Wolkite University

College of Engineering and Technology

Department of Electrical and Computer Engineering

Computer Engineering Stream

Title of Thesis Project

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Declaration

We declare that this thesis is our original work and all sources and materials used for the purpose have been properly acknowledged. This project has not been presented for a degree in this or any other universities, and that all the sources duly cited. I, the undersigned, declare that this project is our own original work.

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4. Student Name	Signature

This Project has been submitted for examination with my approval as a university advisor.

_____	_____
Project Advisor	Signature

Acknowledgement

Thank you, God, for giving us health and helping us out through this thesis. Many thanks for our Advisor Mr. to encourage us for this challenge, get experience and for his continuous advice in this thesis. We are also thankful to our friends for everything they have done for us.

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List of acronyms

CSS: Cascading Style Sheet

HTML: Hypertext Markup Language

IREG: International Ranking Expert Group

MOE: Ministry of Education

OS: Operating System

UC: Use Case

XAMPP: Cross-platform(X), Apache(A), MariaDB(M), PHP(P) and Perl(P)

Abstract

In our country every year a lot of students join different universities. These students face many problems while choosing the universities. These problems happen due to shortage of information for students that are about to join universities. Nowadays these students don't get sufficient and organized information on the universities. This information includes the exact location of the institutions, is the institution located in city or around the countryside, the climate of the area, services that is given around the institution, establishment of the institution, the collages and departments of the institution, appearance of the institution by image or video, services that is given in the institution like cafeteria service and so on. If the student has all this information on all institutions its simple for him/ her to choose what he desired.

So, this system allows the students (that are about to join the university) to give sufficient information about each institution and allows the student to decide. The development of this system is applied by web based and android application.

Chapter One

Introduction

1.1. Background

The main idea behind the project is to develop android application as well as responsive website for those who doesn't use smartphones which will help preparatory school students to find the desired information about universities and to choose their placement of universities. It uses smart phone of android plat form and web services on computer systems and on phones. All the time students are confused on searching for the better placement of universities while the placement time (which is totally unknown to them). So, these problems can be reduced if they use this website and if possible, an application too. Hence, this idea is very new and useful for all those who needs to get all information about the whole Ethiopian universities. Obviously, the website needs an internet connection but the proposed application does not require any internet access. Generally, the project is about student placement information guide system how students will get best use of the application according to his/her point of interest and used to fill the placement and update the filled placement.

1.2. Motivation

During our time in preparatory school (specially in grade 12) we are inspired to go to university. But we totally had no access of information to choose the best university (related to the time of establishment, the location and the exact geographical position of the university, the visual images and videos of the university, the weather of the place, the exact collages and departments that is given in the universities and so on). We just get a little doubtful information from the university students so this doubtful information leads to another problem. Additionally, to fill the placement information we have to come back to school and fill it on the given paper. To update the information, we need to come back to the school.

So, to decrease and solve this problem we thought to develop a web-based system and android application for students that are about to join universities.

1.3. Statement of the Problem

Currently students get information about universities mainly through gathering data from different people, social media and other simple ways those are available easily. But problem is that students

are not able to get accurate and detailed information about the Ethiopian universities. So, it might be crucial if all these problems are solved.

Some of the problems that happens to the students are: -

- Due to large Geographical area it is difficult to know the correct location of the university and how far from the current or nearest location.
- Difficulty in accessing information that are viewed in hard copy file or in website.
- For filling and updating the placement the students must go to their school.
- Students are confused when choosing their field of study and universities because of lack of enough and accurate information.
- Unable to know the weather condition of university locations.
- Not obtaining enough information about each college and departments that is given in each university.
- Data confidentiality.
- At the same time while searching for any information it's too difficult to access and it takes a lot of time to search on different particular websites.

1.4. Objective

1.4.1. General Objective

The general objective of this project is to develop a website for filling the placement and university information and android application for university placement information.

1.4.2. Specific Objective

- A website that enables a student to fill the placement and update the placement.
- To design and develop and android application and website that contains all information about all universities in our country.
- To develop a web-based system that helps students through the desired accurate information.
- To update the current system into new and better system.
- To access the system from everywhere without coming to school.
- To change way of getting information on the dense and hard copy document into simplest accessible systems.

