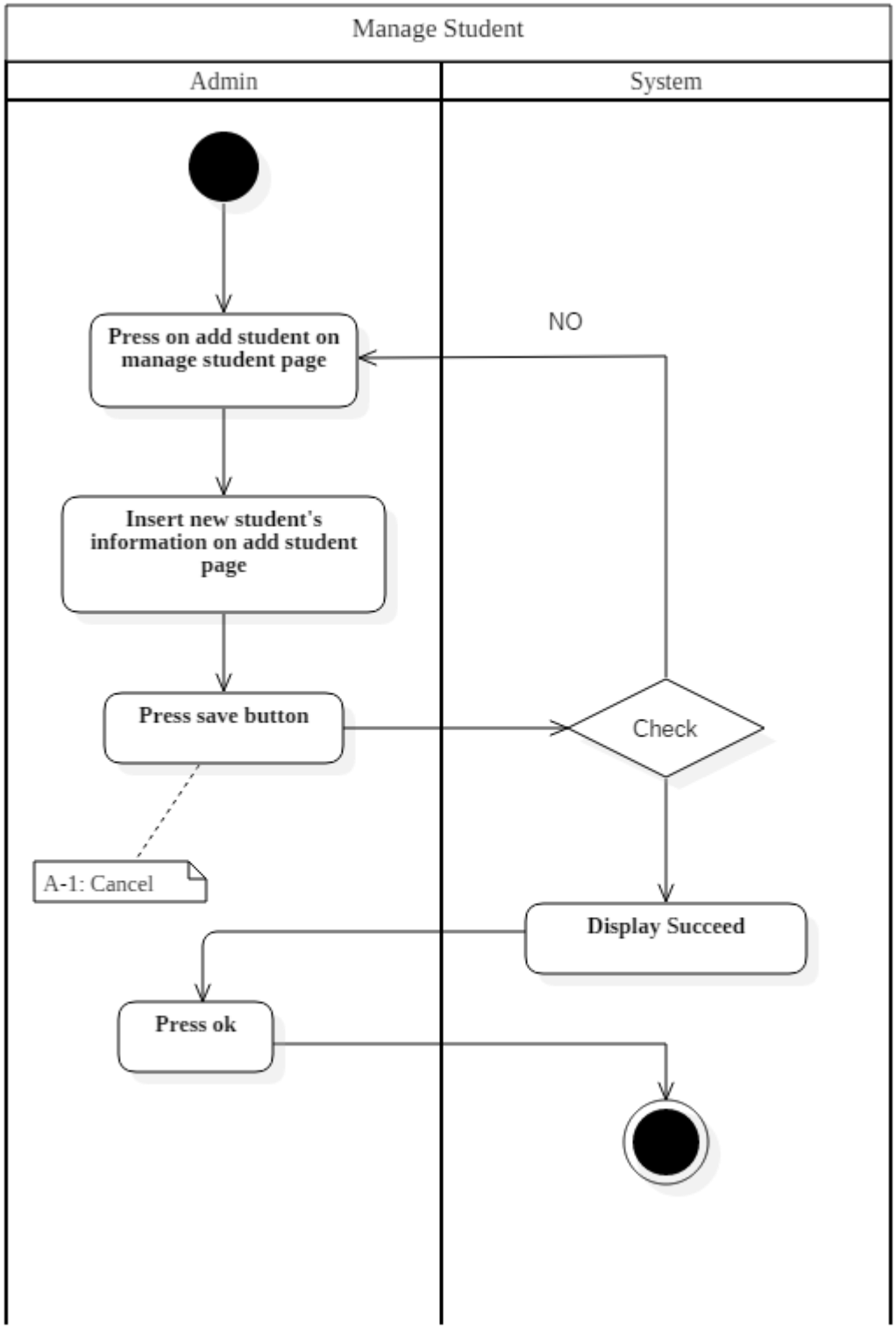

*Figure: 3.46: Activity Diagram of Admin manage **Add** student*

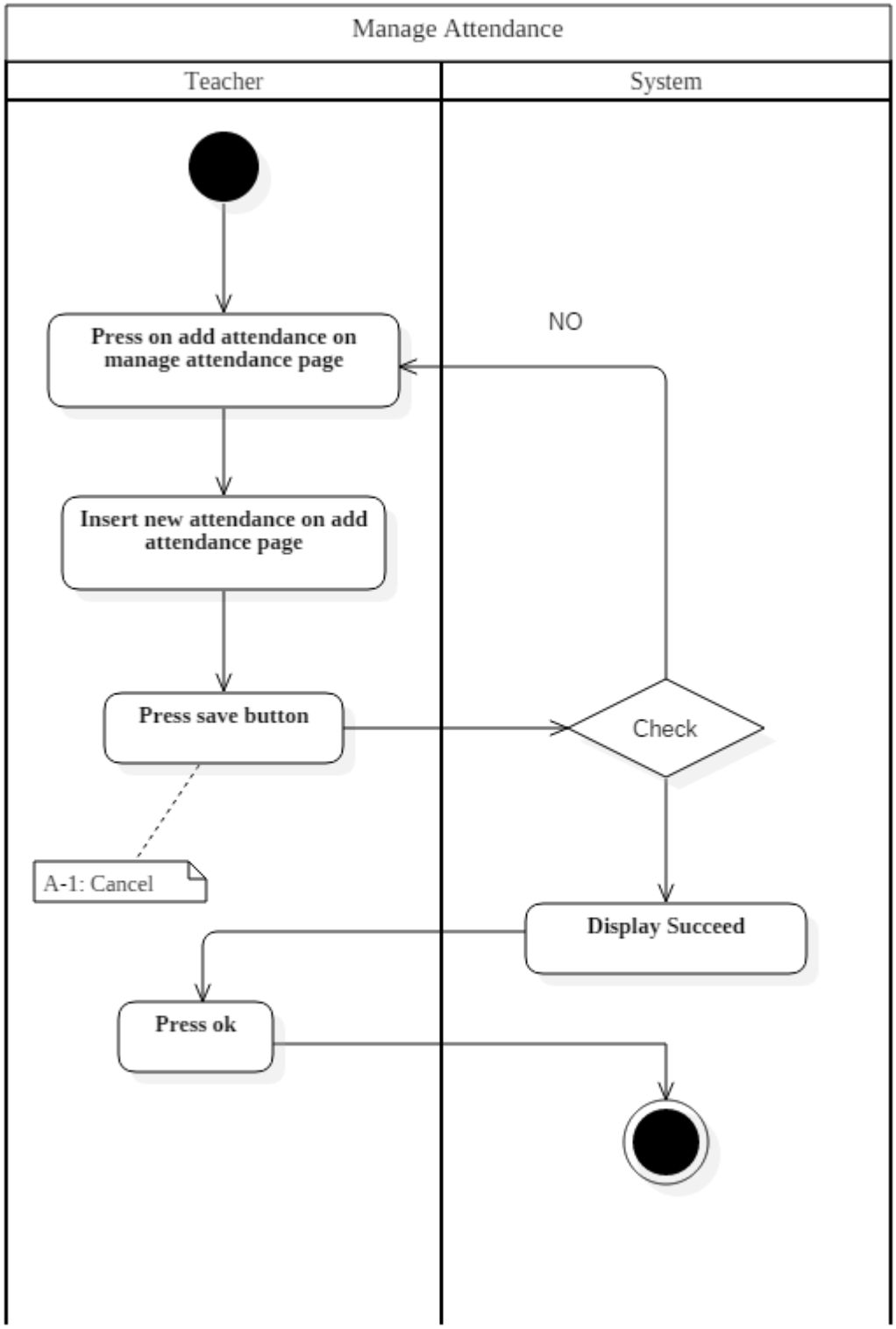

*Figure: 3.47: Activity Diagram of Admin manage **Add** attendance*

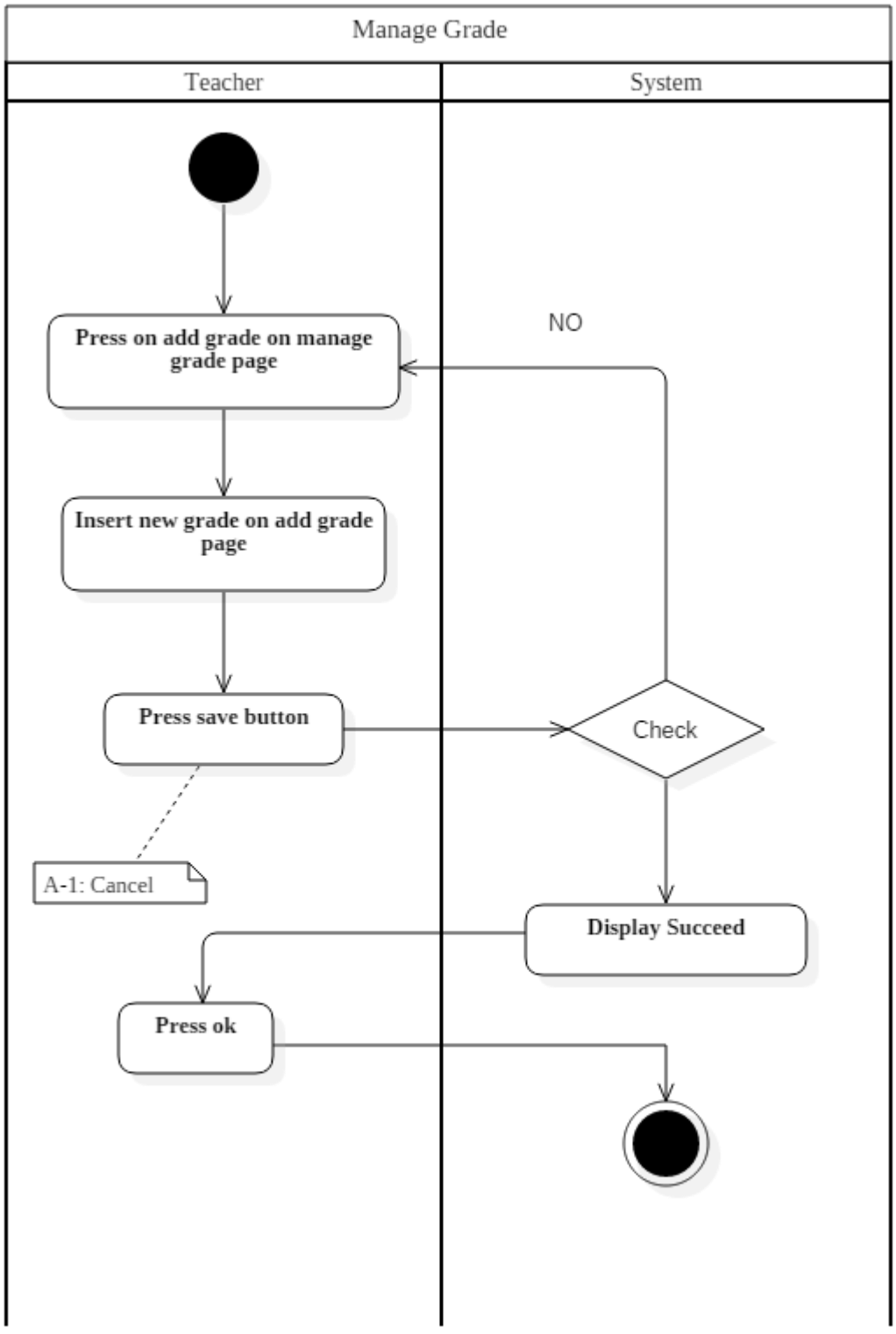

*Figure: 3.48: Activity Diagram of Admin manage **Add** grade*

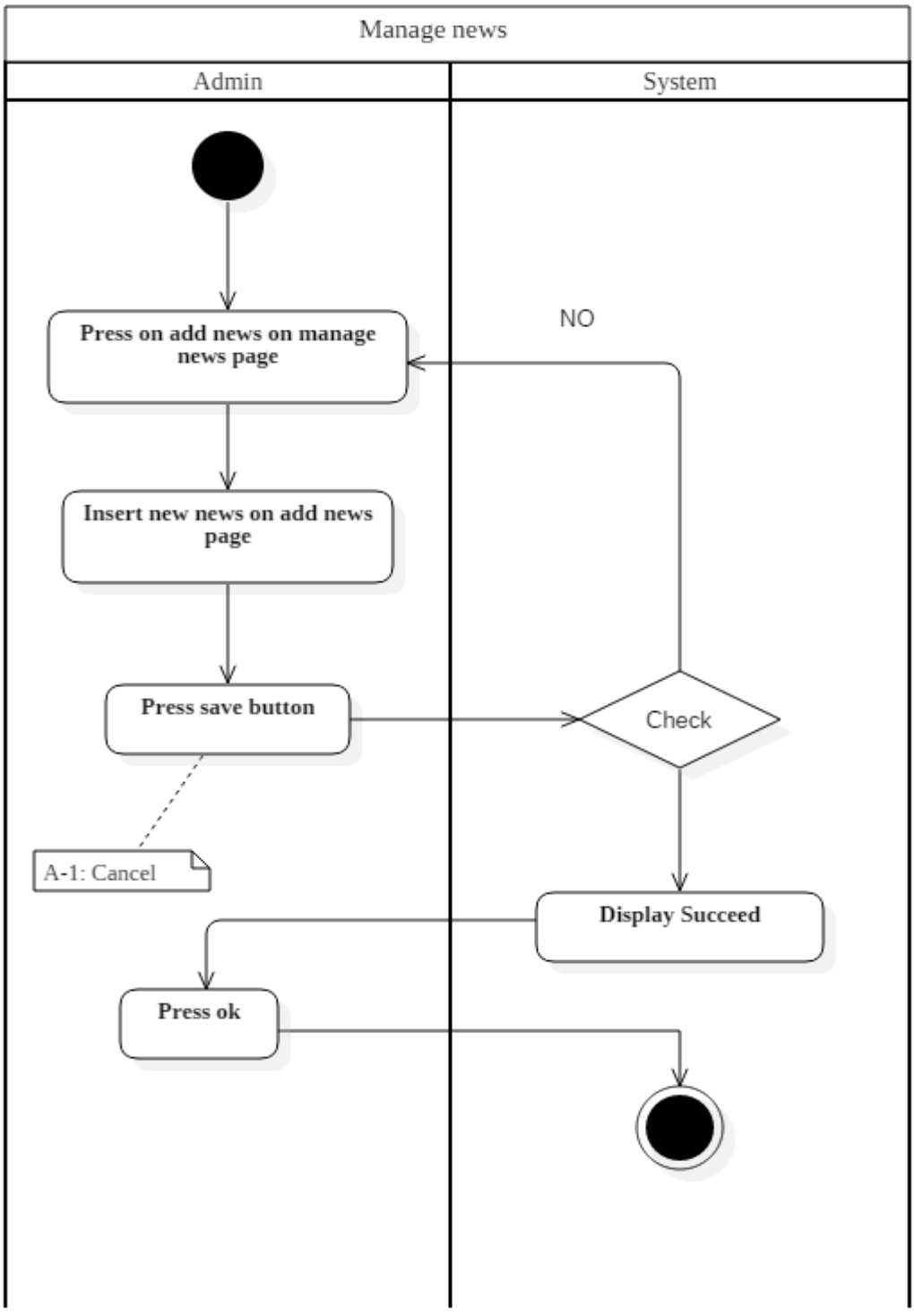

*Figure: 3.49: Activity Diagram of Admin manage **Add** news*

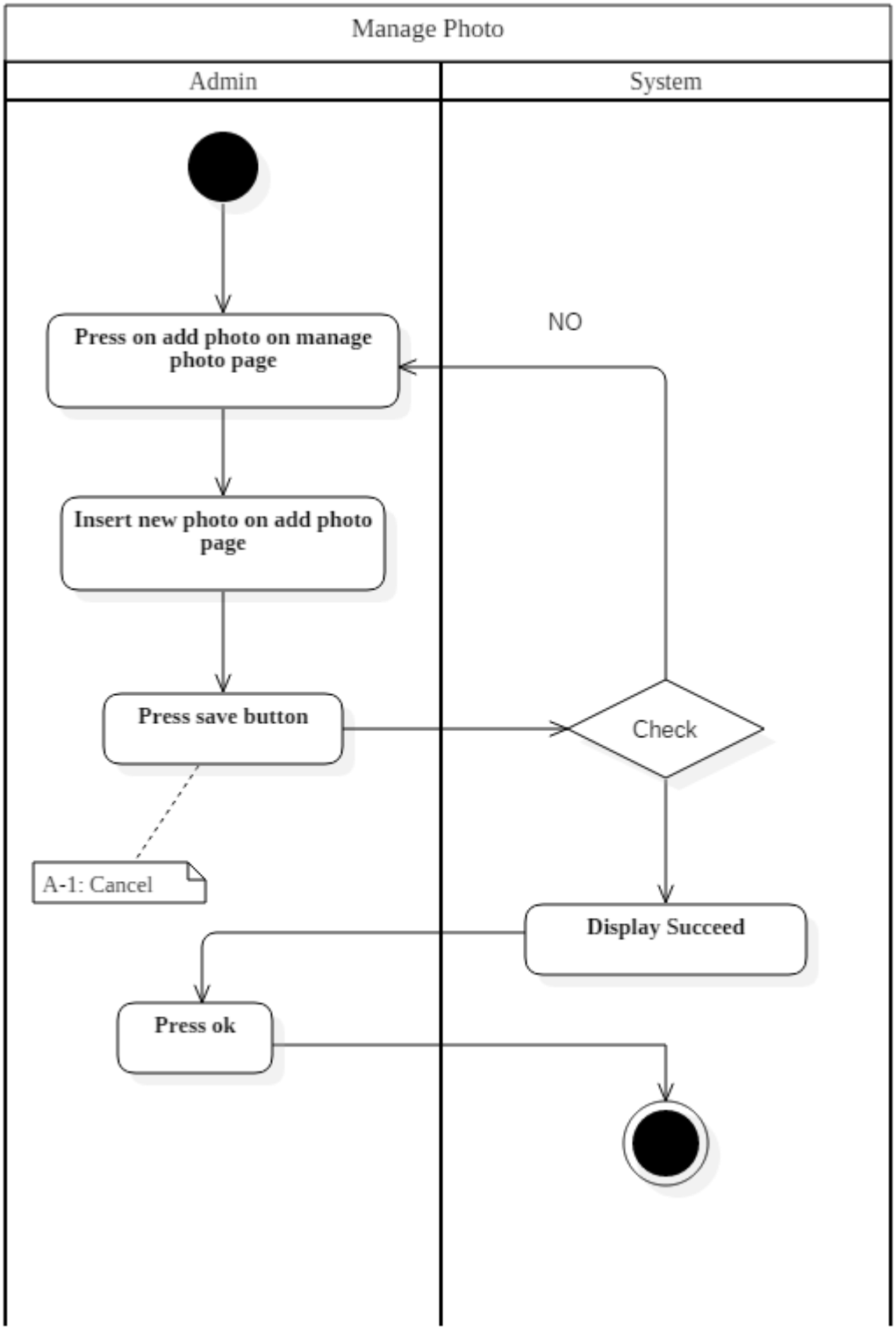

*Figure: 3.50: Activity Diagram of Admin manage **Add** photo*

