SAMARA UNIVERSITY

COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

COMPUTER ENGINEERING STREAM

PROJECT TITLE : SEMERA UNIVERSITY PROPERTY REGISTRATION MANAGEMENT SYSTEM

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Declaration and approval

We declare that the project comprises our own work. We have acknowledged and refereed all materials used in this work. We understand that non-adherence to the principles of academic honestly and integrity. Misrepresentation of any idea will constitute sufficient ground for disciplinary action by the institute and can also evoke penal action from the sources which have not been properly cited or acknowledged.

In doing so, we assure that we agree with all written above with our signature as follows.

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This project has been approved by our advisor :

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Acknowledgment

First and most, I would like to extend we unshared thanks to the almighty God for providing we to opportunity and smoothing of all aspects regarding the program.

We deeply great fully and indebeted to Miss. Zemzem Hibet our semester project adviser, for in encouragement, suggession , guidance and overall assistance. Successful accomplish of this semester project would have been very difficult with out your generous time devotion from the early design of semester project proposal to the final written up of this semester project.

By adding valuable and constructive comments which enable to complete the semester project written up.

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List of Acronyms

CSS :- Cascading Style Sheet

DBMS :- Database management system

GUI :- graphical user interface

HTML :- Hyper Text Markup Language

ID :- identification

MYSQL :-Open-Source relational Data Base management system

OS :- operating system

UML :- unified modeling language

Abstract

Property registration management is registered our property to identify the owner of the property. The problem with current system of Samara university students and employees register their property manually. This system has many problems. These are saving resource, time, protecting there data from external agent and so on. By considering these problems we are make computerized property registration management system.

We are develop computerized property registration management system which includes the following features:

The students and employees register their property in one place or one office. This computerized system is worked on desktop computer. Before using the system admins (registrar) need login with their user name and password in order to enter the system. After that admins can register, delete, search,display and update users (students and employees) and their property into the system.

For develop this project we use waterfall software development life cycle model. This project is develop by using JAVA and MYSQL for front end and back end part.

Chapter One

Introduction

Property registration management system is the process of registering and containing our property. It supports for security, proof of ownership, collateral for loans and easy transfer of ownership. property registration management system basically helps add to the value and authenticity of your property.

Here, in the Samara university property registration management system is operated by manual system.this system have many problems, there are problems of protecting their data from external agent, time, putting their data in a database and saving resource, by considering these problems we are changed this system into computerized system.

1.1 Background study

The current property registration management system in which students must have to be on the paper. This way of property registration management system is some what difficult. As we see using paper can cost as many and cause data loss. So over come such problems we need the computerized property registration management system which the property of students and employees registers on it. Property registration management system is a desktop based application which aimed to change the manual system of property registration into computerized system. That means not paper work existing.

Our project is not merely register the property of students. Rather, we can use the power of computer to actually do batter in addition to what normally occur register on paper.

1.2 problem statement

In our property registration management system we try to solve the limitation of traditional property registration management system. Here we provide some disadvantages of traditional property registration and how our system solved them.

- In traditional property registration management system we need a lot of paper and pen. These things have high amount of cost. But in our system we have not need paper and pen.

- Students and employees are move from one office to another for registering there property. This process have physical exhaustion and boredom. but in our system students and employees can register there property in one place.
- To find data from traditional system is so difficult and can take time. In our system we can get data simply by searching from a computer.
- Using paper system can cause data loss by age of paper increase, accident like fire and so on. In our system data is put on database.

1.3 Goal of the project

- This system allows students and employees to register their property in one place or one office with out having to leave the office without any hassle.

This system decrease the amount of resource and data lose.

1.4 objective

1.4.1 General objective of the project

This project aim to change the Samara University property registration manual system into computerized system.

1.4.2 Specific objective of the project

- Add property with the owner of property in the system
- Search owners in the registered data on the system
- Update the registered data in the system
- Delete the registered data on the system
- Display the registered data

1.5 Scope of the project

In the Samara university property registration system is now worked by paper. So we have changed this system into computerized system. But the function of our system is register the personal property of the students and employees.

The registered property of students and employees are Laptop.

1.6 Methodology

1.6.1 Data gathering techniques

The strategy utilized to design the project is based on the idea that it must be used to overcome the manual property registration system employed by Samara university police department. There are two sorts of data collection strategies used. Observation and interviews are the two approaches used.

- **Observation:** observation is used to determine the amount of work and transactions involved in a specific activity. To see how they're doing right now We are observing the activities that are carried out by the staff of police office.
- **Interviews:** are conducted with relevant staff members in order to gain first-hand information.

Two sorts of approaches are included in this methodology. There are two types of interviews: closed and open. As a result, the team has chosen an open interview with the management in order to learn about the organization's current working procedures. As a result, the team was able to learn more about the organization and its requirements.

1.6.2 Development Languages

- **JAVA Programming language**

JAVA is a high level, class based, object oriented programming language that is designed to have as few implementation dependencies as possible it is a general purpose programming language intended to let programmers write once, run anywhere , meaning that compiled java code can run all platforms that support java without the need to recompile.[1]

- **MYSQL Database**

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation. MySQL is a database management system (DBMS). A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.[2]

1.6.3 Software requirement

These are the description of the services that a software system must provide and the constraint under which it must operate. However, the table below depicts the software requirements needed for developing the proposed system in terms of their specifications, minimum requirement and other features.

Table 1.1 software requirements

software	Minimum requirement	description	availability
Netbeans IDE	Version 14	To write back end and front end design by java	Yes
Internet web browser (Chrome)	Version 11.0	To be use to preview the system	Yes
Operating system	Windows 10	Used to run the computer system	Yes
Microsoft Word	2019	Use for documentation	Yes
MYSQL Workbench	Version 8	Tool for MYSQL database	Yes

Chapter Two

Literature review

2.1 Introduction

This chapter is regarded as one of the most crucial chapters in any research project due to the fact that gives a literature review of the whole aspect concerning the project. Before starting to solve a problem, it is ideal to have a clear picture on the origin of the problem. It as well elaborates more on the current system of property registration management system in the Samara University. it is well ideal to understand how the proposed system is going to aid the police department and students of Samara University.

In this chapter we will include about the existing system of property registration management system of Samara University, our proposed property registration management system for Samara University, related works our proposed system and .

2.2 Existing system

The process of property registration system in the Samara University was done by manually. Students are move from one office to another for registering there property. Disadvantage of this system is use high amount of cost, This process have physical exhaustion and boredom, it can take time, it can cause data loss by age of paper increase, accident like fire and so on.

2.3 Proposed system

Our computerized property registration system has the following features:

- In comparison to the present system the proposed system will be less time consuming and is more efficient.
- Students and employees can register there property in one place.
- we can get data simply by searching from a computer.
- data is put on database.
- Update data simply
- Delete registered data simply
- Display registered information simply

2.4 Related works

2.4.1 Online property registration and Tax payment

There are many related works to our property registration management system project, One of them online property registration and tax payment system. This project worked by Usha Chaudhary and submitted in the partial fulfillment of the requirements for the degree of Bachelor of Information Management at Faculty of Management, Tribhuvan University (Its location is South Asia,Nepal country) under him guidance and supervision in 2015 G.C.

Figure 2.1 online property registration and tax payment system login page

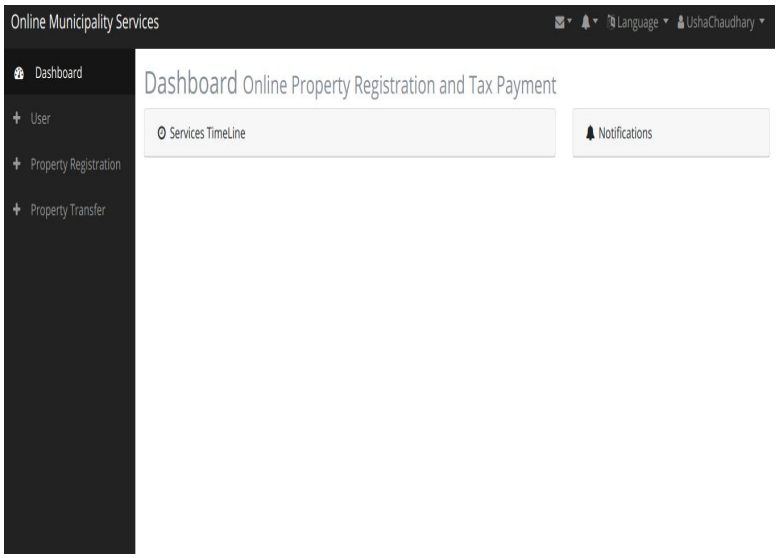


Figure 2.2 online property registration and tax payment system dashboard

"Online Property Registration and Tax Payment" is a Governmental web based application which is designed to make online property registration or transfer and tax payment. System is economically and timely feasible. This system is widely used system by government of developing and developed country to provide online governmental service.[3]