1.5. Methodology

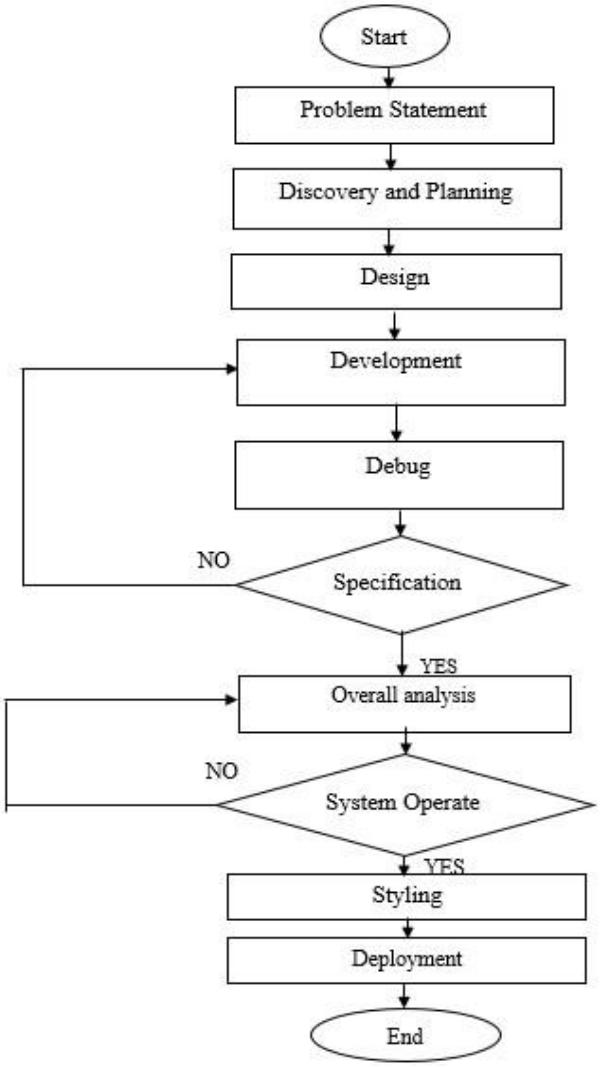

Figure 1. 1: Methodology

1.5.1. Requirement Gathering

For requirement gathering process there are three phases: from phase one to phase three

Phase One: -Discovery and Planning

- Information gathering

In this stage, we try to gather as much information as possible about detail information of Ethiopian universities and we are still trying to get new information about all Ethiopian universities.

- Website goals and its purpose

The main goal and purpose of this project is to develop a web based and android application for university placement information.

- Technologies used

Choosing the right technology is not easy work and we all try to see different frameworks but finally, we came up with different ways of building webpage using Laravel framework as a backend which is too easy to embed with other frameworks for frontend bootstrap framework is used which is easy to use with Laravel, HTML and CSS.