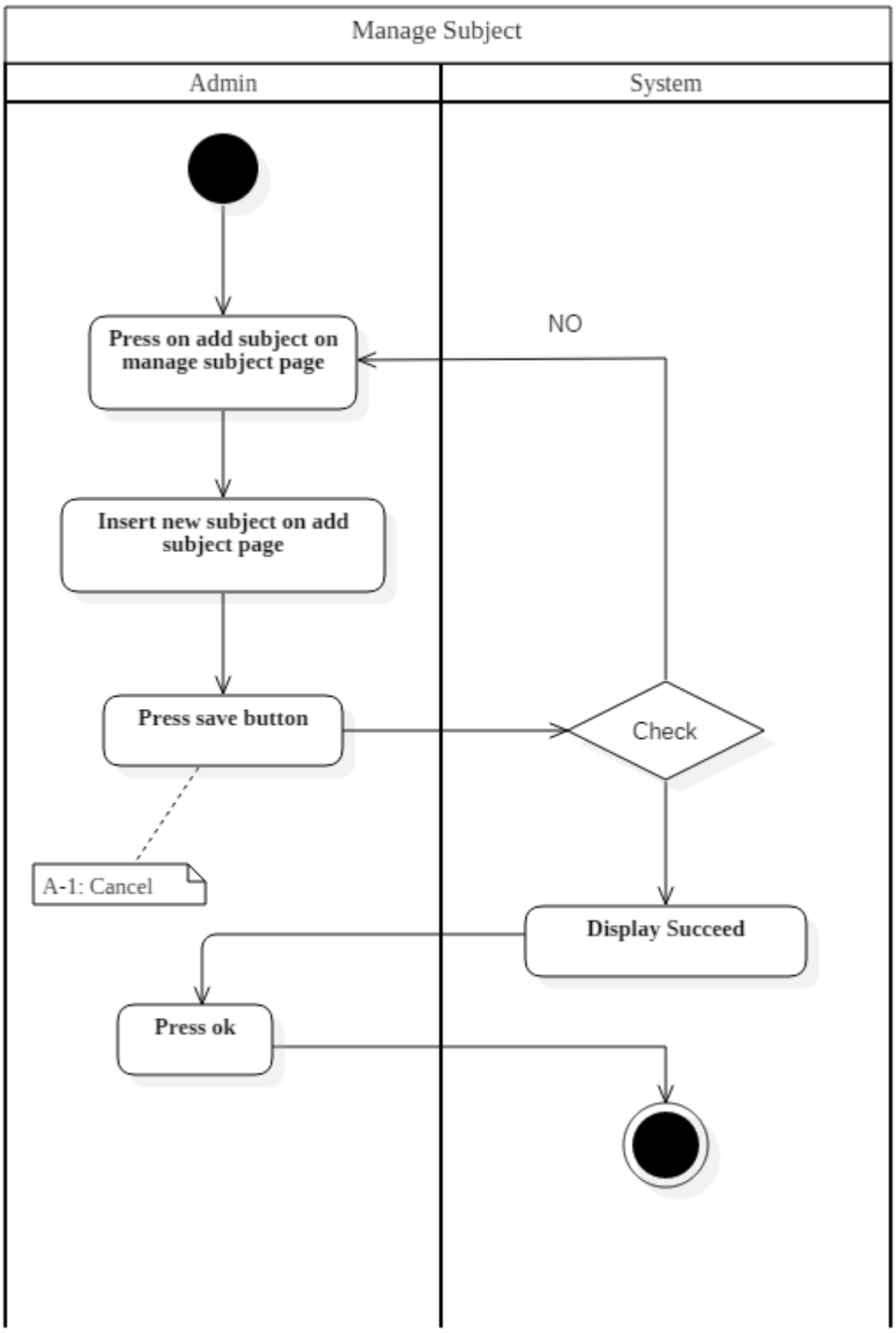

*Figure: 3.51: Activity Diagram of Admin manage **Add** subject*

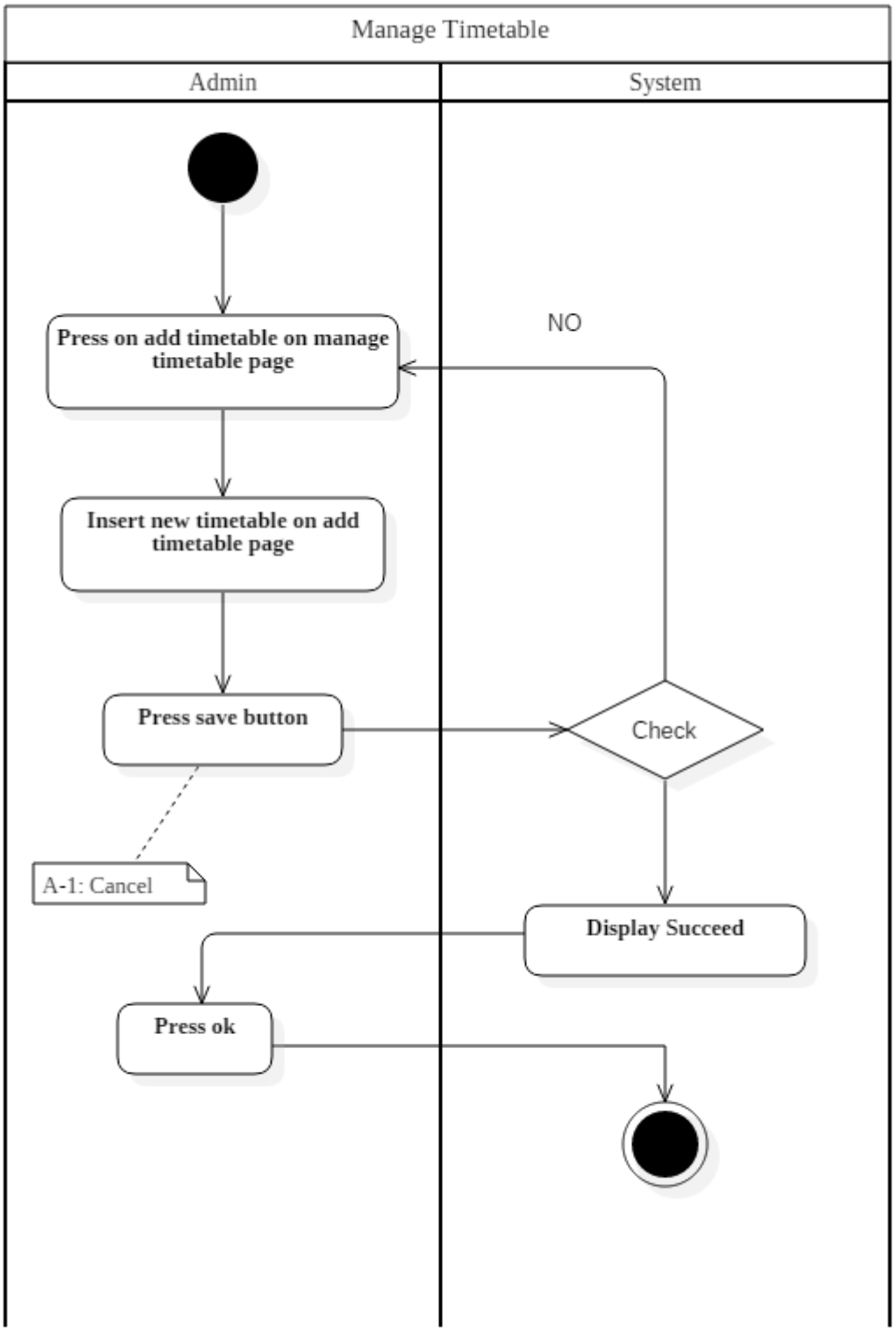

*Figure: 3.52: Activity Diagram of Admin manage **Add** timetable*

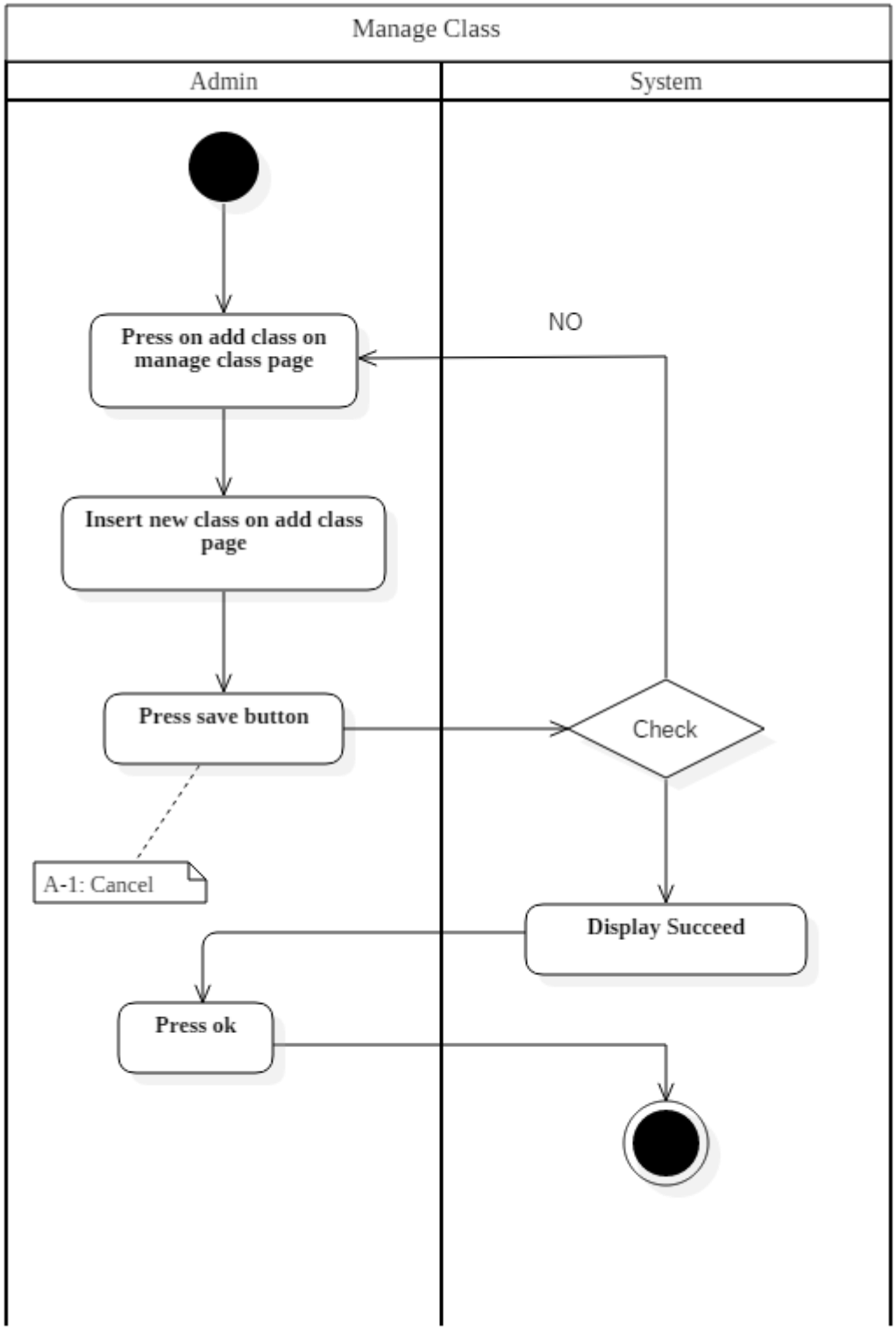

*Figure: 3.54: Activity Diagram of Admin manage **Add** class*

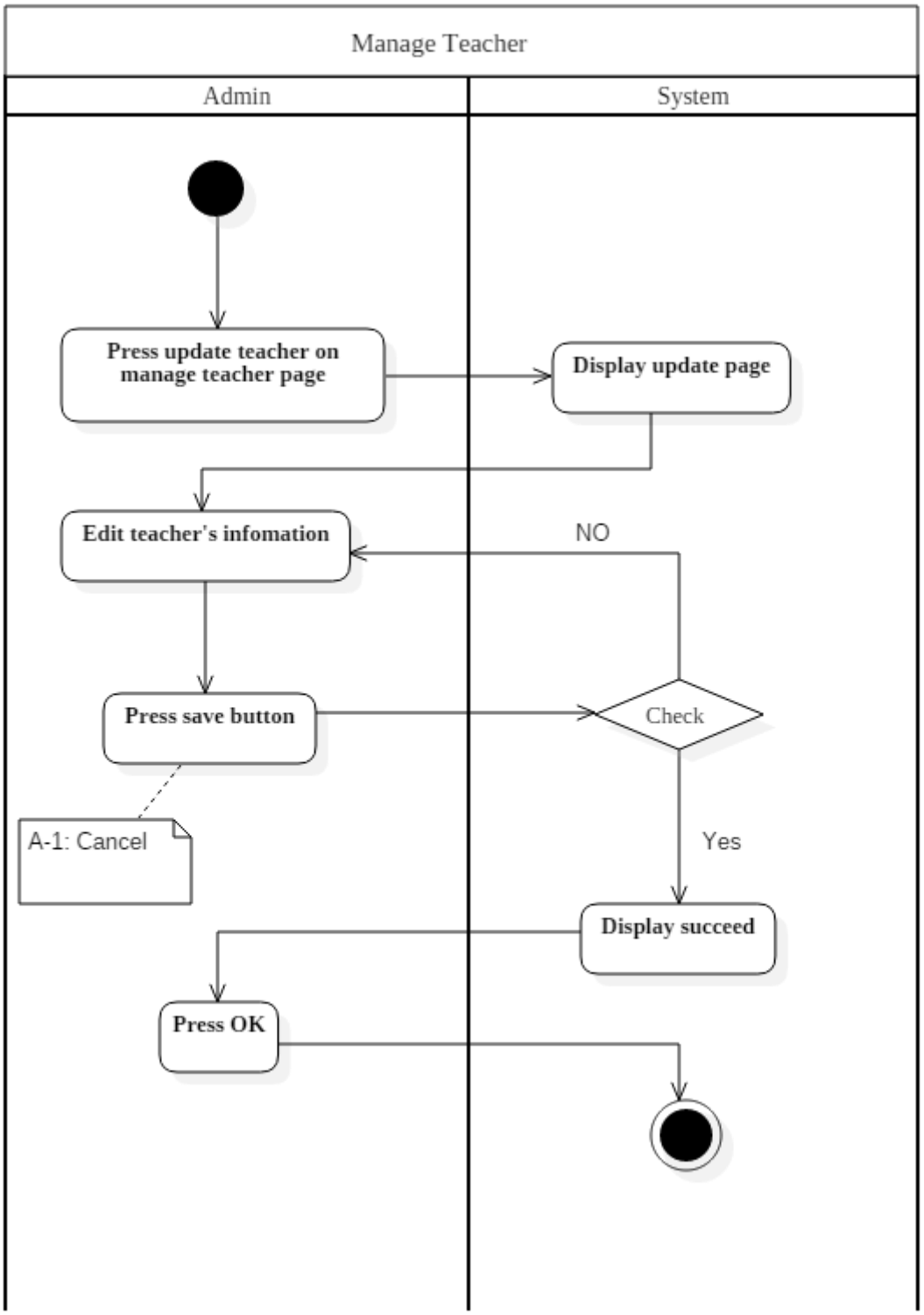

*Figure: 3.55: Activity Diagram of Admin manage **Update** teacher*

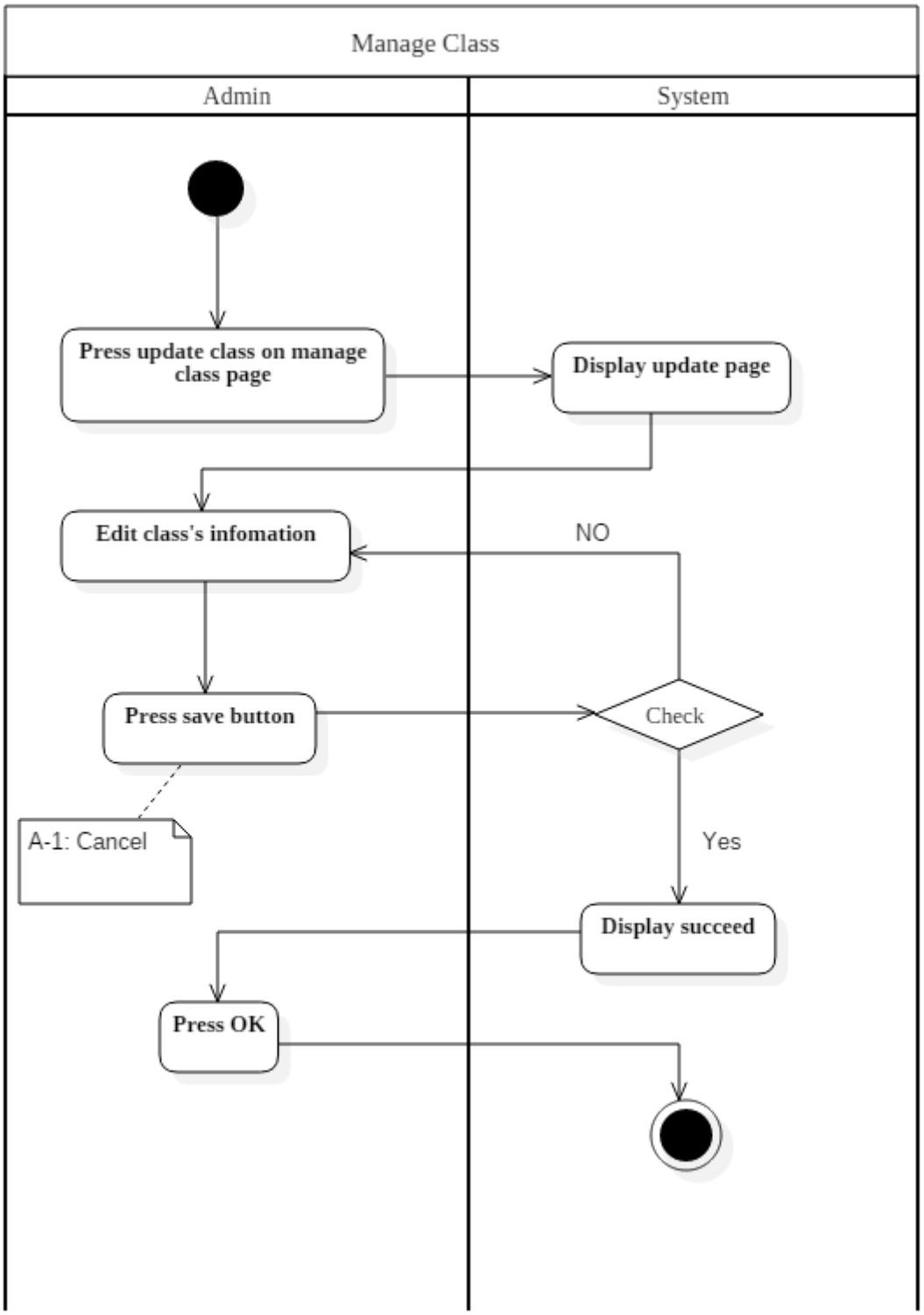