The main purpose of this system is to eliminate the manual work which always create problem to keep the data securely from lost, fire, etc. Due to the paper based work we have a problem of time required to search a data in a register. This system will reduce the time and money on registration process. Owner are free to register their property any time that does not give present system due to governmental holidays, leave, etc. Owner can register their property, sitting on their room. They don't need to visit the office which will avoid the transportation cost, extra burden that they have during registration on office. This will eliminate the queue or line they have to stand during registration or payment. This is one of the best systems for the government transparency.[3]

The spiral model is the best model to this system due to the large project. Risk has been analyzed in every phase of the system development cycle. In the future new feature will also added in same basis. This system is very simple and easy to use. Digital signature, budget management, attractive but the very simple interface is kept for the future management. This system is used the following software tools for implement his project.[3]

MySQL:- (Local Server) MySQL is an open-source relational database management system. (mysql)

- **StarUML :-** It is a UML tool by MKLab. It is used for designing the software using different model
- **HTML:-** It is used for giving eye catching look to the website. And also providing easy to use GUI.
- **CSS:-** CSS is cascading style sheet which is used to give designer look to HTML using the external file.
- **JAVA:-** Java is a general-purpose computer-programming language that is concurrent, class-based, object-oriented, and specifically designed to have as few implementation dependencies as possible. (Java_(programming_language))
- **Apache Tomcat:-** (Application Server)Apache Tomcat, often referred to as Tomcat Server, is an open-source Java Servlet Container developed by the Apache Software Foundation.

- **Maven:-** (Building Tool) Maven is a build automation tool used primarily for Java projects. Maven addresses two aspects of building software: first, it describes how software is built, and second, it describes its dependencies.
- **MySQL Workbench:-** It is a graphical tool for working with MySQL. MySQL Workbench provides an easy to use interface for performing the many tasks involved when working with databases. It integrates SQL development, administration, database design, creation and maintenance into one visual integrated development environment.
- **GitHub:-** (Code Versioning) GitHub is a web-based hosting service for version control using git. It is mostly used for computer code. It offers all of the distributed version control and source code management functionality of Git as well as adding its own features.
- **Visual Studio Code:-** It is a source code editor developed by Microsoft for Windows, Linux and mac OS. It includes support for debugging, embedded Git control, syntax highlighting, intelligent code completion, snippets, and code refactoring.

We convert this online property registration and tax payment system into desktop application for register students and employees property for Samara University. This project is use different software tools for implementation, But we use some software tools comparing to this project. His project is worked by spiral model, but we worked by waterfall model, Because of the following result

- Requirements are very well documented, clear and fixed.
- Product definition is stable.
- Technology is understood and is not dynamic.
- There are no ambiguous requirements.
- Our project is short.

Chapter Three

Requirement Analysis And System Design

3.1. Introduction

System design is the process and focuses on decomposing the system into manageable parts. During requirements analysis we concentrated on the purpose and the functionality of the system design. During system design we focus on the processes data structures, and software and hardware components necessary to implement it. The challenge of system design is that many conflicting criteria and constraints need to be met when decomposing the system. The analysis model describes the system completely from the actors' point of view and serves as the basis of communication between the clients and the developers. The analysis model however, does not contain information about the internal structure of the logical, its hardware configuration or more generally how the system should be realized. System design results in the following products:

List of design goals, describing the qualities of the system that developers should optimize. applications page architecture, describing the subsystem decomposition in terms of subsystem responsibilities dependencies among subsystem mapping to hardware and major policy decisions such as control flow access control, and data storage. In this project, Waterfall model approach is chosen because the approach allows the development of the system to be revised after the stages is finished. Once the stages are not satisfied, then going back to the previous stages can be considered necessary to add or modify any features.

This model contains 6 phases: [4]

- ✓ **Feasibility study**

The feasibility study activity involves the analysis of the problem and collection of the relevant information relating to the product. The main aim of the feasibility study is to determine whether it would be financially and technically feasible to develop the product.

- ✓ **Requirement analysis and specification**

The goal of this phase is to understand the exact requirements of the customer and to document them properly.

- ✓ **Design**

The goal of this phase is to transform the requirement specification into a structure that is suitable for implementation in some programming language.

✓ **Implementation and unit testing**

During this phase the design is implemented. Initially small modules are tested in isolation from rest of the software product.

✓ **Integration and system testing**

In this all the modules are integrated and then tested altogether.

✓ **Operation and maintenance**

Release of software inaugurates the operation and life cycle phase of the operation. The phases always occur in this order and do not overlap.

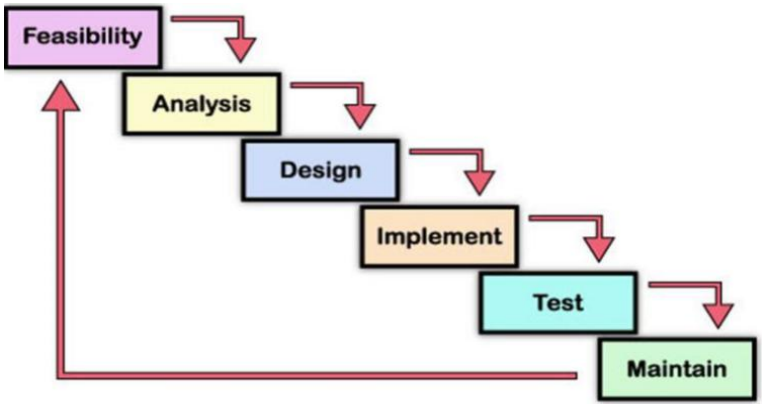


Figure 3.3 Flow diagram of waterfall model

3.2. Systems Requirement Specifications

A structured document setting out detailed descriptions of the system's functions, services and operational constraints. These requirements define what should be implemented so may be part of a contract between client and contractor.

3.3. Functional Requirements

A functional requirement is a requirement that satisfied the users to perform some kinds of functions. It is directly related to the system, means it answer the question what the system can do and how the system perform each activity or describes the interaction between the system and the environment, the environment includes the system user and and any other external system with which the system interacts.

The functional requirements that we are going to analyze as below:

- ✓ Login into the system
- ✓ Register students and employee property
- ✓ Update students and employees property
- ✓ Delete students and employees property
- ✓ Search
- ✓ Get

3.4 Design and Steps

3.4.1 Use-case Diagrams

Use case:- is a description of set of interaction sequence that system perform to provide a result of observable or measurable value to one or more actors. Our project is capable of use cases that are listed below that describe exactly.

• User goal

• Capture system requirement

• The user view of system

• Test the system

• Set of task related activities

• Communication with end user domain experts

• Use Case represents interaction between a user (human or machine) and the system.

Use case components:

• **Actor:** is a person, or external system that plays a role in one or more interaction with the system. And represented with:

• **Use case:** describes a sequence of actions that provides something of measurable value to an actor and is drawn as a horizontal ellipse.

• **System boundary:** indicates the scope of the system project. Anything within the box represent functionalities in side in scope.

Actor Specification

Actor: is a person, organization, service or other system that play a role in one or more interaction with our system. Actor has a goal in using the system. And this goal is what the actor wants to achieve by interacting with the system.

In our project actor is administrator (registrar). hes/her responsible for overall system management like adding new property.

Use case: have been identified from the system specification :

- Employee and student property registration
- Employee and student property updating
- Employee and student property displaying
- Employee and student property searching
- Employee and student property deleting

3.4.2 Use case scenario / Description

Use case description explains in details the general flow of use case diagrams. Each table contains the use case name, use case ID, the actors that initiates and interacts with the use case, and flow of events that show the interaction between the actor and the use case which enable the user to easily understand the function of the proposed system.

Login use case description

Table 3.1 login use case description

Use case name	Login
Use case identifier	UC01
Actor	Admin
Description	It allows the admin to use and interact with the system.
Precondition	The admin must have a valid username and password.
Basic course of action	1. The user open the applications 2. The system displays the login page 3. The users enter his/her username and password and press login button

	4. The system validate the user username and password 5. the user is valid then the the system displays dashboard page 6. The user access the system 7. Use case end
Alternative course of action	The username and password is not found in the system ,system is display an error message ``incorrect username or password``.
Post condition	The user access the system

Employee or student property register Use case Description

Table 3.2 register use case diagram

Use case name	Register
Use case identifier	UC02
Actor	Admin
Description	Allows the admin to register employees or students property.
Precondition	The admin must access the system passes through the login page.
Basic course of action	1.The user login to his account 2.The system displays the dashboard 3.The admin click on the register button for employee or for student 4.If the admin click for employee, the system display employee property registration form.but click for students the system displays students property registration form. 5.The admin register the employees or students property 6.Use case end
Alternative course of action	If students or employees property registered, the system is display error message
Post condition	The user will be evaluate using the register successfully

Employee or student property update Use case Description

Table 3.3 update use case diagram

Use case name	Update
Use case identifier	UC03
Actor	Admin
Description	Allows the admin to update employees or students property.
Precondition	The admin must access the system passes through the login page.
Basic course of action	1.The user login to his account 2.The system displays the dashboard 3.The admin click on the update button for employee or for student 4.If the admin click for employee, the system display employee property update form.but click for students the system displays students property update form. 5.The admin search the employees or students property by using their ID. 6.the system displays their information 7.the admin update the employees or students property by click update button 8.Use case end
Alternative course of action	If students or employees not registered, the system is display error message in the searching time.
Post condition	The user will be evaluate using the updated

Employee or student property display Use case Description

Table 3.4 display use case description

Use case name	Display
Use case identifier	UC04
Actor	Admin
Description	Allows the admin to display employees or students property information.