Phase Two: -Design

- Information architecture (IA)
- Wireframe models

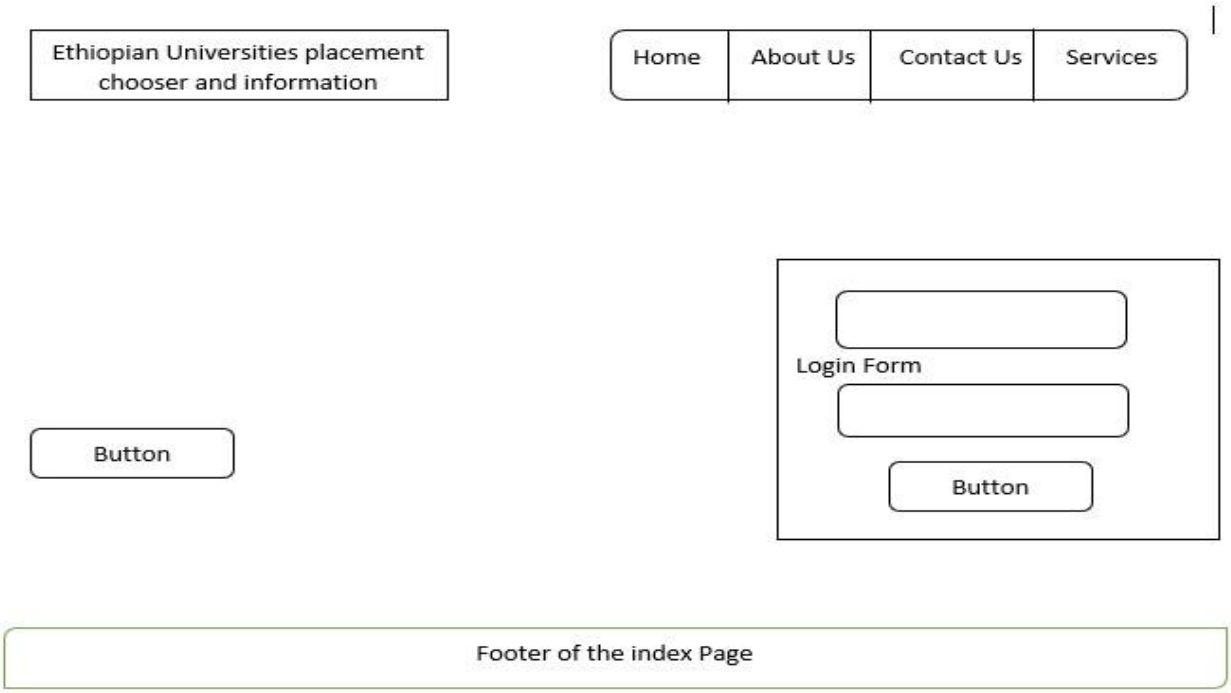

Figure 1. 2: Index page wireframe model design

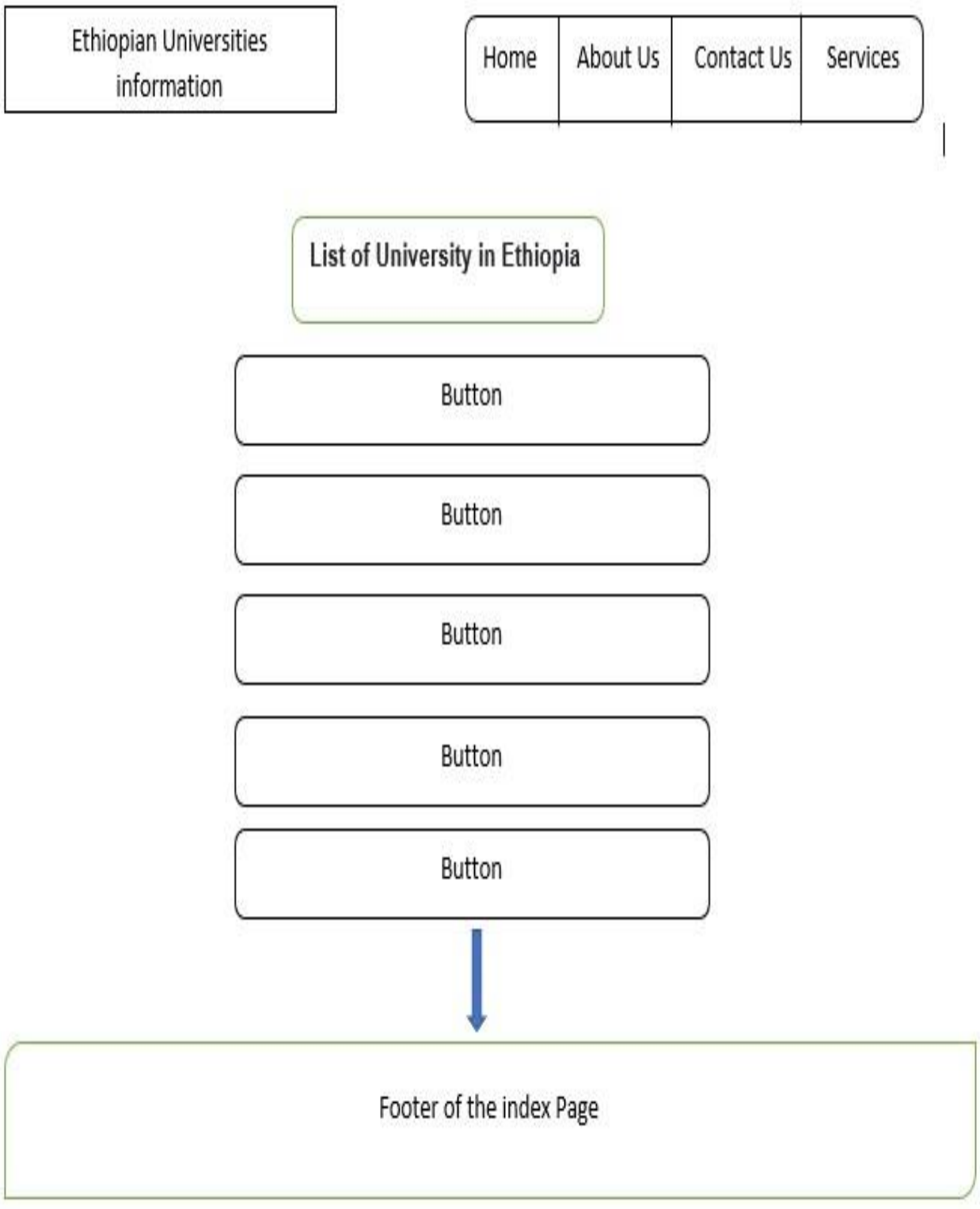

Figure 1. 3: Universities information wireframe model design

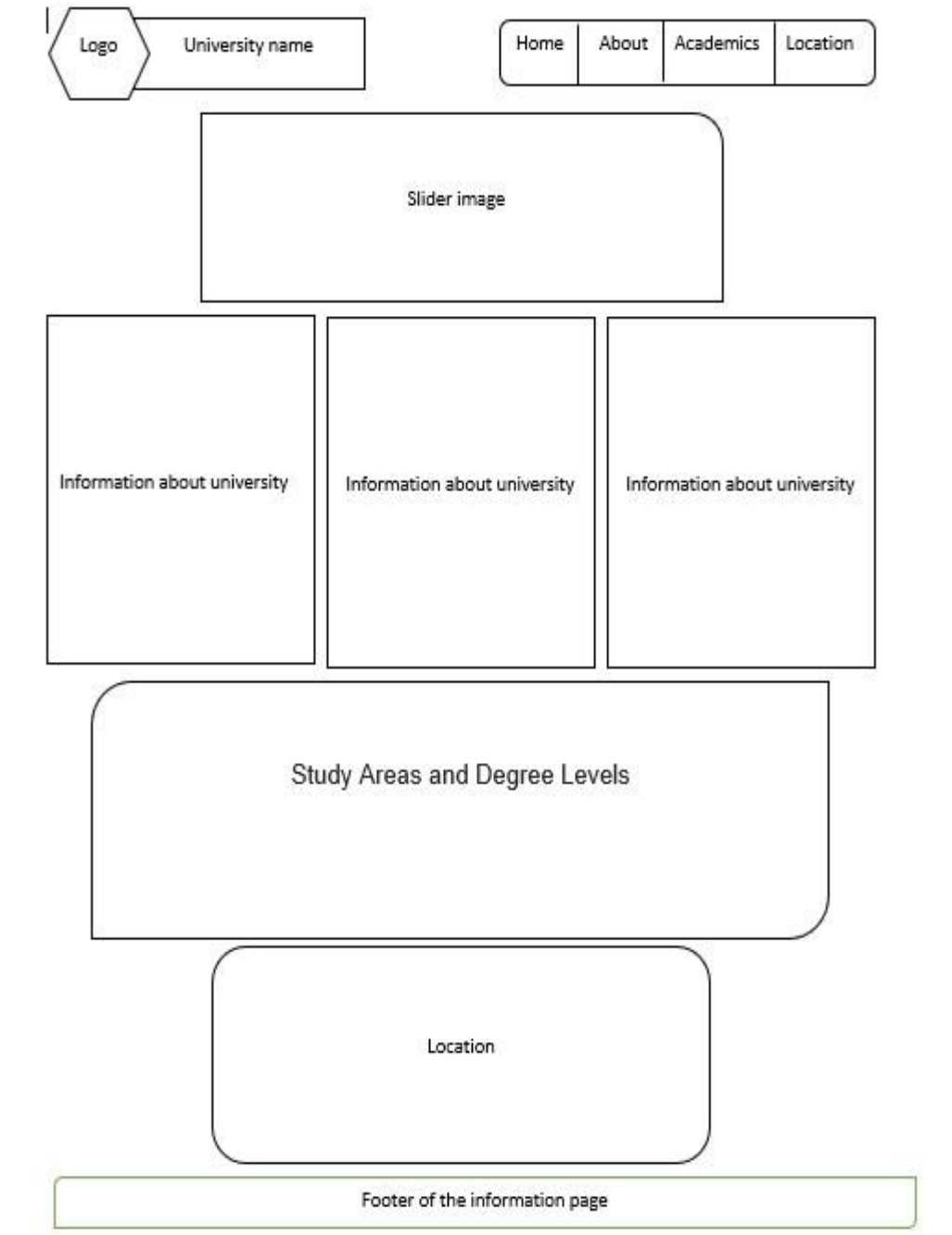

Figure 1. 4: Home page of universities Phase

Three: -Development

- Using HTML, CSS, Bootstrap and Laravel
- Databases

1.5.1.1. Feasibility analysis

- Operational Feasibility

The system is operationally feasible as it very easy for the End users to operate it. We make the system easy for every student to access updated information. It only needs basic information about Windows platform.

- Technical Feasibility

It is essential that the process of analysis and definition be conduct in parallel with an assessment to technical feasibility. It centers on the existing computer system (hardware, software etc.) and to what extent it can support the proposed system. It is planes to implement the proposed system is support deferent operating system like as windows OS to using web-based application and the have little sufficient hardware and software system are need for clinic.

- Economic Feasibility

The system is successful by economical since it is time save, low budget and meet the interest of the student. This feasibility checks whether the system can be developed with the available funds. The web-based university information system does not require enormous amount of money to be developed. This can be done economically if planned judicially, so it is economically feasible

1.5.1.2. Requirements Elicitation and Analysis

Requirement elicitation and analysis is the process of discovering, reviewing, documenting, and understanding the user's needs and constraints for the system.

- Knowing what problems to be solved and recognizing system boundaries.