*Figure: 3.56: Activity Diagram of Admin manage **Update** class*

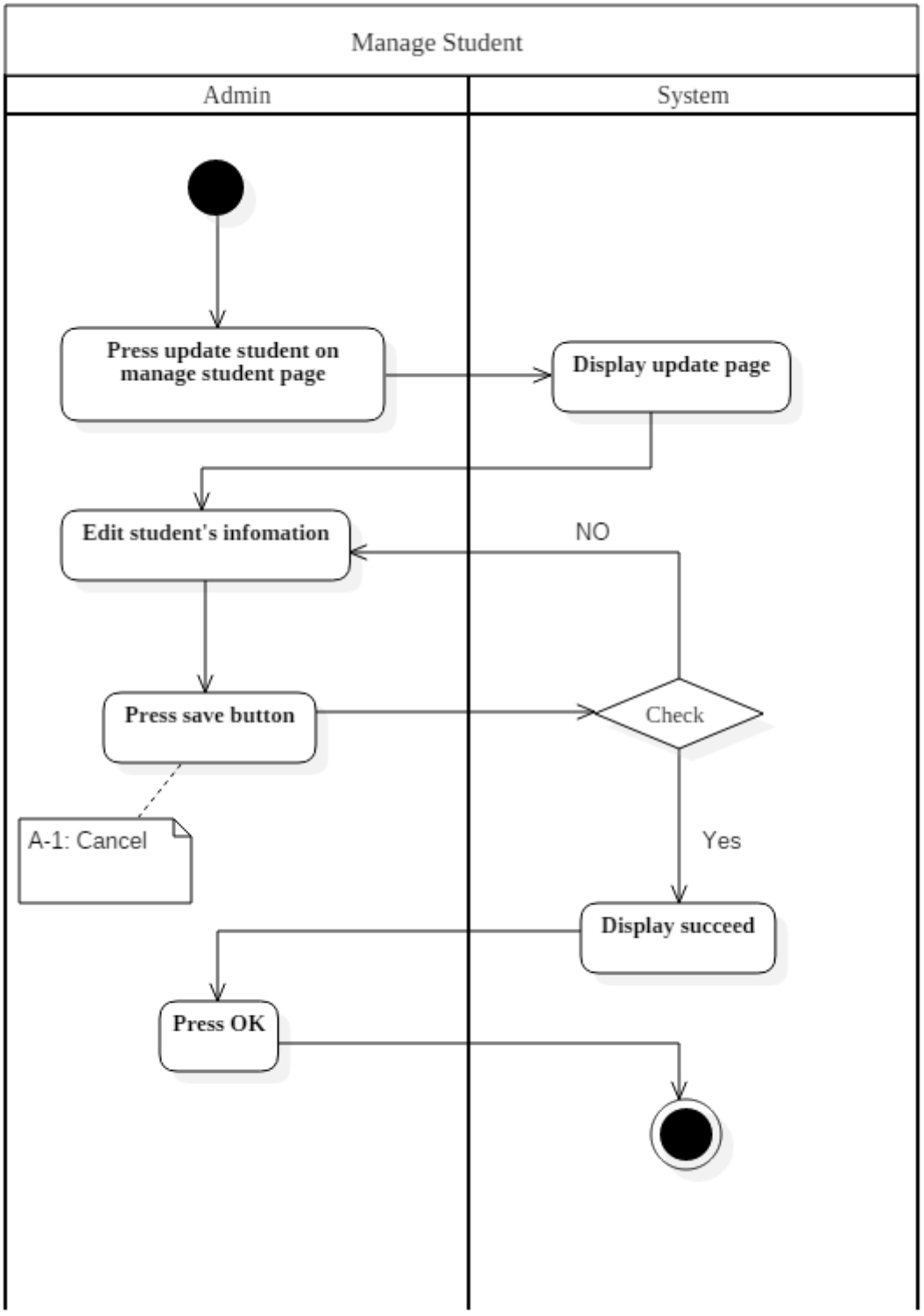

*Figure: 3.57: Activity Diagram of Admin manage **Update** student*

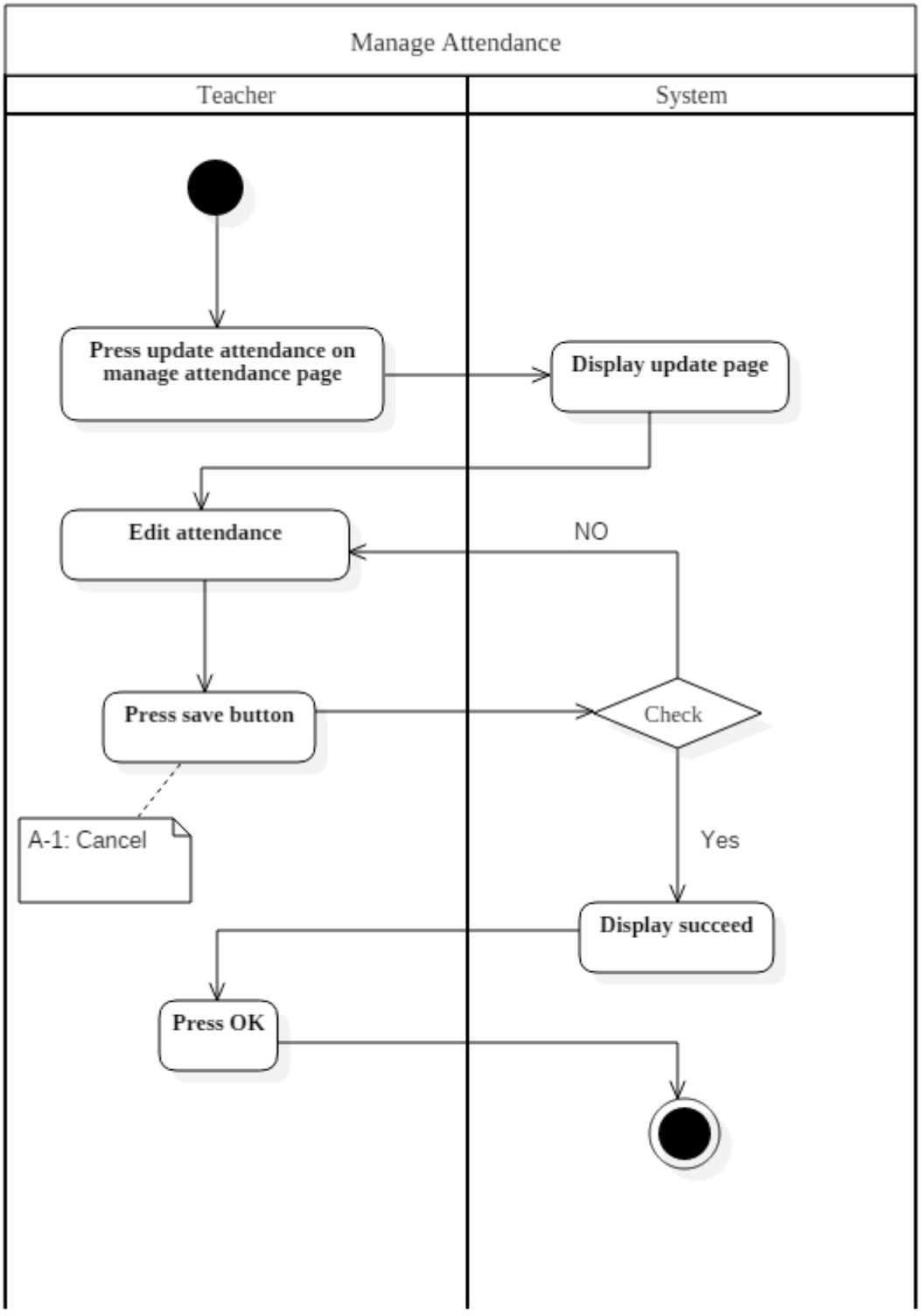

*Figure: 3.58: Activity Diagram of Teacher manage **Update** attendance*

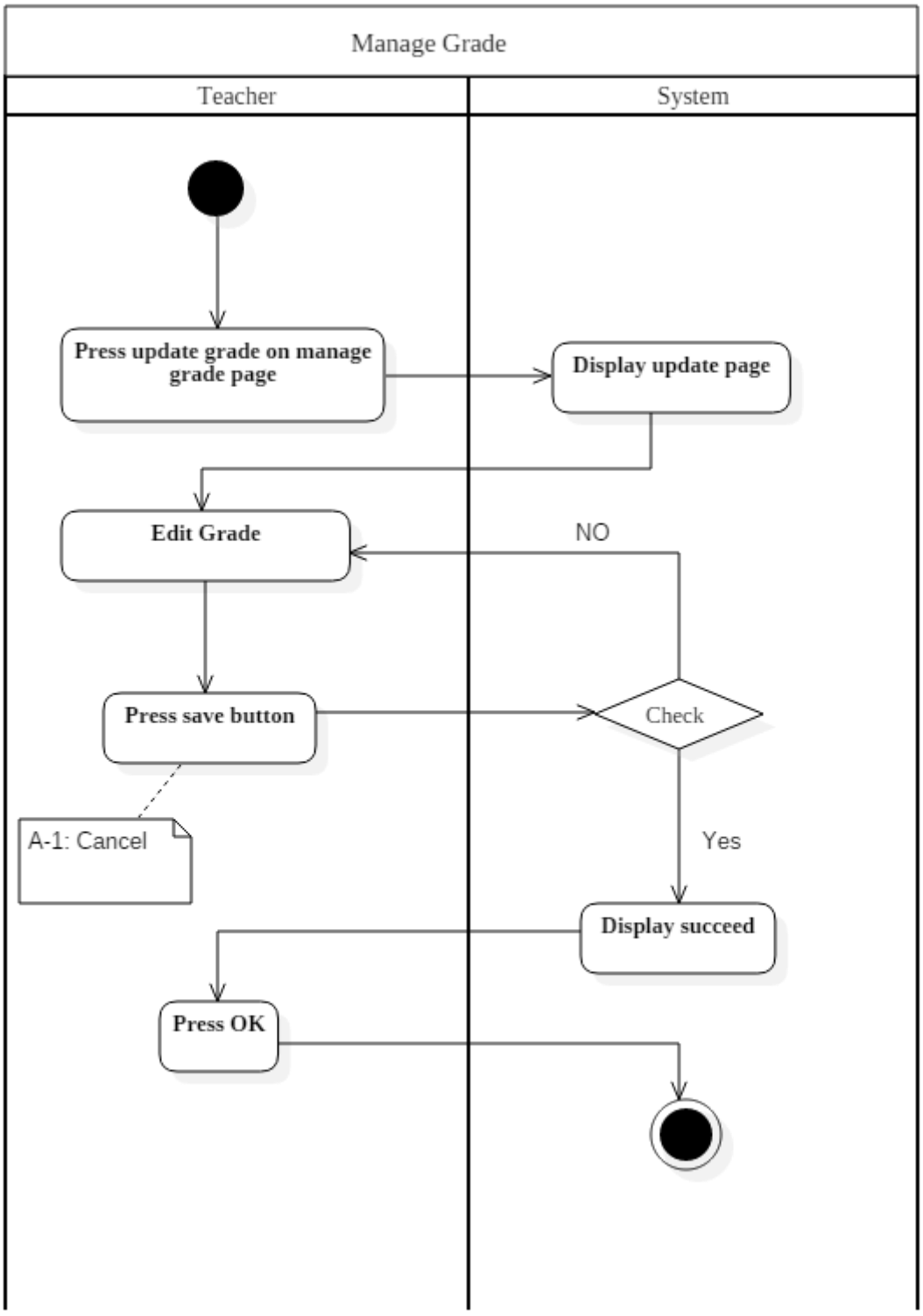

*Figure: 3.59: Activity Diagram of Teacher manage **Update** grade*

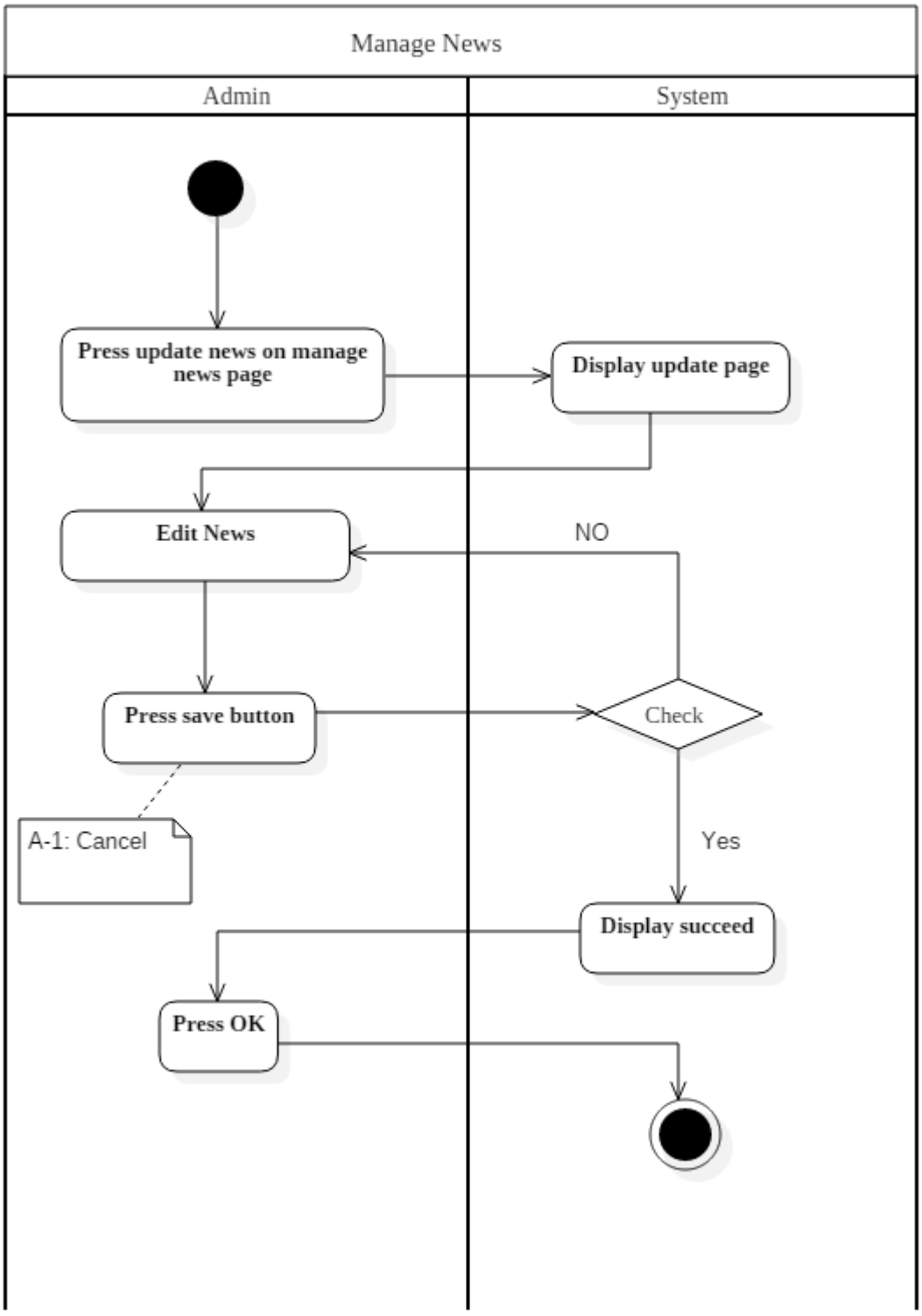

*Figure: 3.60: Activity Diagram of Admin manage **Update** news*

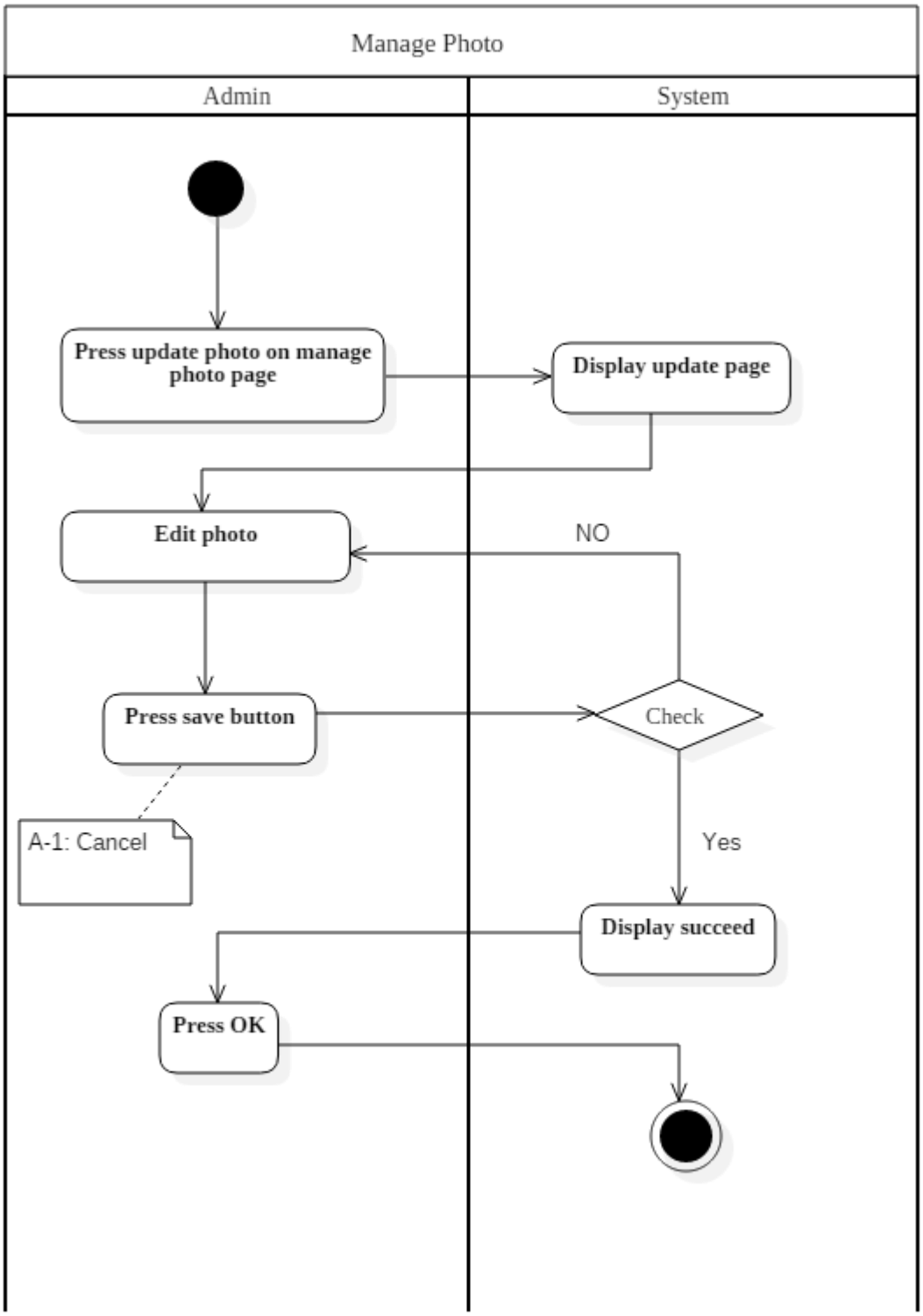