Precondition	The admin must access the system passes through the login page.
Basic course of action	1.The user login to his account 2.The system displays the dashboard 3.The admin click on the display button for employee or for student 4.If the admin click for employee, the system display employee property information .but click for students the system displays students property information. 5.Use case end
Post condition	The user can observe students or employees property information

Employee or student property delete Use case Description

Table 3.5 delete use case description

Use case name	Delete
Use case identifier	UC05
Actor	Admin
Description	Allows the admin to delete employees or students property information.
Precondition	The admin must access the system passes through the login page.
Basic course of action	1.The user login to his account 2.The system displays the dashboard 3.The admin click on the update button for employee or for student 4.If the admin click for employee, the system display employee property update form.but click for students the system displays students property update form. 5.The admin search the employees or students property by using their ID. 6.the system displays their information 7.the admin delete the employees or students property by click delete button.

	8.Use case end
Post condition	The user will be evaluate using the deleted

Employee or student property search Use case Description

Table 3.6 search use case description

Use case name	Search
Use case identifier	UC06
Actor	Admin
Description	Allows the admin to search employees or students property information.
Precondition	The admin must access the system passes through the login page.
Basic course of action	1.The user login to his account 2.The system displays the dashboard 3.The admin click on the display button for employee or for student 4.If the admin click for employee, the system display employee property information .but click for students the system displays students property information. 5.the admin search employees or students information using their ID by clicking search button 6.the system is display employee or student information by removing other information. 5.Use case end
Alternative course of action	If students or employees not registered, the system is display white board.
Post condition	The user can observe student or employee property information

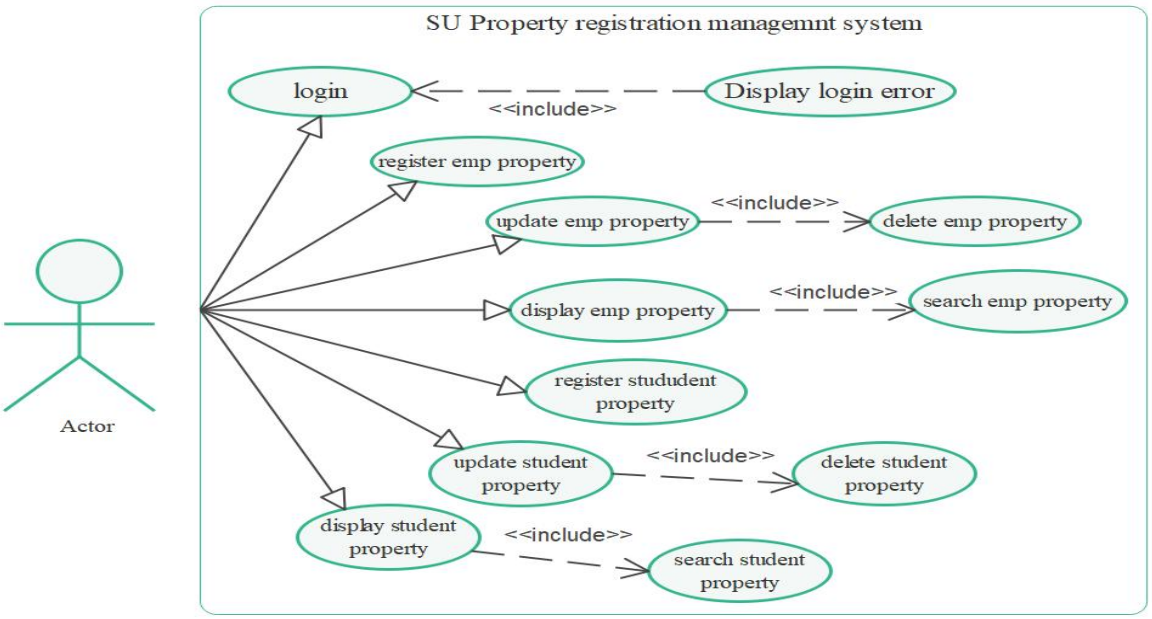


Figure 3.4 use case diagram of property registration management system

As we see in the above figure the activities of the administrator are:

- Login to the system by providing a user name and password
- Register students and employees property
- Update students and employees property
- Delete students and employees property
- See the registered information of students and employees property
- search students and employees property

3.4.3 Sequence Diagrams

A sequence diagram depicts the sequence of actions that occur in system, the invocation of methods in each object, and the order in which the invocation occurred is captured by the sequence diagram. This makes the sequence diagram a very useful tool to easily represent the dynamic behavior of the system. A sequence diagram is two dimensional in nature. On the horizontal axis it shows the life of the object that it represents, while on the vertical axis it shows the sequence of the creation or invocations of these objects. Elements of sequence diagrams:

✓ Object which represented by a named rectangle

✓ Message which shows the interactions between objects

I, login sequence diagram

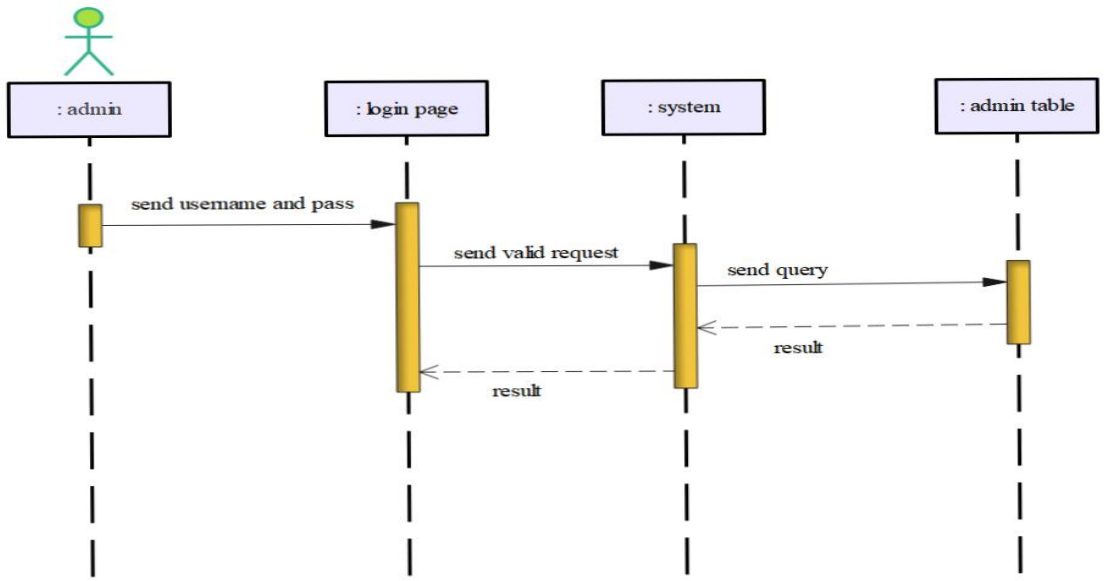


Figure 3.5 sequence diagram of login system

The figure above describes the sequence of the login process, the user enters the system by providing a username and password to the login page, then login page sends request for the system to validate information, then system get users from the admin table in the database and check if username and password are correct, if they are correct the system opens a session for the user and sends response to the login page.