With the help of these systems many problems can be solved as stated under significance of the project title.

- Identifying who are the stakeholders.

Stake holders of this system are our group member, and if it's possible in the future students of preparatory, any of an interested user, MOE,

- Recognizing the goal of system is the target to be achieved.

1.5.2. Development Tools

1.5.2.1. Software tools

This project is developed on softwares. So, many softwares can be utilized during the development of this system.

For web-based system these softwares requirements are: -

- Visual Studio Code/ Sublime Text editor 3/ Atom text editor
- Internet browser Google Chrome/ Opera Browser
- Xampp Control Panel v3.2.2

For Android-based system these softwares requirements are: -

- Ionic - Cross-Platform Mobile App Development
- Android studio

For writing and editing the document.

- Microsoft Office 2016.

For UML diagrams

- Microsoft Visio 2013

1.5.2.2. Hardware tools

- Computer with 4.00 GB RAM, 465GB hard disk, Intel(R) core (TM) i3-3220 CPU 2.2GHz, system type 64-bit operating system.
- We are going to develop these systems on Windows 10 personal pc.
- 1 TB HDD, 16 GB flash drive.

1.6. Significance and target beneficiary of system

Generally, this project is a system that solves the problem of preparatory students specially for the students about to join university. If the current information (the information they get from others) is replaced by this proposed project, the system could be a lot faster, confidential, simple to access on web and android application. Other than this system can be a motivation for the students to join university.

1.6.1. Significance of project

- Efficient in providing information.
- No need of any extra manual effort.
- It is easy for access any students
- It needs a little knowledge to operate the system.
- Doesn't require any extra hardware device/ documents.