*Figure: 3.61: Activity Diagram of Admin manage **Update** photo*

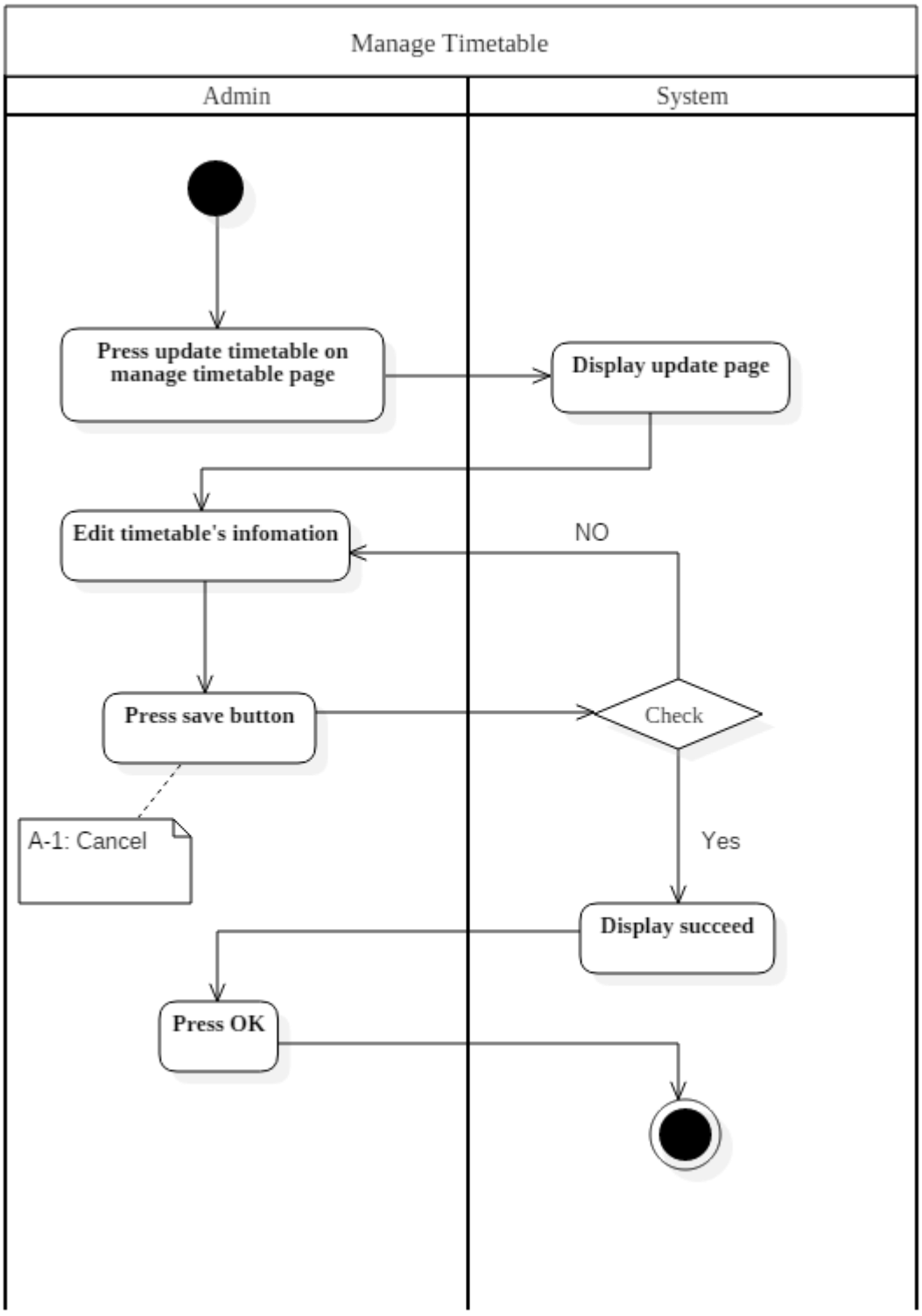

*Figure: 3.62: Activity Diagram of Admin manage **Update** timetable*

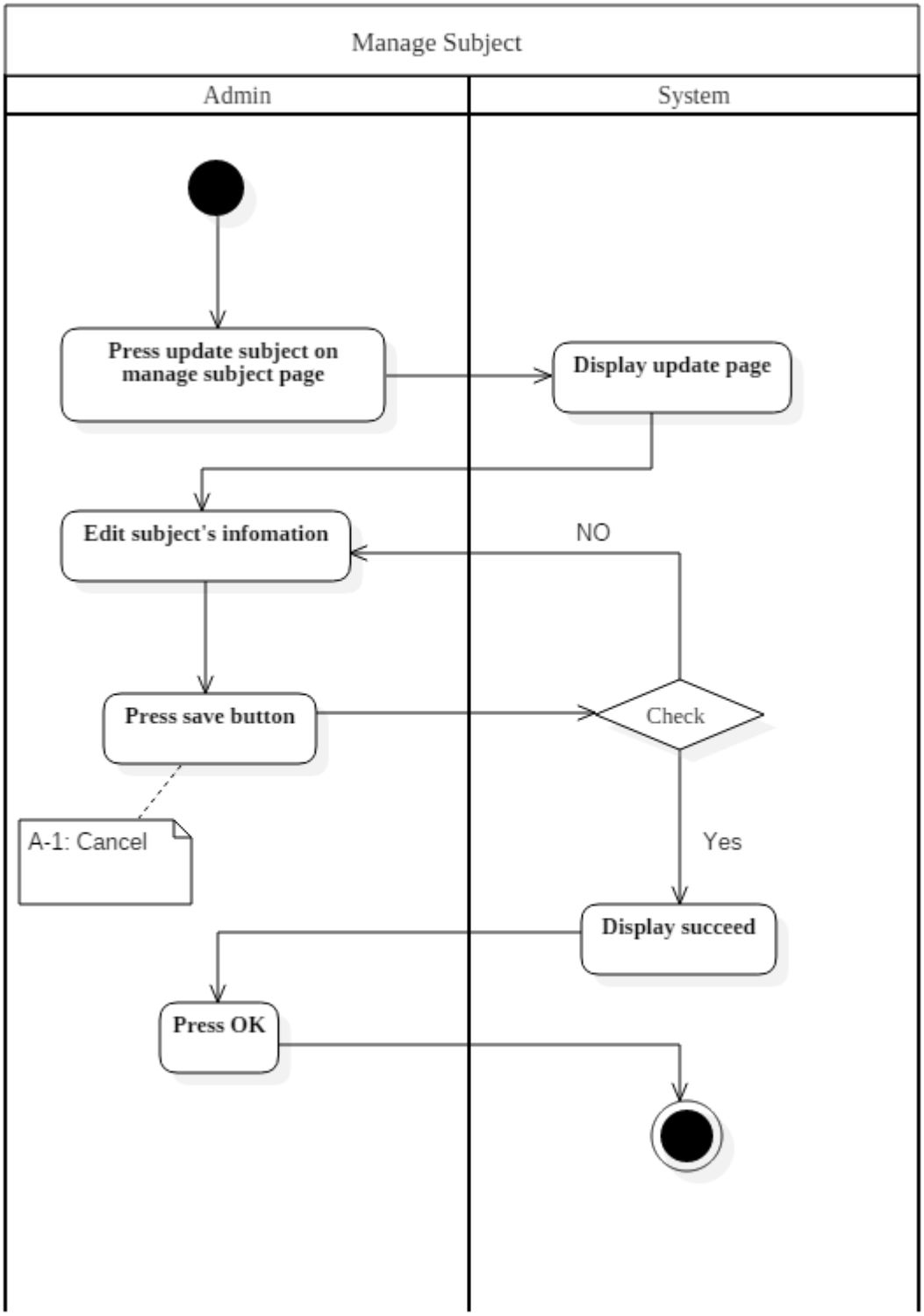

*Figure: 3.63: Activity Diagram of Admin manage **Update** subject*

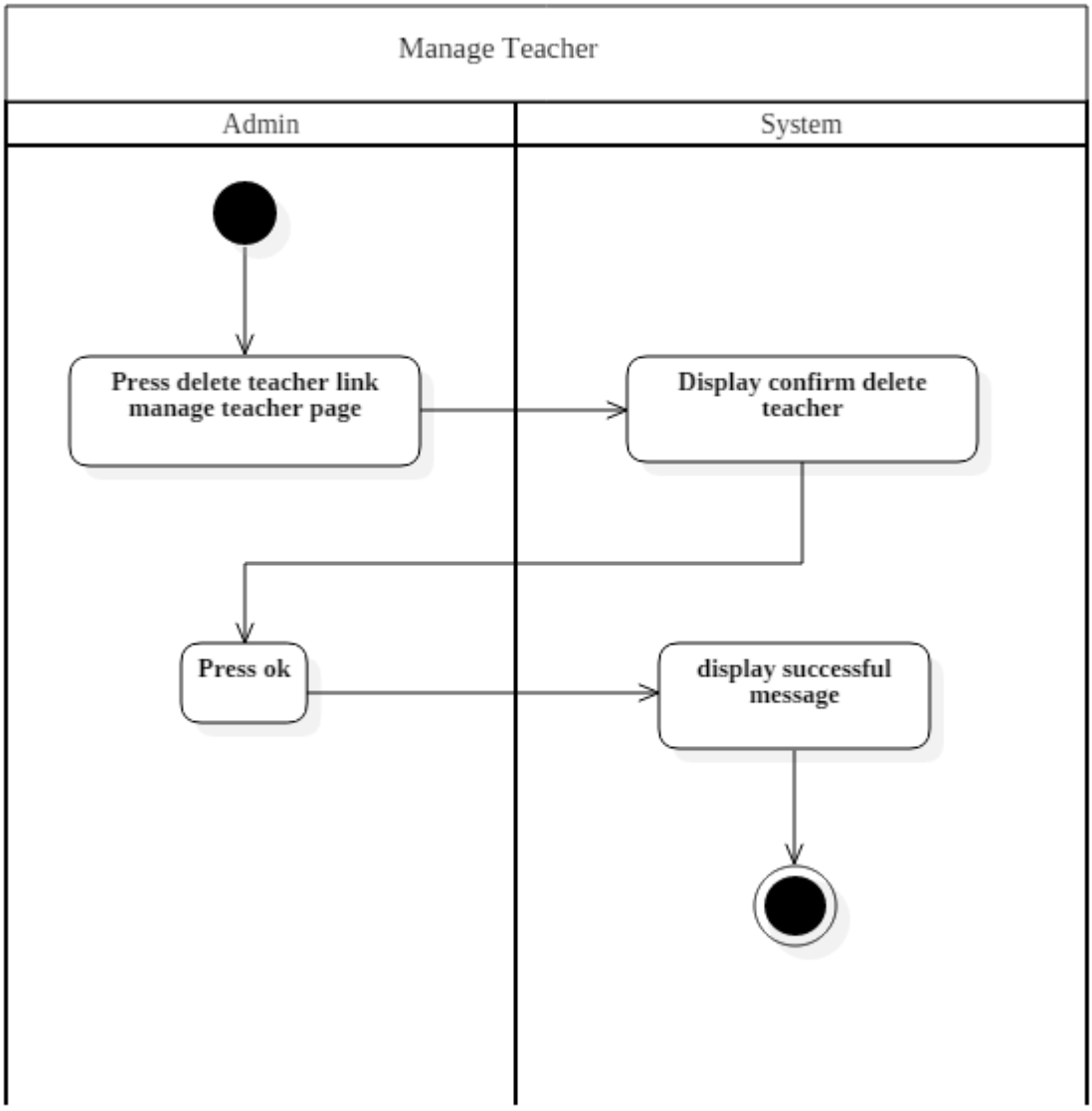

*Figure: 3.64: Activity Diagram of Admin manage **DELETE** teacher*

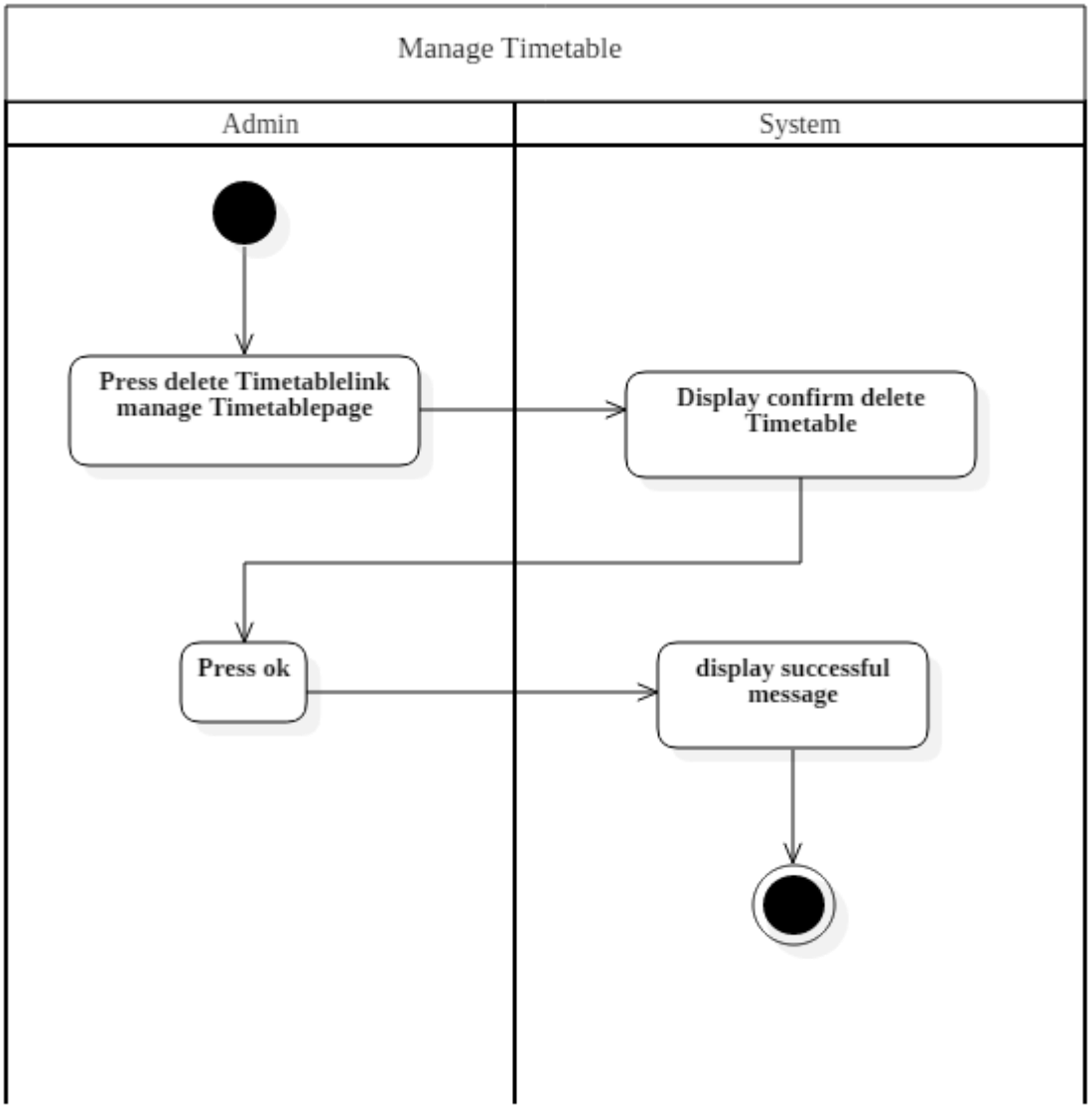

*Figure: 3.65: Activity Diagram of Admin manage **DELETE** timetable*