II, Register sequence diagram

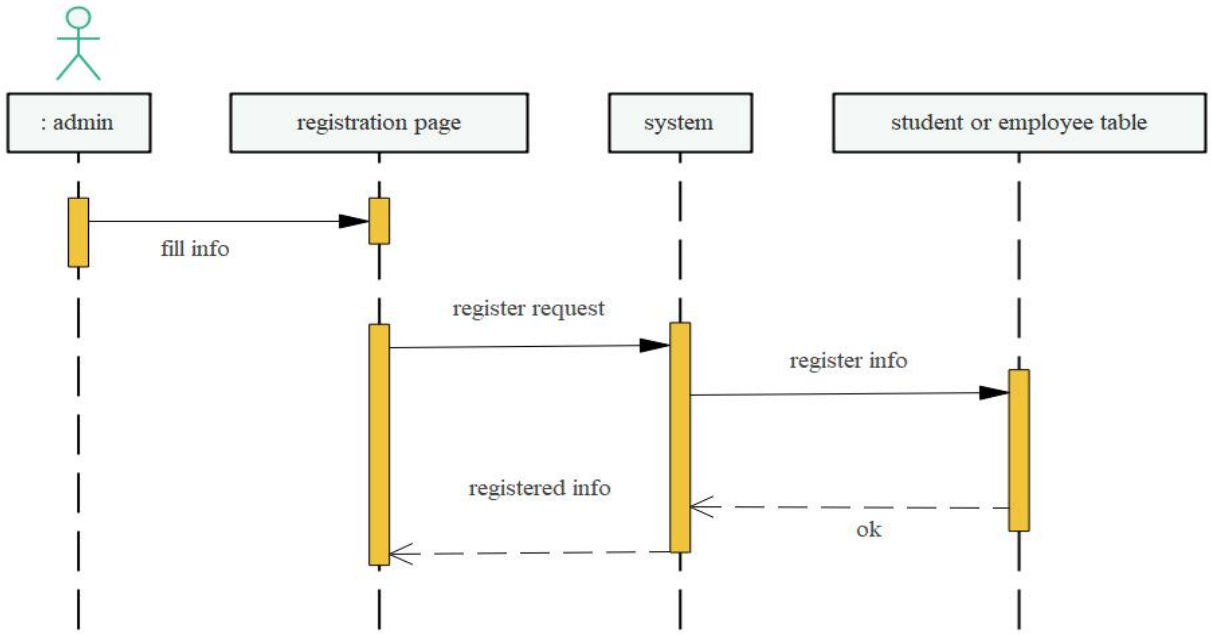


Figure 3.6 Sequence diagram of register property

This sequence diagram shows us the process of register properties performed by the admin, the admins fill information of students or employees property in for student registration or for employees registration form and click register then the registration page sends request for the system , systems get the information and validate if the property already exists, if not registered a new property register in the database ,else send a response to the register page says that the property is already exist.

III, Update Sequence Diagram

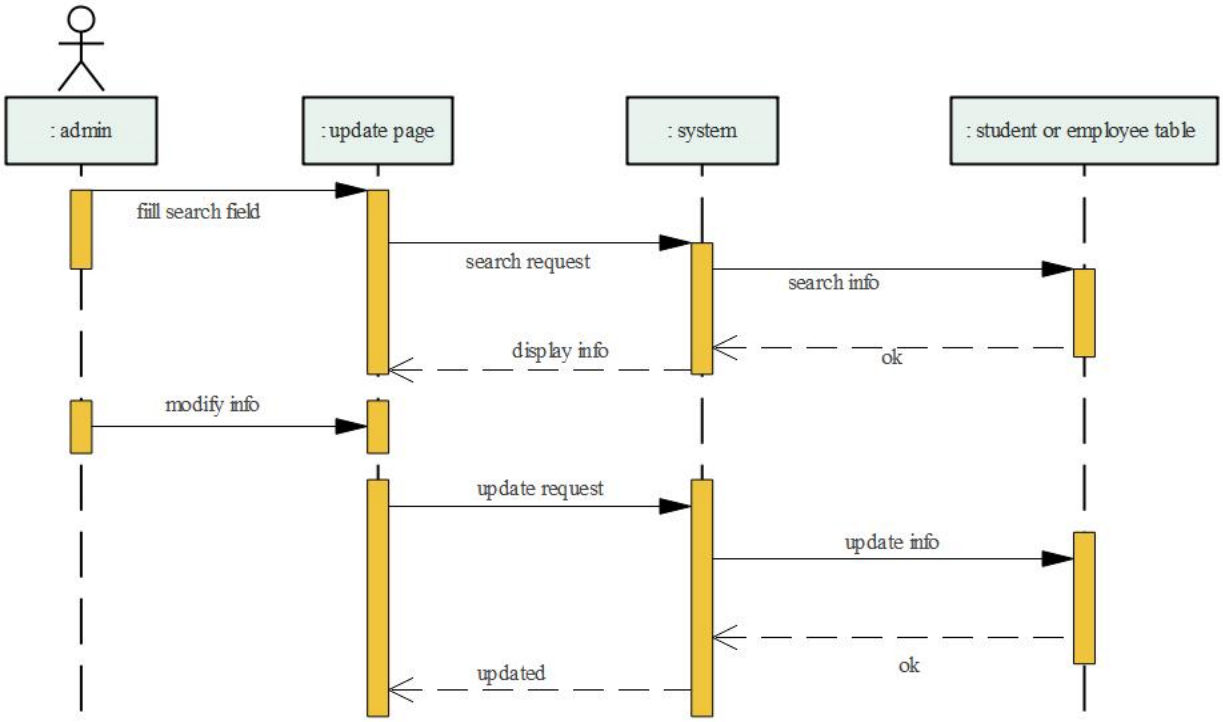


Figure 3.7 Sequence diagram of update property information

This sequence diagram shows us the process of update properties performed by the admin, the admins fill the search field by id of students or employees in for student update or for employees update form and click search button then the update page sends searching request for the system , systems get the id and validate if the property already registered, if registered the system displays the information ,else send a response to the update page says that this id is not registered.

Then admins modify the information and click update button then the update page sends update request for the system, systems get the information and updated the information then the system response for update page that say updated.

IV, Display sequence diagram

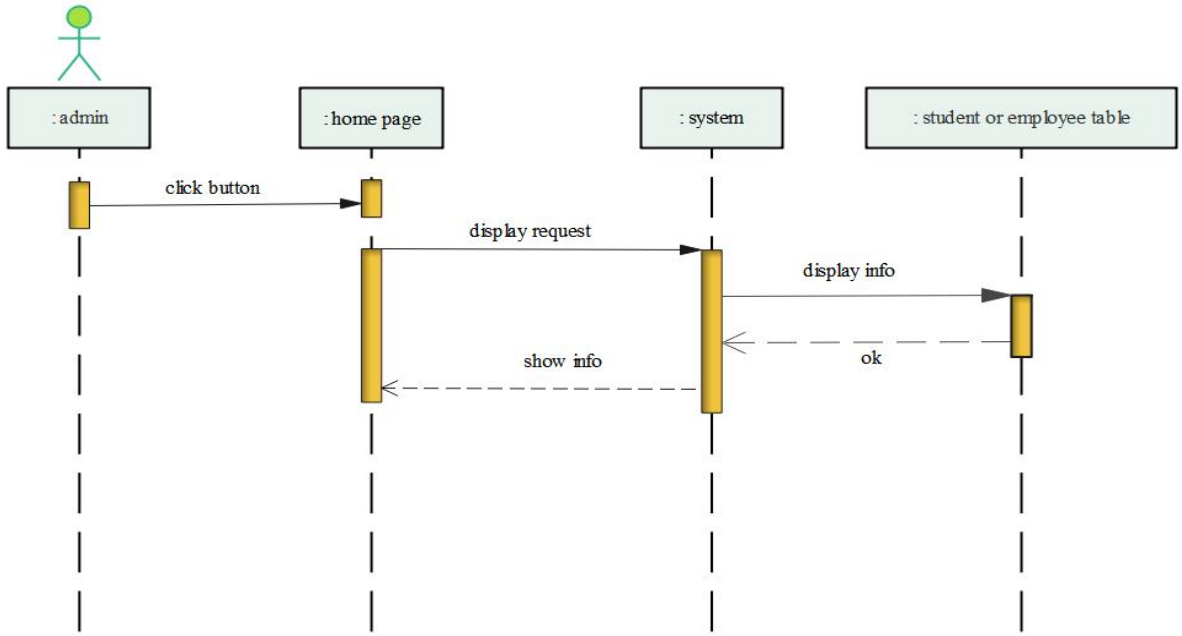


Figure 3.8 Sequence diagram of display property information

This sequence diagram shows us the process of register properties performed by the admin, admins click the display button for students or for employees from the home page and the home page sends display request for the system then the system display the information of students or employees property.