1.6.2. Target beneficiary of system

Student: -

- Able to select universities.
- View all university informations.
- View each colleges and departments that is given in each universities.
- Accessing the website from everywhere without going to their high school.
- Saving the time spent while filling the placement and trying getting information about universities.

School: -

- Reduces their paper work when students select universities.
- It saves the time of teachers that assigned for the selection process.

1.7. Scope of the Study

The system is being designed economically with respect to student point of view. The proposed system will enhance the efficiency and effectiveness of the information and usage of cellphone technology. Our basic approach attempts to develop web-based application and smart phone-based application using android, which can be used to make this process easier and less error prone. More efficient will be achieved through this system. To provide access to information related to college, departments by relating it with the academic programs, location of the university, campuses etc.

Our website in addition to giving university information it enables the students to fill their university placement and enables them to update their placement information.

1.8. Risk analysis

While we are doing this project, we encounter different problems.

No.	Risk	Actions
1	Computer viruses, computer failures	Backup the file, scanning with anti-viruses and recovering the system.
2	Luck of time when power and internet connection isn't available	Working when the power and computer lab is available, and using our time effectively.

Table 1. 1: Risk analysis

1.9. Limitation of the project

- The images of the sliders are not that much clear.
- Many of the informations are not enough including the images of the universities.

These limitations happened because of:

- Many of the universities website of social medias doesn't have clear and enough images.
- Font limitation: not every computer has the ability to display every font and if the font you have chosen for your site is not available for the viewers an alternative will be displayed instead.

Chapter Two

Literature review

2.1. Existing System analysis

- **List of Universities in Ethiopia**

This Website is developed by National Educational Assessment and Examinations Agency and it only gives website of universities in Ethiopia. List of Universities in Ethiopia 2019 including Accredited and Top Private and Public University in Ethiopia 2019-2020**.** In Ethiopia, there are much accredited public and private universities where students may get admission after grade 12. It also gives information on some universities that will soon be administered also via the Ministry of Education.

- **Web-Based University Ranking Information** uniRank™ is international higher education directory and search engine featuring reviews and rankings of over 13,600 officially recognized Universities and Colleges in 200 countries. uniRank™ currently includes worldwide higher education institutions. The requirements are officially recognized, licensed and/or accredited by national or regional bodies such as Ministries of Higher Education or government recognized accrediting organizations.

Universities are ranked by exclusive uniRank University Ranking™ which is listed as global university ranking by the IREG Observatory on Academic Ranking and Excellence**.** The webbased, non-academic University ranking has been published since May 2005. Since its inception, the ranking methodology has been periodically fine-tuned in order to provide better results.

The aim of the uniRank University Ranking™ is to provide an approximate global ranking of world Universities and Colleges based upon their web presence and popularity in terms of estimated traffic, trust/authority and quality link popularity. This is especially intended to help international students and academic staff to understand how popular a specific higher education institution is in a foreign country. This system does not claim by any means - to rank higher education organizations or their programs, by the quality of education or level of academic services provided. The uniRank University Ranking™ is not an academic ranking and, therefore, should not be adopted as the main criteria for selecting a higher education organization where to enroll and study. - **Web Designed System for University Project**

This project is a web-based application, which will be helpful to the students all over the world. This Web Designed System for University project was developed with the purpose of making students all over the world comfortable in getting different types of information of the University. This Web-based application will allow user to surf various hierarchies, get its information and also in the admission forms.

This Web Designed System application is easy to use at the same time efficient enough to serve purpose. This project is an attempt to gather the various scattered information about University. So, by doing this, utilizing IT in bringing comfort and cutting an edge for bringing the development of the University.

2.2. Proposed System

Many of the existing systems are based on hard copy files. The above-mentioned Existing systems give only university information. But our proposed system in addition to giving university information in android application and website allows users to choose their placement of university.

This new system removes/ decreases the existing problems, which usually occurred to preparatory students. The major purposed of the new system is to give university information for everyone mainly aimed for preparatory students both in website and in android application additionally helping students filling the placement of information. The system has registration and deletion of the student by admin user, adding and deleting of University on the website, has an authenticated login form, letting students choose the desired placement, letting students view and update their placement information. This project gives the approach in technology.

2.3. Requirements of the Proposed System

2.3.1. Functional requirements

Functional requirements describe the interactions between the system and its environment independent of its implementation. The environment includes the user and any other external system with which the system interacts. The proposed system meets the following functional requirements:

Admin

- Can create account for the students.

- Can view accounts.
- Can delete account.
- Can view students filled placement.
- Manages database of the system.

Users

- Can read about university information.
- Can view the list of the universities and fill the placement.
- Can update the filled placement.
- Can view the address or the location of the university.