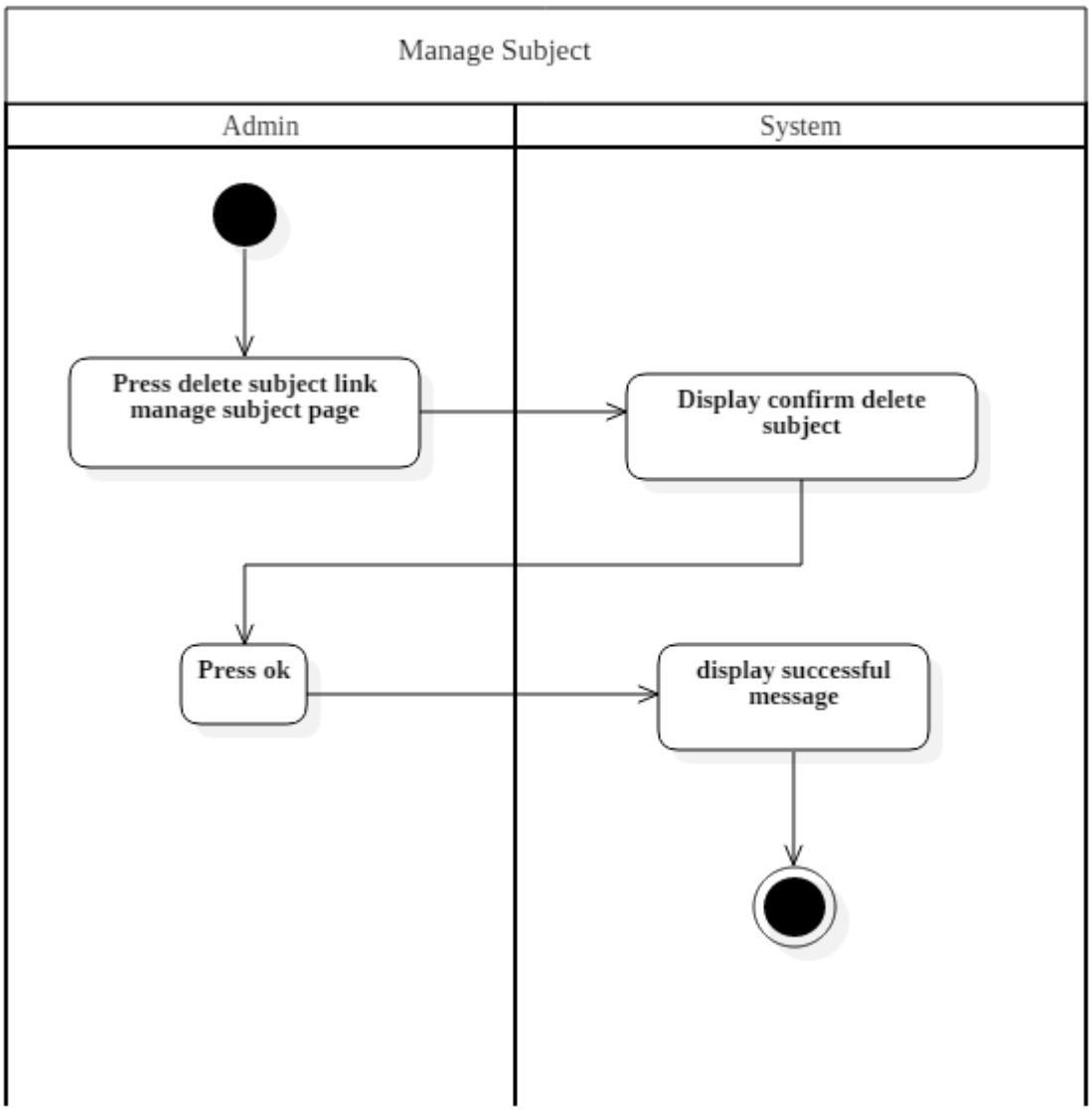

*Figure: 3.66: Activity Diagram of Admin manage **DELETE** subject*

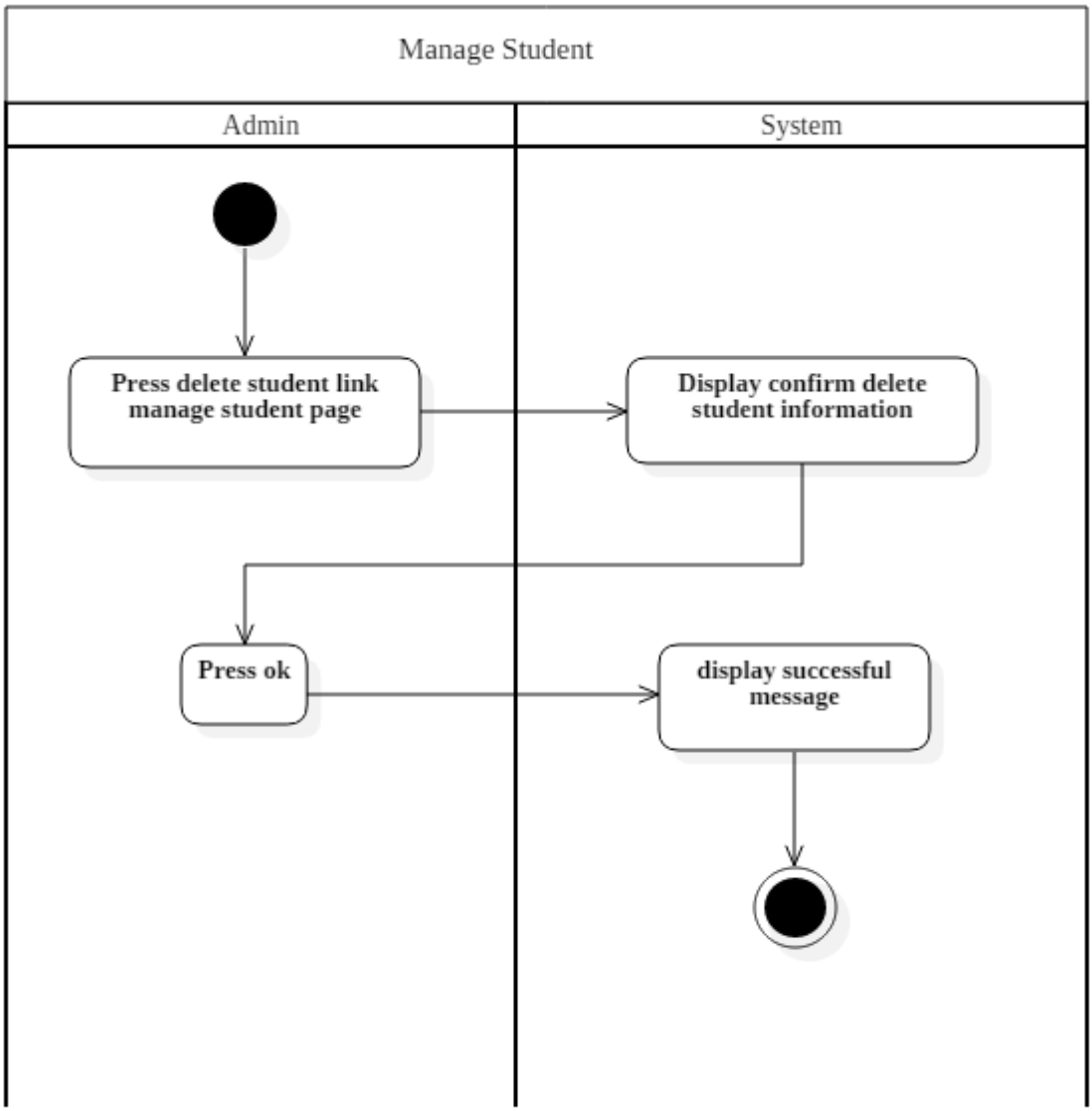

*Figure: 3.67: Activity Diagram of Admin manage **DELETE** students*

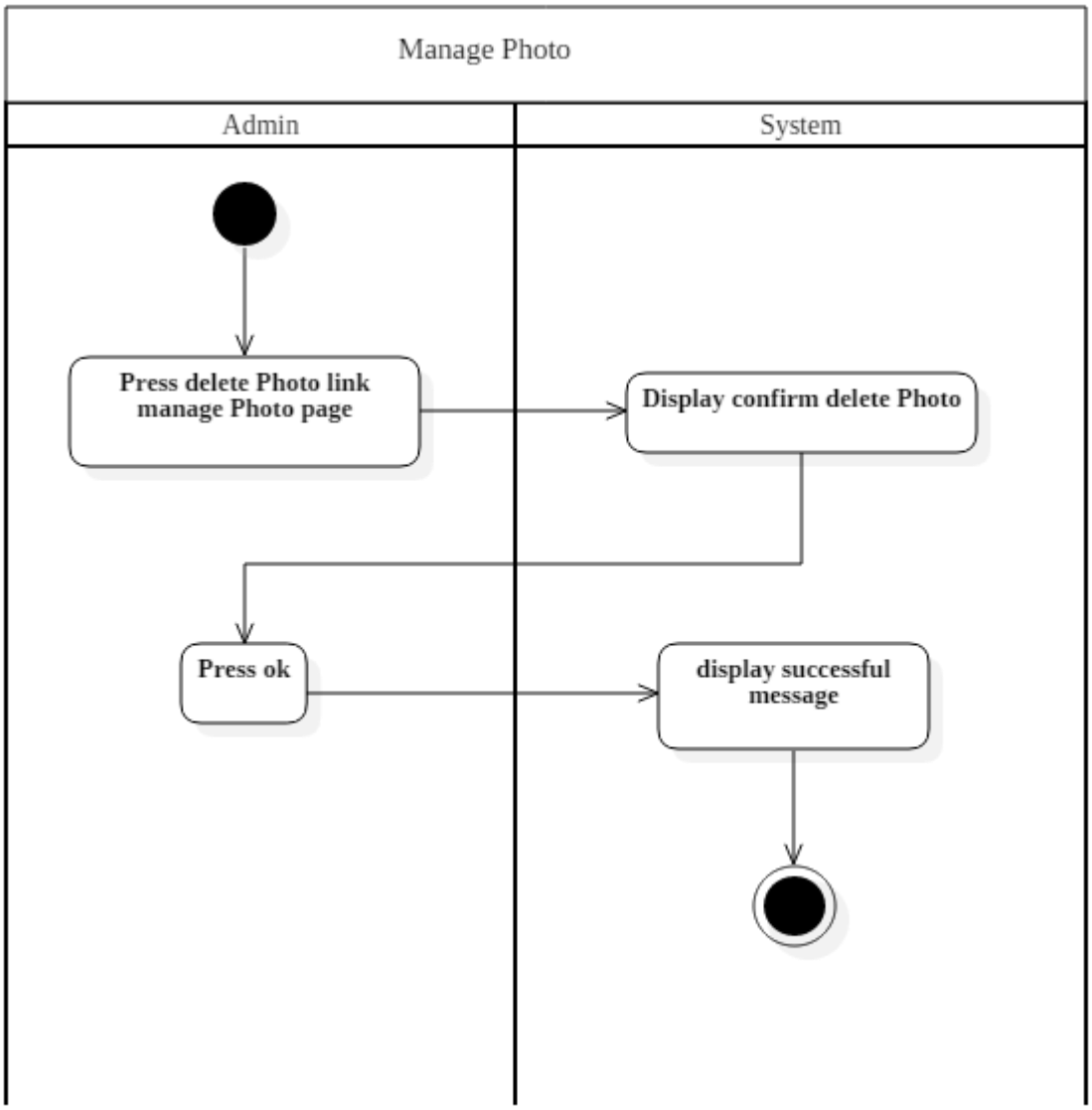

*Figure: 3.68: Activity Diagram of Admin manage **DELETE** photos*

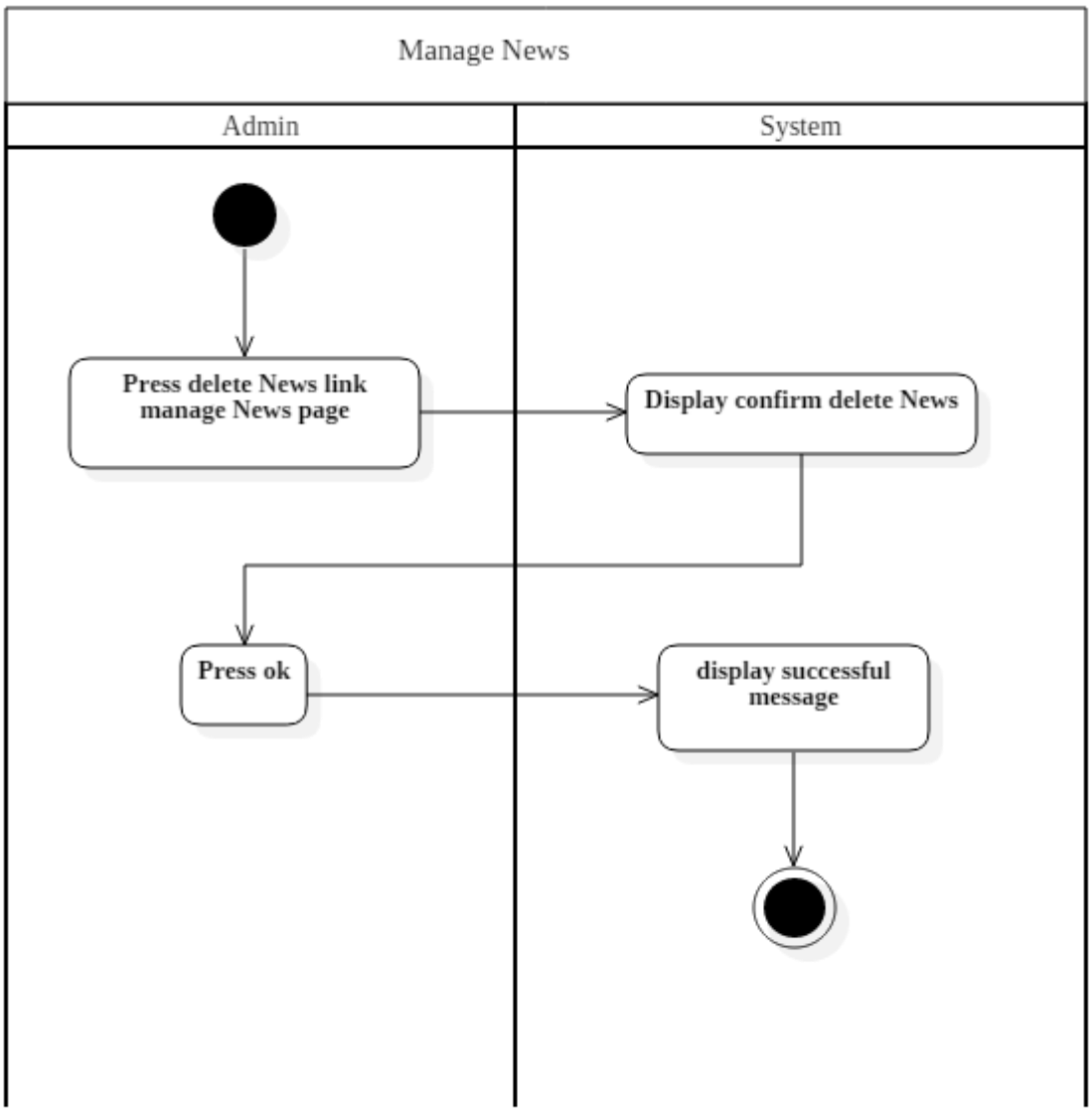

*Figure: 3.69: Activity Diagram of Admin manage **DELETE** news*

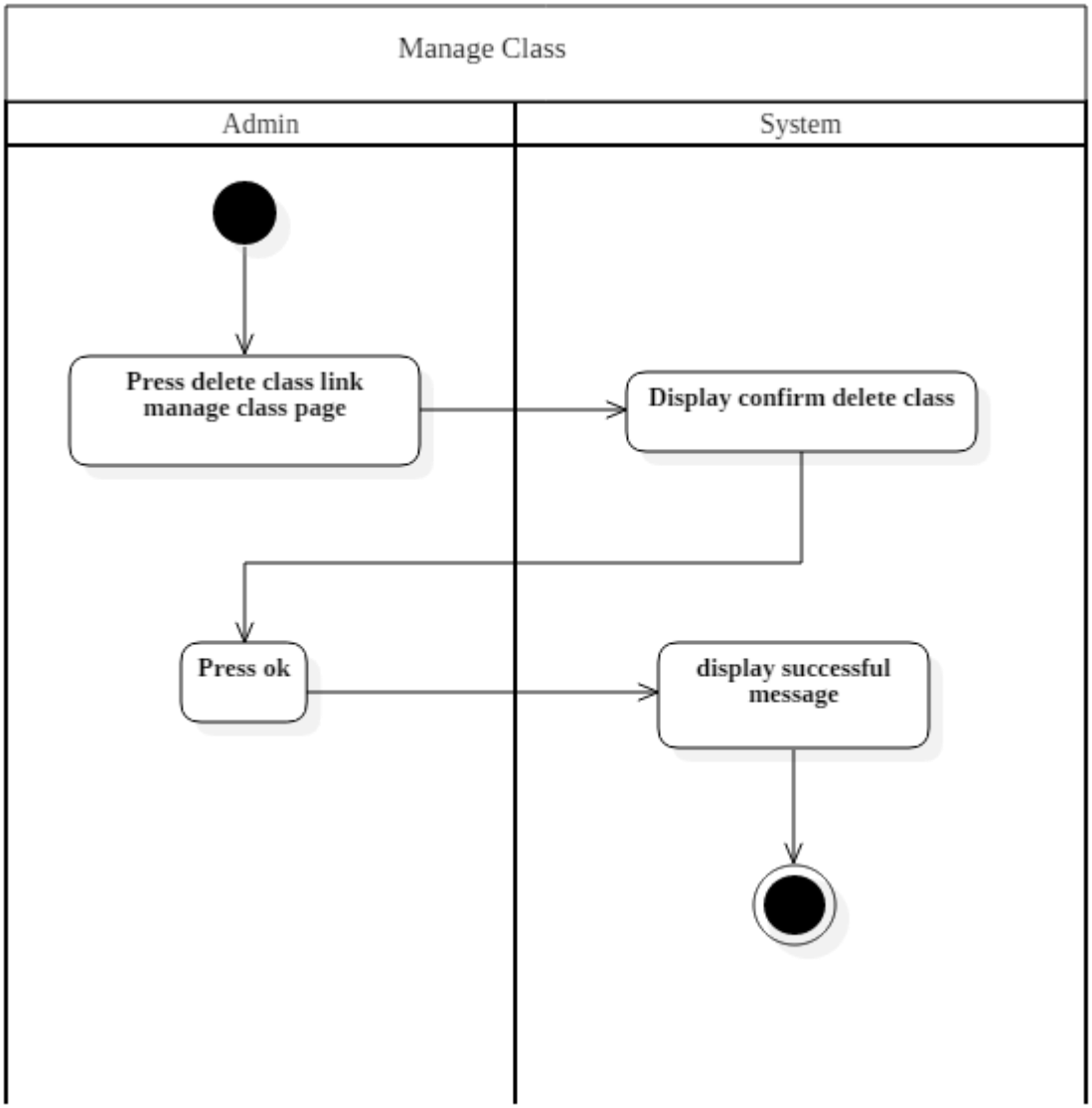