V, Delete sequence diagram

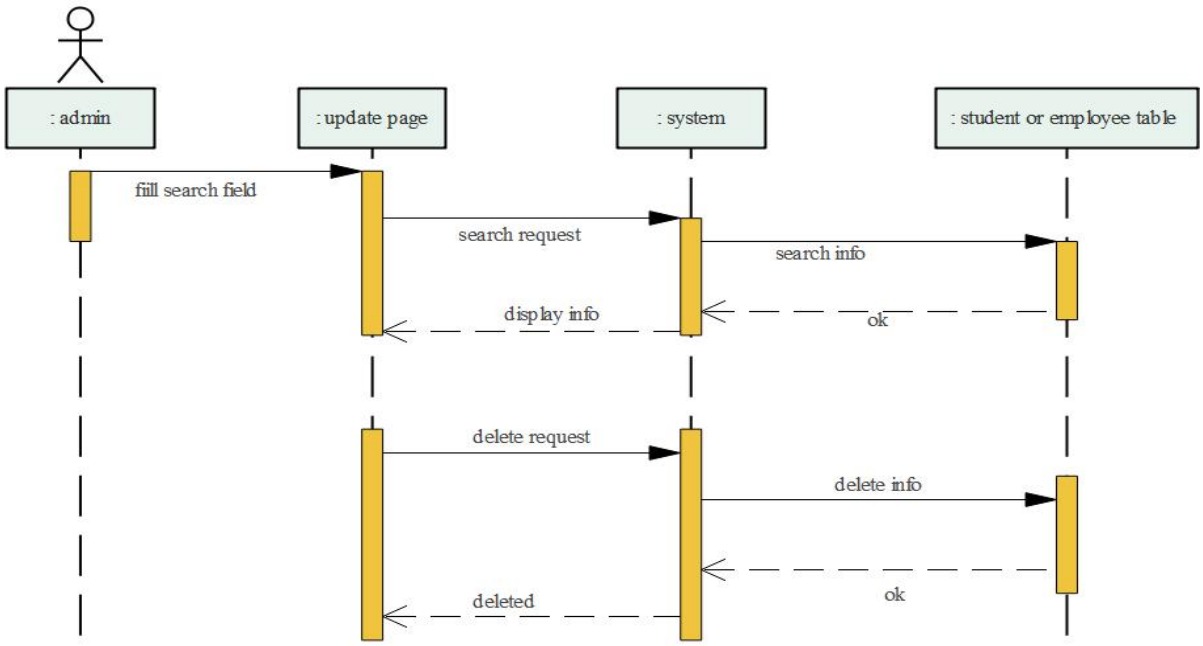


Figure 3.9 Sequence diagram of delete property

This sequence diagram shows us the process of delete properties performed by the admin, the admins fill the search field by id of students or employees in for student update or for employees update form and click search button then the update page sends searching request for the system , systems get the id and validate if the property already registered, if registered the system displays the information ,else send a response to the update page says that this id is not registered.

Then admins click delete button then the update page sends delete request for the system, systems get the information and deleted the information then the system response for update page that say deleted.

VI, Search sequence diagram

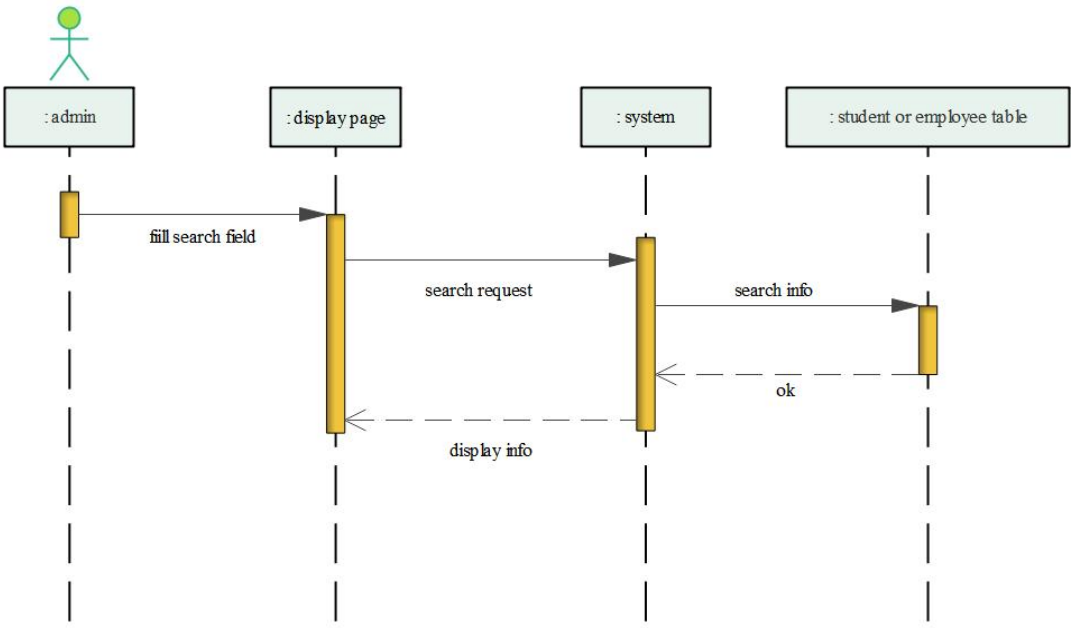


Figure 3.10 sequence diagram of search property

This sequence diagram shows us the process of search properties performed by the admin, the admins fill the search field by id of students or employees in for student display or for employees display page and click search button then the display page sends searching request for the system , systems get the id and validate if the property already registered, if registered the system displays the information ,else display page is does not show nothing.

3.4.4 Activity Diagram

An activity diagram focuses on the flow of activities involved in a single process. The activity diagram shows how these single-process activities depend on one another.