2.3.2. Non-functional requirements

Nonfunctional requirements describe aspects of the system that are not directly related to the functional behavior of the system. Non-functional requirements include a broad variety of requirements that apply to many different aspects of the system, from usability to performance. so, we try to present non-functional requirements of the system as follow:

- **Performance:** With the new proposed system. The system should respond fast in order to access the required information and activities easily.
- **Efficiency**: the system must give good result within amount of time.
- **User Interface:** The interface should be user friendly in order to attract user and easily use of the system.
- **Security and Access permissions:** unauthorized user cannot access the system or the system should be protected through password and user name**.**
  - ✞ The system is secured from un-authorized access.
    - Software have login form.
    - Each user uses his user name and password for accessing the placement.
- **Accessibility**: we must make sure that the system be accessible for all authorized students if not accessibility by anyone else.
- **Usability:** The system is simple to understand, easy to use, and user friendly.
  - ✞ The system should be easy to use by student.
    - The system must have help button to help user.
    - The system must be consistence.

- **Backup and Recovery:** for backup and recovery secondary storage device like: flash disk, hard disk is used.
- **Resources:** In our system Internet is used. Having internet access, it is possible to get information.

2.3.3. User requirement

In order to access this website any one is permitted only to see Ethiopian university information. But to access the login form one is need to be an admin user or a 12^{th} grade student that have his own account that is given from his school (obviously the school receives account of his students from the admin).

In order to access the android application anyone who is interested can use it.

Chapter Three

System Design and Analysis

3.1. ER Diagram

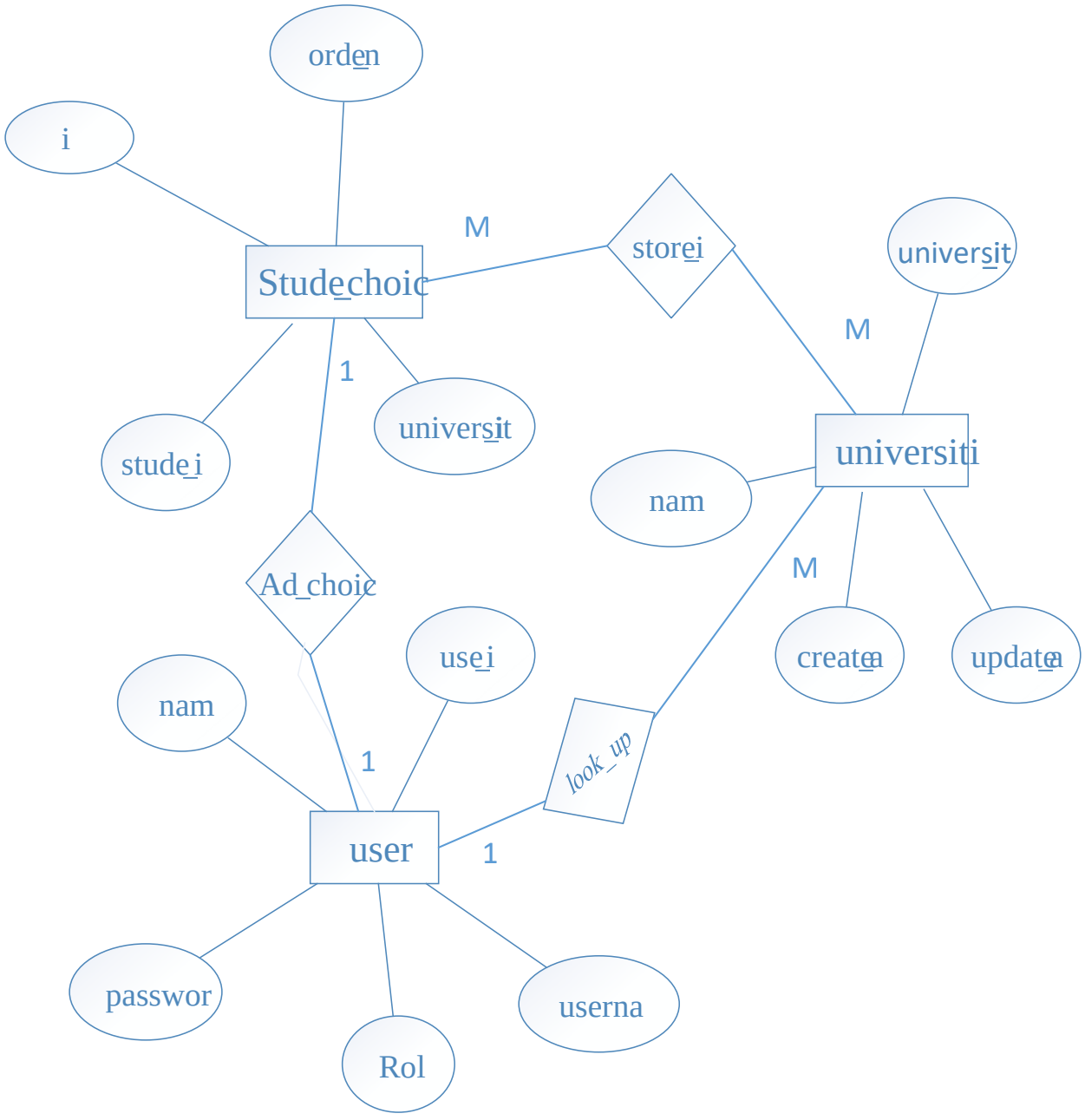

Figure 3. 1: ER diagram

3.2. Use Case Diagram

A use case diagram is sequence of action including the function that system can perform to interact with actor of the system.