*Figure: 3.70: Activity Diagram of Admin manage **DELETE** class*

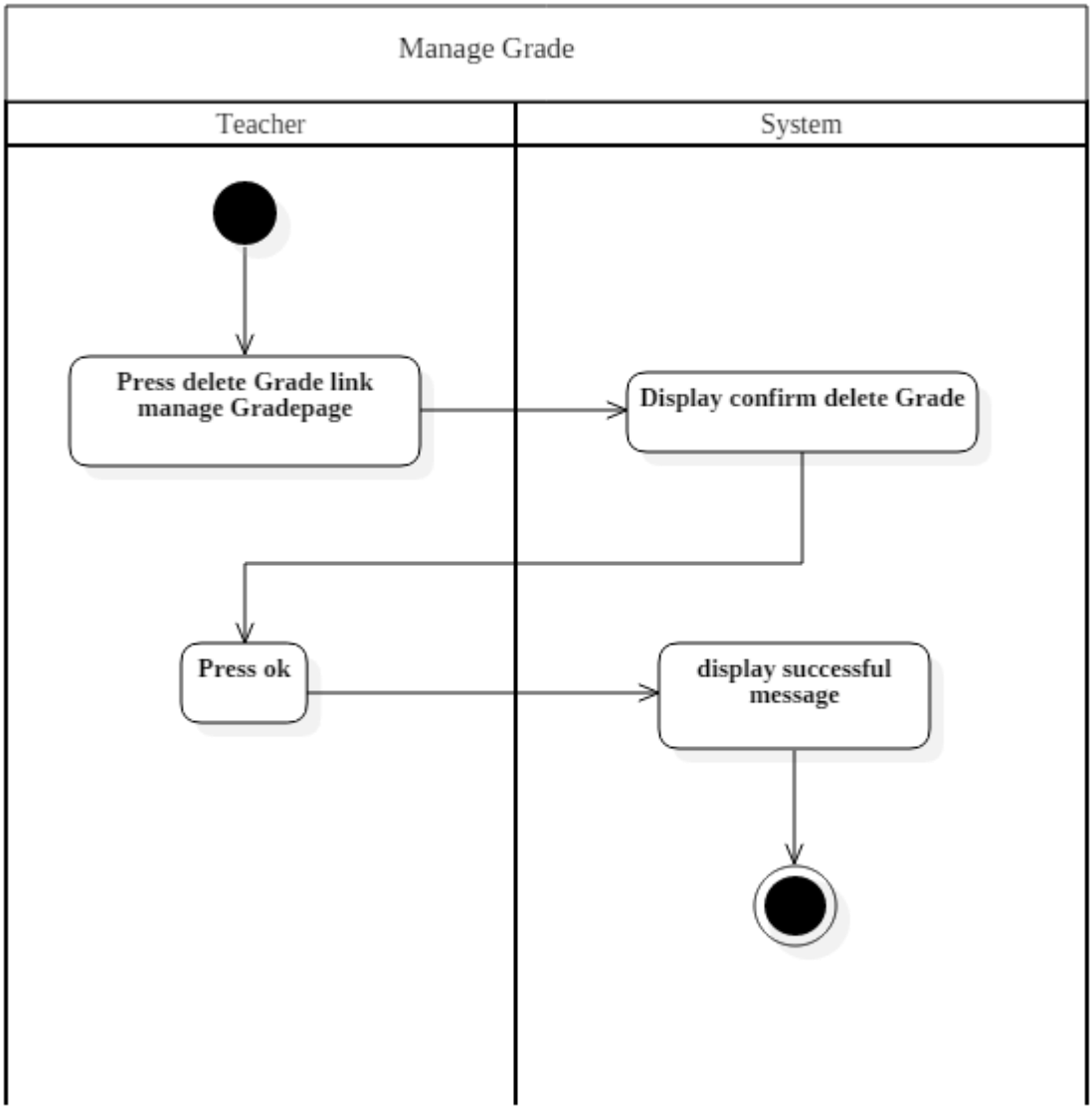

*Figure: 3.71: Activity Diagram of teacher manage **DELETE** grade*

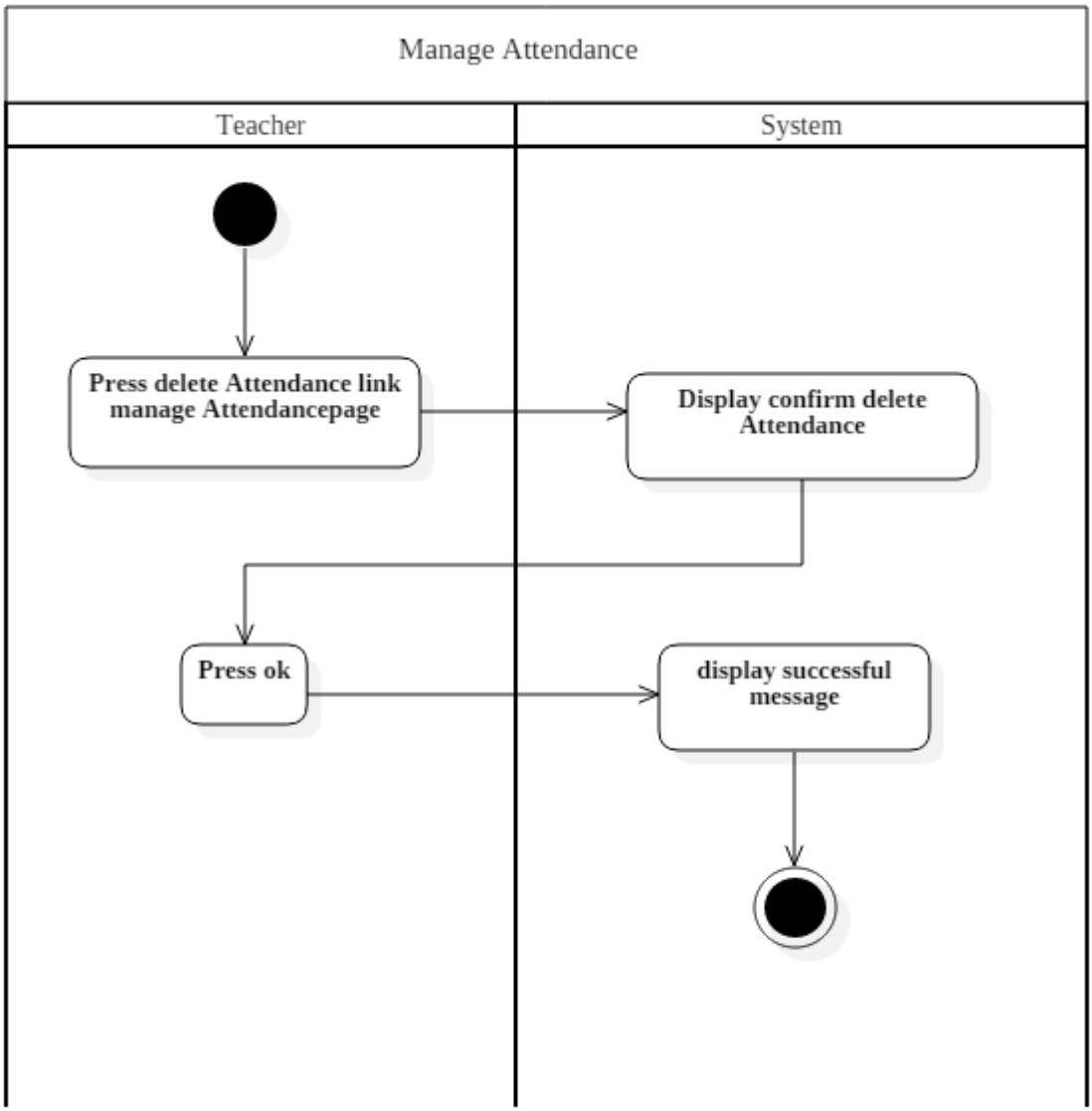

*Figure: 3.72: Activity Diagram of teacher manage **DELETE** attendance*

3.2.8 ER-Diagram

An entity-relationship diagram (ERD) is a graphical representation of an information system that shows the relationship between people, objects, places, concepts or events within system. An ERD is a data modeling technique that can help define business processes and can be used as the foundation for a relational databased. (Margaret, 2014)

3.3 DESIGN

For the third step design phase, I started to design databased and user interfaces by following the requirements, and also designing phase with divided into two parts as follow:

3.31 File Structure

File Structure provides a detailed accounting of all tables found within the user designer-created database. It contains all the attribute names and characteristics of each table in the system.