I. Activity diagram for login

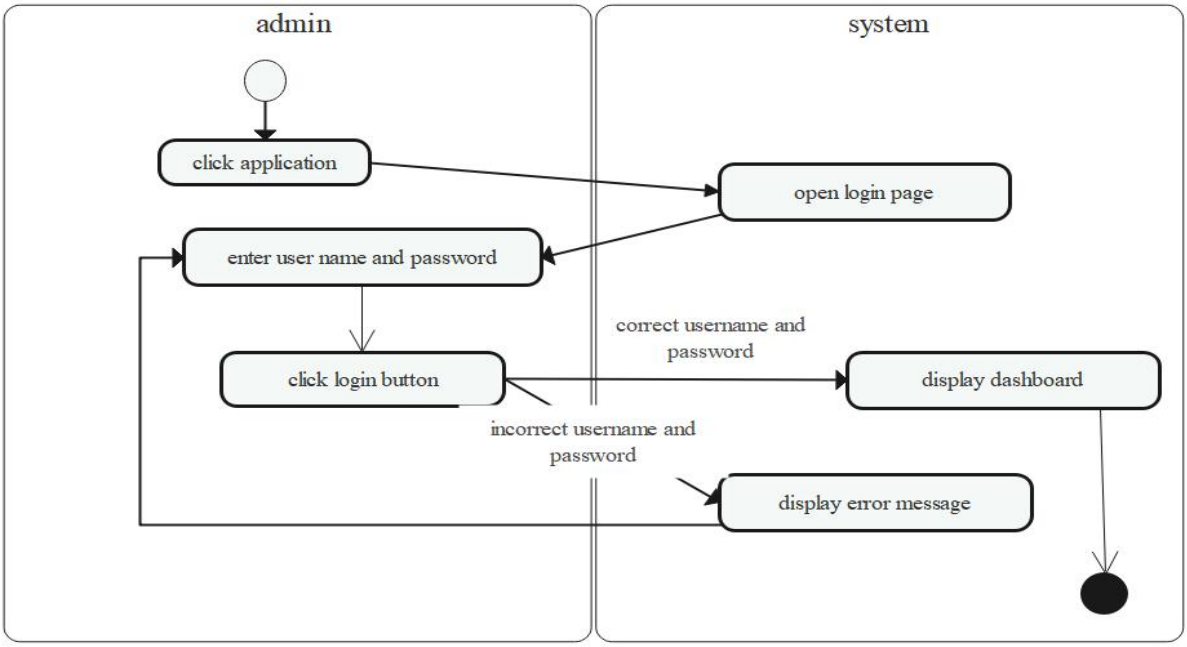


Figure 3.11 login activity diagram

II. Activity diagram for registration

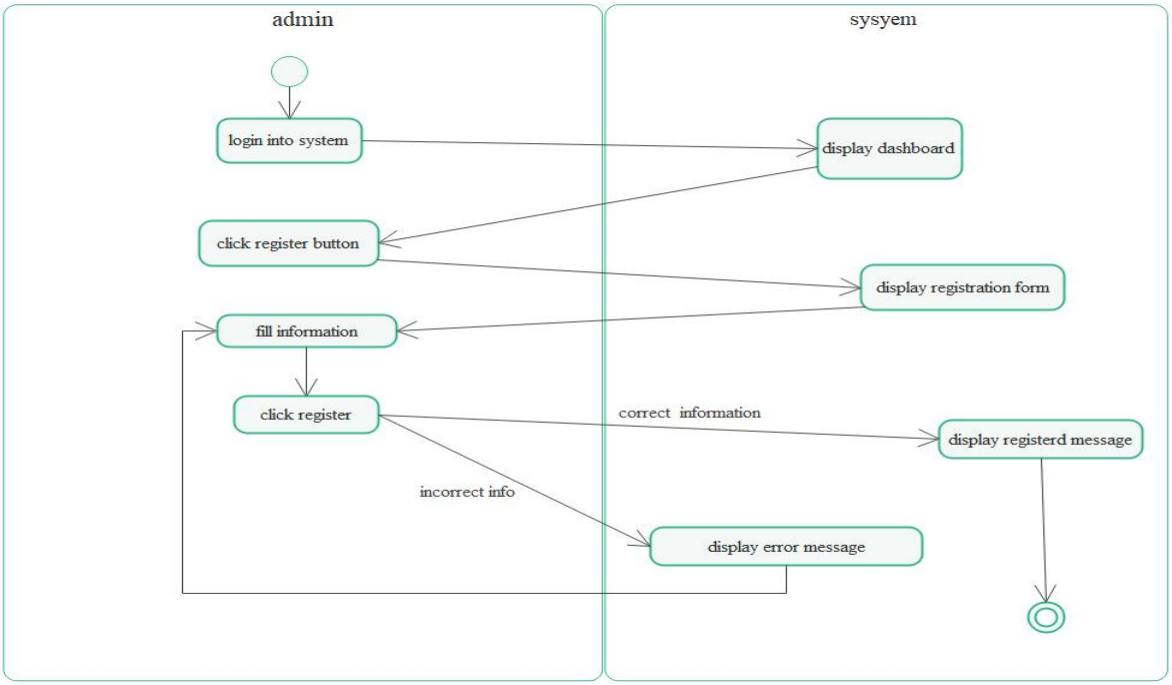


Figure 3.12 registration activity diagram

III. Activity diagram of update and delete

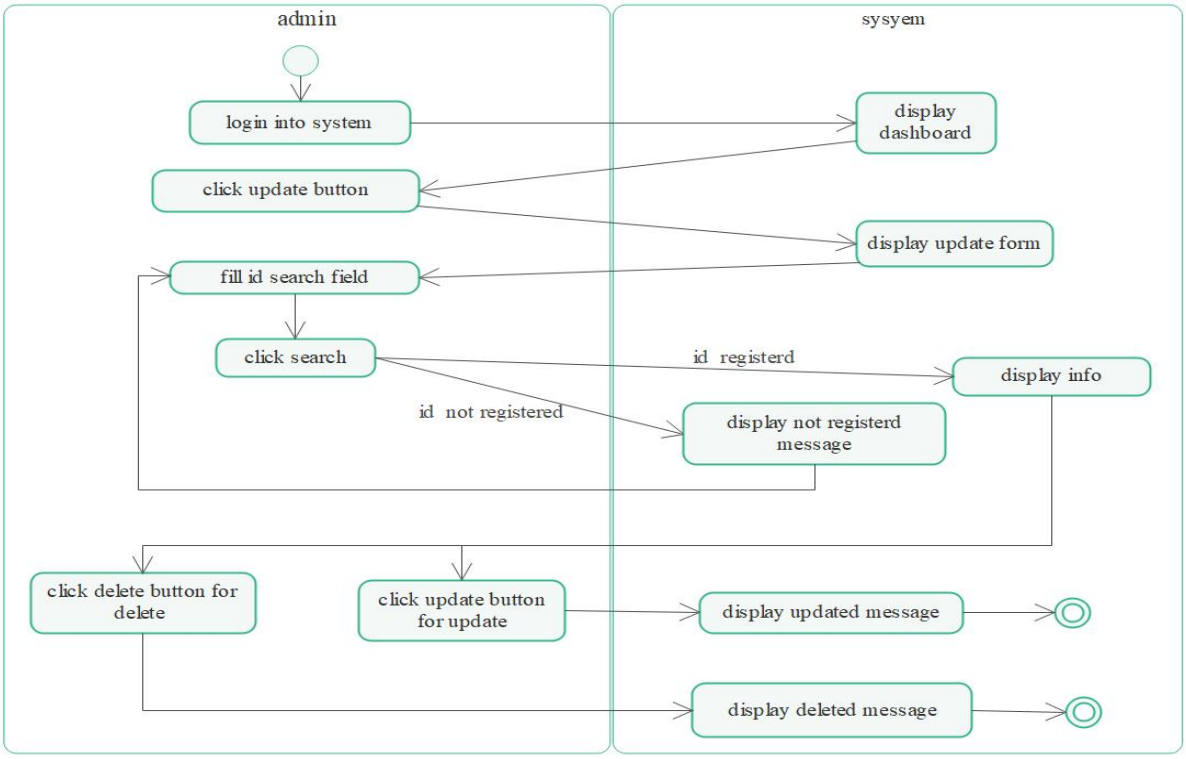


Figure 3.13 update and delete activity diagram

IV. Activity diagram of display and search

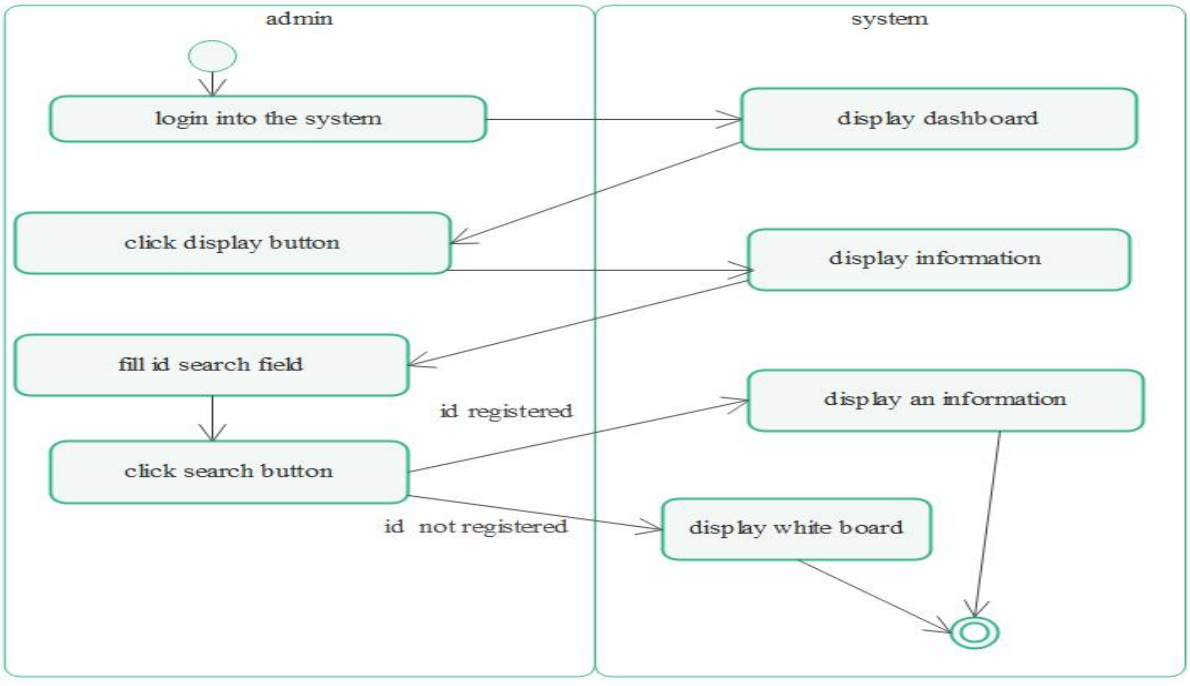
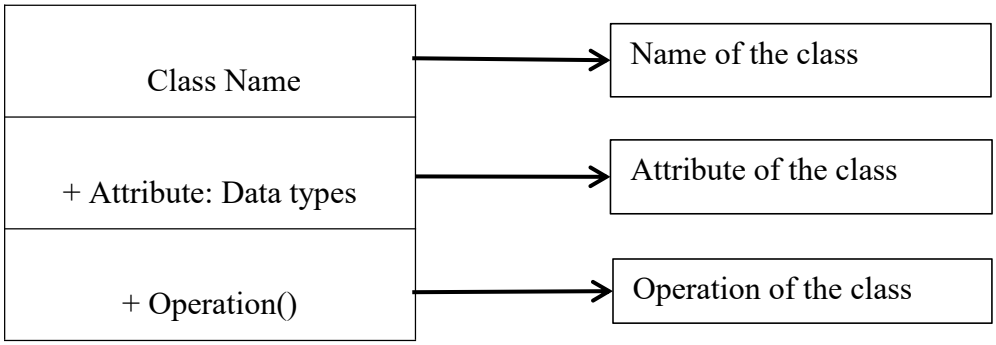