Identified Use case listed

- Login
- Create account
- Update account
- Delete account
- View information
- Add placement
- Edit placement

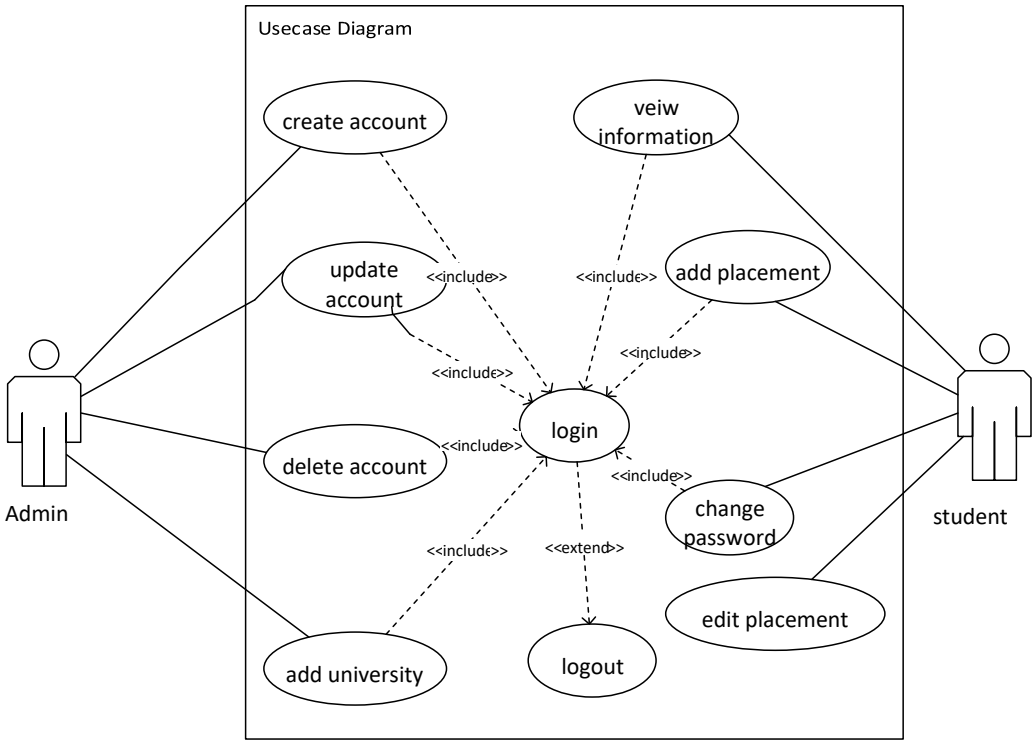

Figure 3. 2: Use Case diagram

3.2.1. Use Case description

Use case description provides critical information needed to understand in what context the use cases are and briefly explain how the functionalities precede using natural language in a step wise manner. Here is the use case description for AUID in table form:

Use case number	UC 0
Use case name	Login
Actor	✞ Admin ✞ Student
Description	The use case describe how authenticated user can log into the system
Precondition	The admin must have correct user name and password
Post condition	System user logged in to the system
Basic flow of events	1) The login Use Case starts when the user by clicking the login button 2) System display login form 3) User fills his/her user name and password. 4) System cheek validation 5) System authenticates the user 6) System displays user account page
Alternative course of Action	3.a) If user enter wrong or invalid user name and password 3.b) System shows an error message for incorrect username or password 3. c) Return to step 2.

Table 3. 1: Use case description for login

Use case number	UC 1
Use case name	Create account
Actor	Admin
Description	The admin creates the account for the students
Precondition	Admin should know the student's privileges
Post condition	Account will be created for the student's
Basic flow of events	1) Admin click on student nav bar 2) System display student registration form 3) Admin will fill the form and click register button 4) System cheek validation of entered data and the display student saved message.
Alternative course of action.	3.a) If Admin enter invalid data 3. b) System shows an error message for incorrect data. 3. c) Return to step 2.

Table 3. 2: Use case description for create account

Use case number	UC 2
Use case name	Update/ Edit account
Actor	Admin
Description	The admin updates the account for himself and the student's
Precondition	Admin should be login into account
Post condition	Account will be updated for the admin himself and students.
Basic flow of events	1) Admin click on edit button 2) Admin reenter new name and user name. 3) Admin click save changes button. 4) System authenticates and display Student information updated successfully
Alternative course of action	3.a) If Admin enters another users user name. 3.b) System shows an error message for incorrect user name. 3. c) Return to step 2.

Table 3. 3: Use case description for update account

Use case number	UC 3
Use case name	Delete account
Actor	Admin
Description	The admin deletes account of users.
Precondition	Admin allowed to delete the account
Post condition	Users account will be deleted.
Basic flow of events	1) System display list of account of users 2) Admin click on delete button of needed user account. 3) System deletes that selected account from the database. 4) The system displays pop up message if clicked on Yes Delete button. 5) System display Student successfully removed.