- **Table: admin**

Table name: admin						
Description: this table use to keep admin's information						
Name	Type	Length	Description	Null	Key	Reference
ad_id	Int	11	Admin id	No	Primary	-
ad_username	Varchar	150	Admin username	No	-	-
ad_pass	Varchar	150	Admin password	No	-	-
ad_email	Varchar	150	Admin email	No	-	-
ad_address	Text		Admin address	No	-	-
ad_tel	Varchar	150	Admin telephone	No	-	-
ad_img	Varchar	150	Admin image	No	-	-
Sum		761	Bytes			

Table 3.2: Admin

- **Table: teacher**

Table name: Teacher						
Description: this table use to keep teacher's information						
Name	Type	Length	Description	Null	Key	Reference
tch_id	Int	11	Teacher id	No	Primary	-
tch_name	Varchar	150	Teacher name	No	-	-
tch_pass	Varchar	150	Teacher password	No	-	-
tch_dob	Varchar	150	Teacher birth of date	No	-	-
tch_sex	Varchar	150	Teacher sex	No	-	-
tch_qaul	Varchar	150	Teacher qualification	No	-	-
tch_salary	Varchar	150	Teacher salary	No	-	-
tch_address	Text		Teacher address	No	-	-
tch_email	Varchar	150	Teacher email	No	-	-
tch_tel	Varchar	150	Teacher telephone	No	-	-
tch_img	Varchar	150	Teacher image	No	-	-
Sum		1,211	Bytes			

Table 3.3: Teacher

- **Table: student**

Table name: Student						
Description: this table use to keep student's information						
Name	Type	Length	Description	Null	Key	Reference
std_id	Int	11	Student id	No	Primary	-
std_name	Varchar	150	Student name	No	-	-
std_pass	Varchar	150	Student password	No	-	-
std_acad	Varchar	150	Student academic year	No	-	-
std_dob	Varchar	150	Student date of birth	No	-	-
std_sex	Varchar	150	Student sex	No	-	-
std_address	Text		Student address	No	-	-
std_phone	Varchar	150	Student phone	No	-	-
std_parent	Varchar	150	Student parent	No	-	-
std_img	Varchar	150	Student image	No	-	-
cl_id	Int	11	Class id		Foreign	Class
Sum		1,072	Bytes			

Table 3.4: student

- **Table: class**

Table name: class						
Description: this table use to keep class's information						
Name	Type	Length	Description	Null	Key	Reference
cl_id	Int	11	Class id	No	Primary	-
cl_name	Varchar	150	Class name	No	-	-
Sum		161	Bytes			

Table 3.5: class

- **Table: subject**

Table name: subject						
Description: this table use to keep subject's information						
Name	Type	Length	Description	Null	Key	Reference
sub_id	Int	11	Subject id	No	Primary	-
sub_name	Varchar	150	subject name	No	-	-
cl_id	Int	11	Subject id	No	Foreign	Subject
Sum		172	Bytes			

Table 3.6: subject

- **Table: time table**

Table name: time table						
Description: this table use to keep time table's information						
Name	Type	Length	Description	Null	Key	Reference
tb_id	Int	11	Time table id	No	Primary	-
tb_day	Varchar	150	Time table day	No	-	-
sub_id	Int	11	Subject id	No	Foreign	Subject
tb_start	Varchar	150	Time table start	No	-	-
tb_end	Varchar	150	Time table end	No	-	-
cl_id	int	11	Class id	No	Foreign	Class
tch_id	Int	11	Teacher id	No	Foreign	Teacher
Sum		483	Bytes			

Table 3.7: time table

- **Table: grade**

Table name: grade						
Description: this table use to keep grade's information						
Name	Type	Length	Description	Null	Key	Reference
gd_id	Int	11	Grade id	No	Primary	-
std_id	Int	11	Student id	No	Foreign	Student
sub_id	Int	11	Subject id	No	Foreign	Subject
cl_id	Int	11	Class id	No	Foreign	Class
gd_grad	Varchar	150	Grade	No	-	-
Sum		194	Bytes			

Table 3.8: grade

- **Table: attendance**

Table name: attendance						
Description: this table use to keep attendance's information						
Name	Type	Length	Description	Null	Key	Reference
attd_id	Int	11	Attendance id	No	Primary	-
std_id	Int	11	Student id	No	Foreign	Student
attd_date	Varchar	150	Student attendance	No	-	
att_reason	Varchar	150	Attendance reason	No	-	
Sum		311	Bytes			

Table 3.9: attendance

3.2.2 INTERFACE DESIGN

Before implementing the actual design of the picture, a few interface designs were constructed to visualize the user interaction with the system

- **Home page**

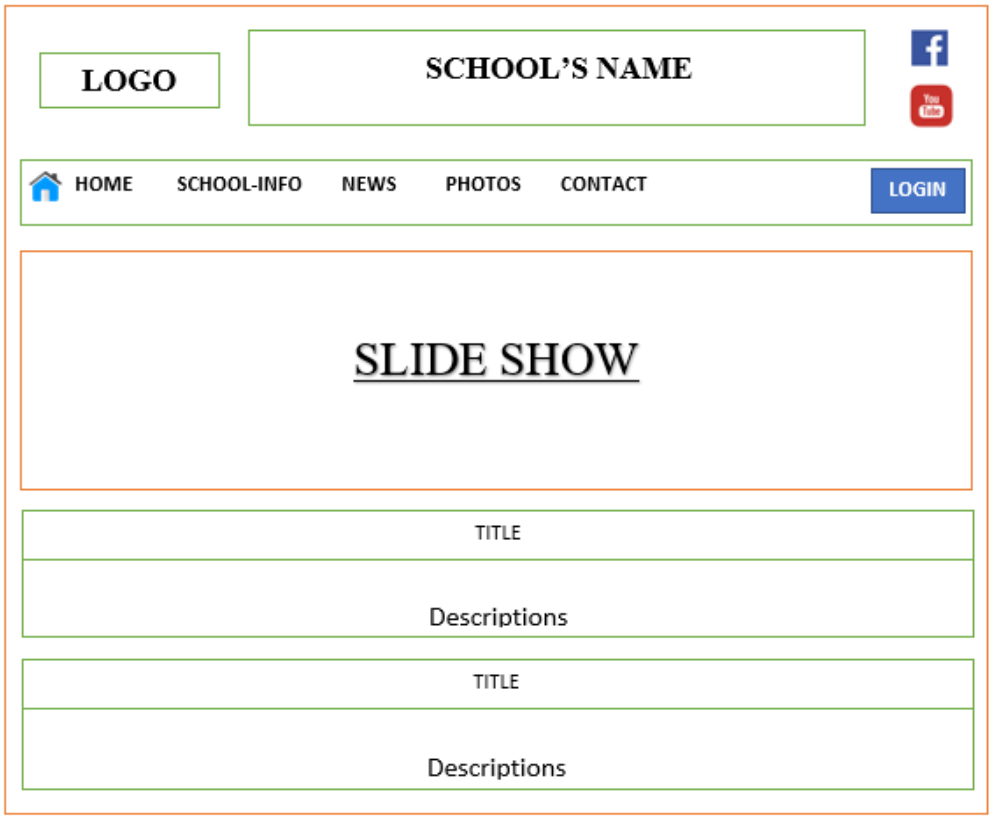

Figure 3.78: home page

Figure 3.78 show the homepage before admin teacher and student make login, it's the page that show about general information about School Management System.

❖ **Admin page**

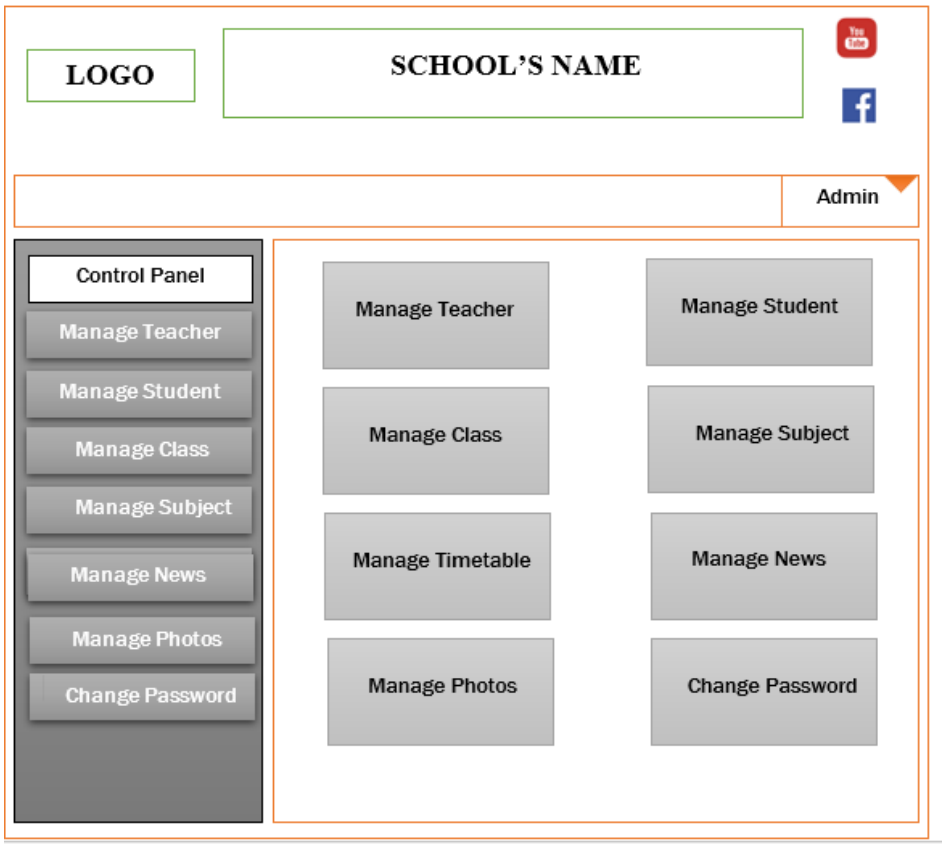

Figure 3.79: admin page

Figure 3.29: show the admin control panel page, when admin want to manage function about school management system. First, admin must login then can select any function in control panel to manage school like manage teacher.

❖ **Teacher page**

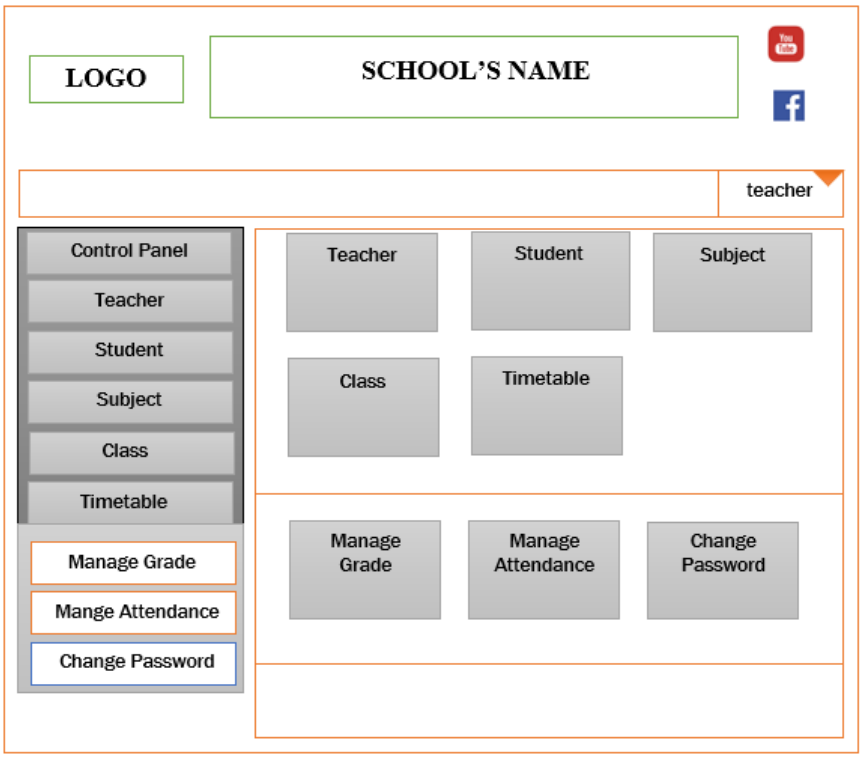

Figure 3.80: teacher page

Figure 3.80: show the teacher control panel page, when teach want to manage some functions and view in school management system. First, admin must login then can select some function in control panel to manage school like manage grade.

❖ **Student page**

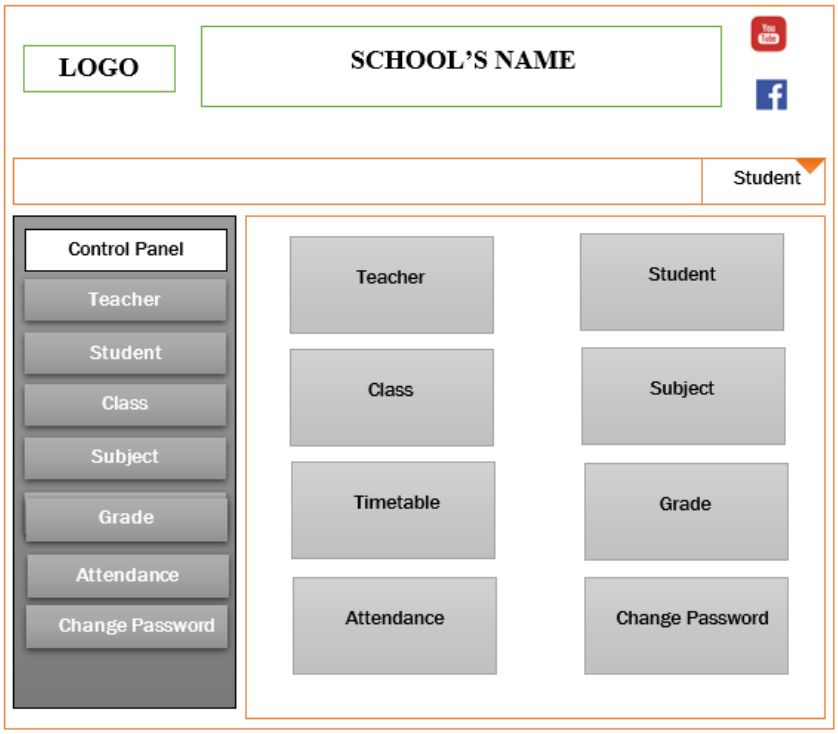

Figure 3.81: student page

Figure 3.81: show the student control panel page, when student want to view their information school management system. First, student must login then they can view like view their personal information, time table, grade and others.

3.4 IMPLEMENTATION

Implementation phase as steps four after finished design phase and this phase present about the programmer or developer start to writing and testing code and install server hosting and doing until complete the code.

3.5 MAINTENACNE

For the maintenance phase, I have to upload and get feedback from user. If the system get feedback, we may improve and develop to be better than.

BIBLIOGRAPHY

- Abdoli Sejzi, A. (2013). Virtual university in developed and developing countries towards providing a workable model of virtual university, Doctor of Philosophy Dissertation, Universiti Teknologi Malaysia (UTM), Johor, Malaysia.
- Abdoli Sejzi, A., Aris, B., and Yahya, N. (2012). The phenomenon virtual university in new age: trends and change, Science Direct, Journal of Procedia social and behavioral science, vol 56, pp 564-572
- Abbas Abdoli Sejzi, Baharuddin Arisa , 2013. Learning Management System (LMS) and Learning Content Management System (LCMS). https://educ.utm.my/tl/wp-content/uploads/2013/11/301.pdf
- W. Sebestine, 2013. definition of school management. [Reference from on Jun 21] https://www.quora.com/What-is-the-definition-of-school-management/answer/Sebestine-Willson
- PRAVEEN SHEKHAR, PANKAJ PANDEY, PUNEET KUSHWAHA,NEERAJ CHAUDHARY, 2011. School Management System. https://www.bartleby.com/essay/School-Management-System-PKPVDZEK6ZZS
- http://sunrayztechnology.com/WebsitePages/SchoolMgmtSoft1.aspx
- http://www.viainfotech.co.in/school_management.aspx
- S. Madiha, 2013. Impact of Management Information Systems (MIS) on School Administration. https://www.researchgate.net/publication/270847103_Impact_of_Management_Information_Systems_MIS_on_School_Administration_What_the_Literature_Says
- Vivienne V. Forrester, 2019. School Management Information System: Challenges to Educational Decision-Making in The Big Data Era. https://independent.academia.edu/VivienneVForrester

– Kamile DEMİR, 2006. SCHOOL MANAGEMENT INFORMATION SYSTEMS IN PRIMARY SCHOOLS

https://files.eric.ed.gov/fulltext/ED501456.pdf