Figure 3.14 display and search activity diagram

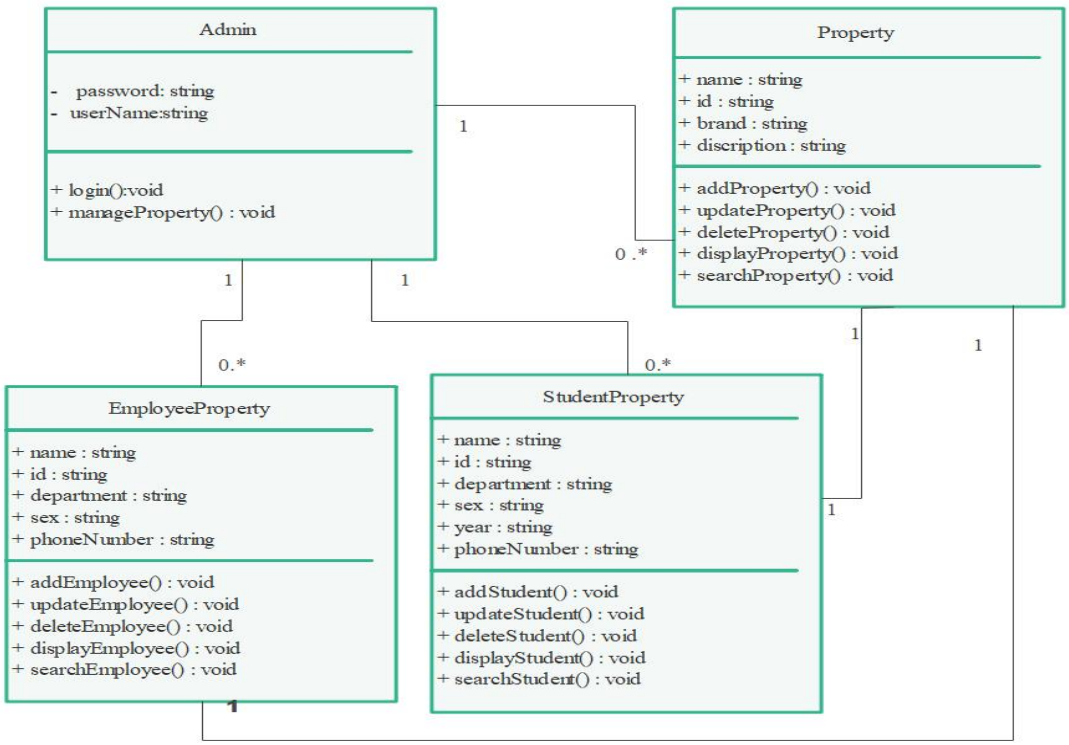
3.4.5 Class Diagram

A class diagram in Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes,there attribute operation(methods),and the relationships among objects. The class diagram is a main building block of object-oriented modeling. It is used both for general conceptual modeling of the systematic of the application, and for detailed modeling translating the models into programming codes. Class diagram can also be used for data modeling. The class in diagram represents both the main objects, interaction in the application and the classes to be programmed.

- In the diagram, classes are represented the top part contains the name of the class
- The middle part contains the attributes of the class
- The bottom part gives the methods or operations the class can take or undertake with boxes, which contains three parts:



In the design of a system, a number of classes are identified and grouped together in a class diagram, which helps to determine the static relation between those objects. With detailed modeling, the classes of conceptual design are often split into a number of sub classes.


Admin
- password: string
- userName:string
+ login():void
+ manageProperty() : void
Property
+ name : string
+ id : string
+ brand : string
+ discription : string
+ addProperty() : void
+ updateProperty() : void
+ deleteProperty() : void
+ displayProperty() : void
+ searchProperty() : void
EmployeeProperty
+ name : string
+ id : string
+ department : string
+ sex : string
+ phoneNumber : string
+ addEmployee() : void
+ updateEmployee() : void
+ deleteEmployee() : void
+ displayEmployee() : void
+ searchEmployee() : void
StudentProperty
+ name : string
+ id : string
+ department : string
+ sex : string
+ year : string
+ phoneNumber : string
+ addStudent() : void
+ updateStudent() : void
+ deleteStudent() : void
+ displayStudent() : void
+ searchStudent() : void
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CHAPTER FOUR

IMPLEMENTATION

4.1 Introduction

Implementation is the phase where objectives of physical operations of the application turned into realities i.e., real working model. The crucial phase in the system development life cycle is the successful implementation of the new application design. The process of converting as new system into an operational one is known as system implementation. This includes all those activities that take place to convert from a previous system to a new system.

The focus of our test strategy was simply prototyping testing on our system. The system developers are in a position of converting all documents gathered and designed into the code so that the system will be implemented for the user to be used for the purpose it developed. Implementation refers to the coding of the all documents gathered starting from requirement analysis to design phase.

4.2 Environment Setup

The environmental setup section is about the configuration of hardware and software platform for the purpose of software development.

The development tools used are:

- ✓ WPS Office: for documentation writing
- ✓ EdrawMax: for designing UML diagrams

The development environment used:

- ✓ MYSQL workbench: for database storing
- ✓ Netbeans IDE: for compile code

The programming language used:

- ✓ SQL: for database programming
- ✓ Java: for simple accessing of different buttons and to design user interface

4.3 Graphical user interface (GUI) design

A graphics-based operating system interface that uses icons, menus and a mouse (to click on the icon or pull down the menus) to manage interaction with the system. The graphical user

interface (GUI; sometimes pronounced “gooey”) is used by most commercially popular computer operating systems and software programs today. It's the kind of interface that allows users to manipulate elements on the screen using a mouse, a stylus, or even a finger.

❖ Login page :

Figure 4.1 login page GUI

❖ Dashboard page:

Figure 4.2 dashboard GUI

❖ Students property registration page:

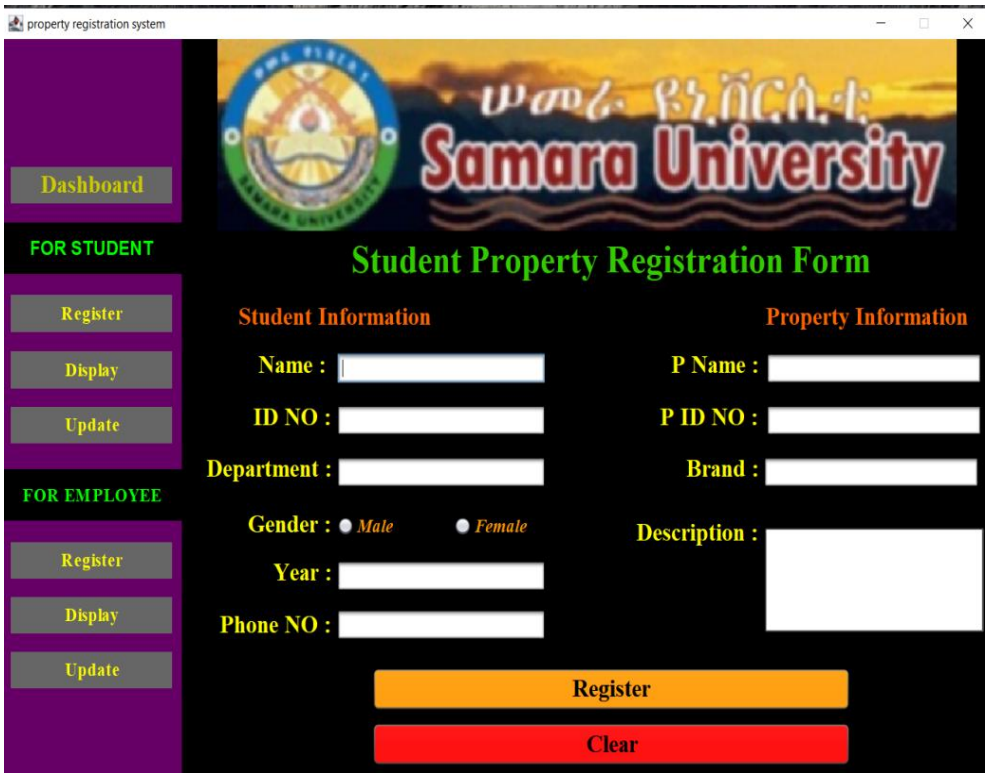

Figure 4.3 student property registration page GUI

❖ Students property display page:

Figure 4.4 students property display GUI

❖ Students property update page :

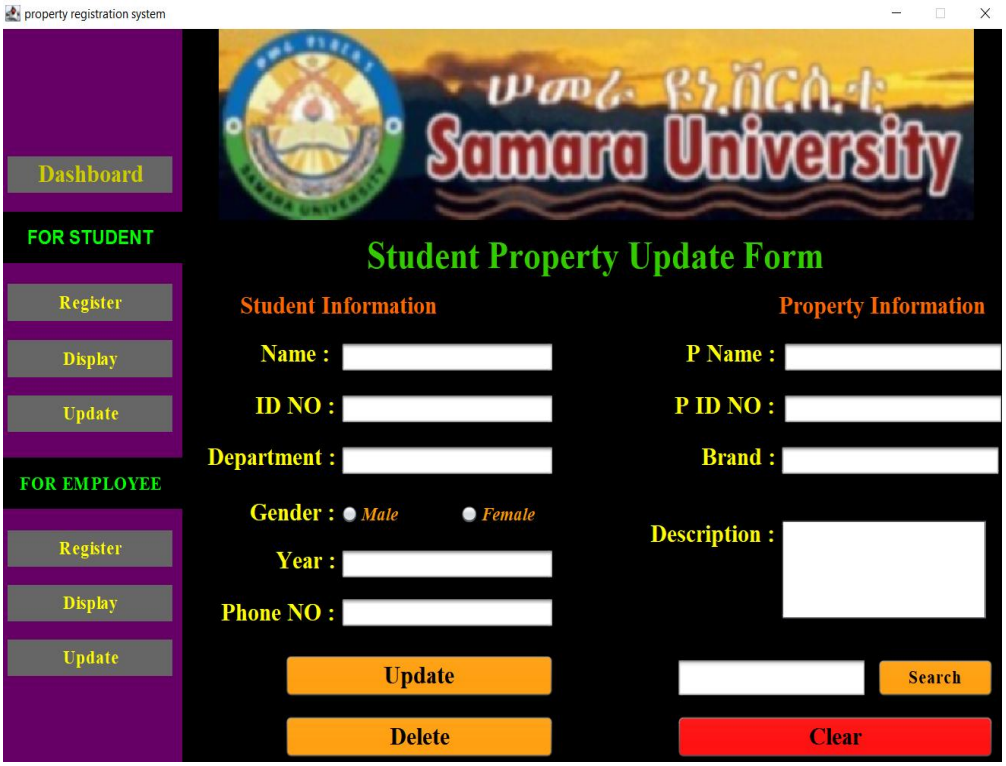

Figure 4.5 student property update page GUI

❖ Employees property registration page:

Figure 4.6 employees property registration page GUI

❖ Employees property display page:

Figure 4.7 employees property display GUI

❖ Employees property update page:

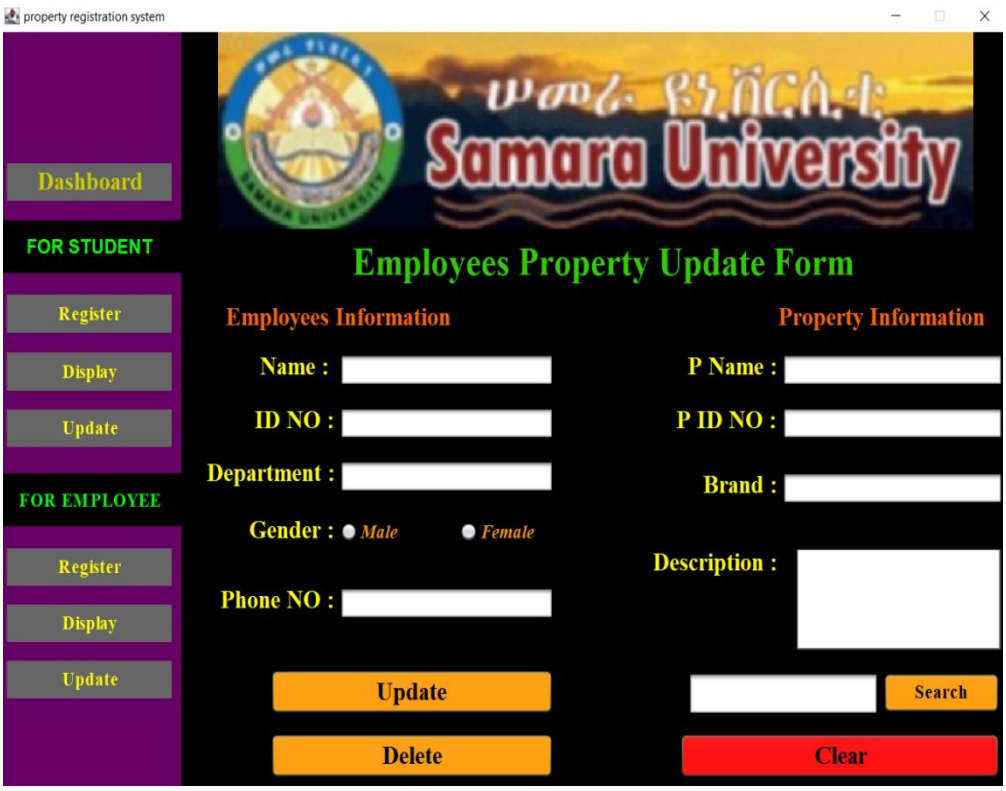

Figure 4.8 employees property update page GUI

4.5 System Testing

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, assemblies and/or a finished product It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner.

Unit testing

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive.

Integration testing

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

In general, we can solve the most problems of Samara University students and employees property registration manual system,so we can register,update,delete,search and show the property of students and employees easily. in this paper, a property registration management disktop application has been developed. The new system is expected to serve as a solution to the problems and weakness observed in the manual system.

5.2 Recommendations

Things that are adding in the future in our system are :

- To register the students and employees property with out any movement
- Add to recover deleted information
- Add a system that register owners and their property picture

Reference

[1] “wikipidia,”[online]. Available: https://en.wikipidia.org/wiki/Java_programming_language. [accessed July 13, 2022]

[2] “searchoracle.techtarget,”[online]. Available: https://searchoracle.techtarget.com/definition/MYSQL. [accessed July 13, 2022]

[3] “code-projects,”[online]. Available: https://code-projects.org/online-property-registration-project-report-in-php-css-js-and-msql-free-download/. [accessed July 12, 2022]

[4] L. Somerville, software engineering, England, London: Addison-Wesley, 2007, p. 840.

Appendix's (Some sample codes)

Login :

```
private void btnloginActionPerformed(java.awt.event.ActionEvent evt) {

    String user = txtusername.getText();
    String pass = new String(txtpassword.getPassword());
    try {
        prs = con.prepareStatement("Select * from login ");
        rs = prs.executeQuery();

        while (rs.next()) {

            String uname = rs.getString("username");
            String password = rs.getString("pasword");

            if ((user.equals(uname))&& (pass.equals(password))) {
                new selector().setVisible(true);
                this.setVisible(false);

            }else {
                JOptionPane.showMessageDialog(this, "username or password is incorect");
            }
        }
    } catch (SQLException ex) {
        Logger.getLogger(login.class.getName()).log(Level.SEVERE, null, ex);
    }
```

Student property register :

```
private void sbutonregisterActionPerformed(java.awt.event.ActionEvent evt) {

    String sname = snametxt.getText();
    String sid = sidtxt.getText();
    String sdep = sdeptxt.getText();
    String sgen = gender;
    String syear = syeartxt.getText();
    String sphone = sphontxt.getText();
    String spid = spidtxt.getText();
    String spname = spnametxt.getText();
    String spbrand = spbrandtxt.getText();
    String spdics = spdisctxt.getText();

        try  {
            Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/propertyregistration","root", "deju");
            prs = con.prepareStatement( "INSERT INTO `student`(`Name`,`ID`,`Sex`,`Department`,`Year`,`Phone_NO`,"
                    + "`PName`,`PID`,`Brand`,`Description`)VALUES( ?,?,?,?,?,?,?,?,?,?)");
            prs.setString(7, spname);
            prs.setString(9, spbrand);
            prs.setString(10, spdics);
            prs.setString(1,sname);
            prs.setString(2, sid);
            prs.setString(4, sdep);
            prs.setString(3, sgen);
            prs.setString(5, syear);
            prs.setString(6, sphone);
            prs.setString(8, spid);
            prs.executeUpdate();

            JOptionPane.showMessageDialog(null, "Register successfully");
            studentinfo();
            snametxt.setText("");
            sidtxt.setText("");
            sdeptxt.setText("");
            syeartxt.setText("");
            sphontxt.setText("");
```

```
            spnametxt.setText("");
            spidtxt.setText("");
            spbrandtxt.setText("");
            spdisctxt.setText("");
            buttonGroup3.clearSelection();

        } catch (SQLException ex){
            JOptionPane.showMessageDialog(null,"property already exist");
        }


    }
```

employee property register

```
private void empredisbtnActionPerformed(java.awt.event.ActionEvent evt) {

    String sname = empnametxt.getText();
    String sid = empidtxt.getText();
    String sdep = empdeptxt.getText();
    String sgen = gender;
    String sphone = empphontxt.getText();
    String spid = empproidtxt.getText();
    String spname = empproname txt.getText();
    String spbrand = empprobrandtxt.getText();
    String spdics = empprodisctxt.getText();

        try {
            Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/propertyregistration","root", "deju");
            prs = con.prepareStatement( "INSERT INTO `employee`(`Name`,`ID`,`Sex`,`Department`,`Phone_NO`,`PName`,`PID`,`Brand`,`Description`)VALUES(?,?,?,?,?,?,?,?,?)");

            prs.setString(6, spname);
            prs.setString(8, spbrand);
            prs.setString(9, spdics);
            prs.setString(1,sname);
            prs.setString(2, sid);
            prs.setString(4, sdep);
            prs.setString(3, sgen);
            prs.setString(5, sphone);
            prs.setString(7, spid);
            prs.executeUpdate();

            JOptionPane.showMessageDialog(null, "Register successfully");
            employeeinfo();
            empnametxt.setText("");
            empidtxt.setText("");
            empdeptxt.setText("");
            empphontxt.setText("");
            empproname txt.setText("");
            empproidtxt.setText("");
            empprobrandtxt.setText("");
```