Table 3. 4: Use case description for delete account

Use case number	UC 4
Use case name	Logout
Actor	✞ Admin ✞ Student
Description	Allows the User and Admin to logout from the system
Pre-condition	The user must Login
Post condition	The user logout from the system
Basic flow of events	1) Click on logout button 2) Logout from the system

Table 3. 5: Use case description for logout

Use case number	UC 5
Use case name	View Information
Actor	User
Description	User can view the information of university on the Website
Precondition	User enters to homepage of the system.
Post condition	Student view correct information of university
Basic flow of events	1) Users click on Ethiopian University Information button. 2) System displays list of the universities.

Table 3. 6: Use case description for View information

Use case number	UC 6
Use case name	Add placement
Actor	Student
Description	The student edits the position of the university.
Precondition	Students must be authorized to login
Post condition	The system sends the placement to the database.
Basic flow of events	1. The Student logs on into his own account. 2. The system display Manage universities link. 3. The user can order their university placement.

Table 3. 7: Use case description for Add placement

3.3. Sequence Diagram

Sequence diagram represents interaction between different objects in the system. The important aspect of the sequence diagram is that is time ordered. That means exact sequence of the interaction between the object is represented step by step.

Sequence diagram for login

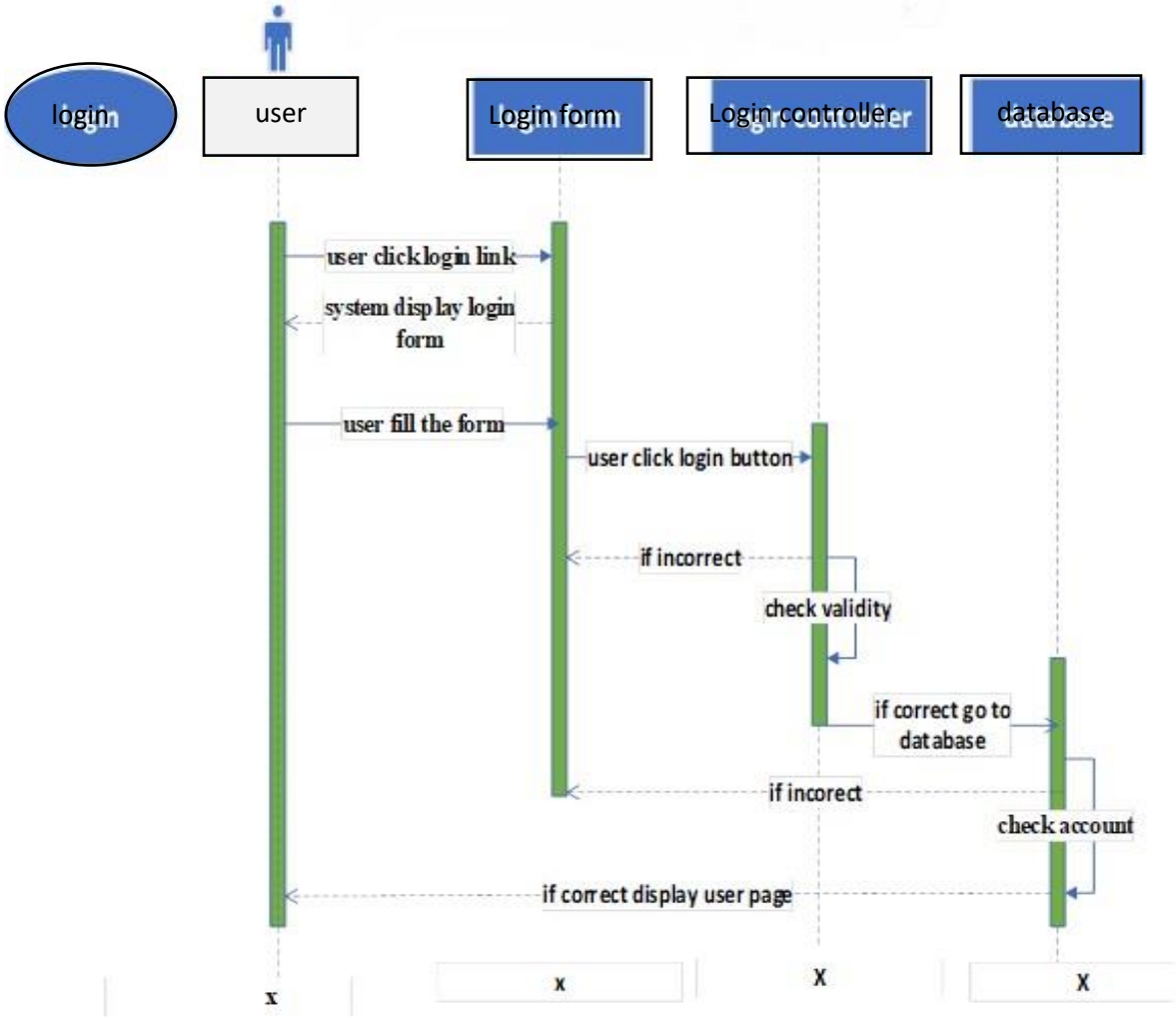

Figure 3. 3: Sequence diagram for login

Sequence diagram for create account

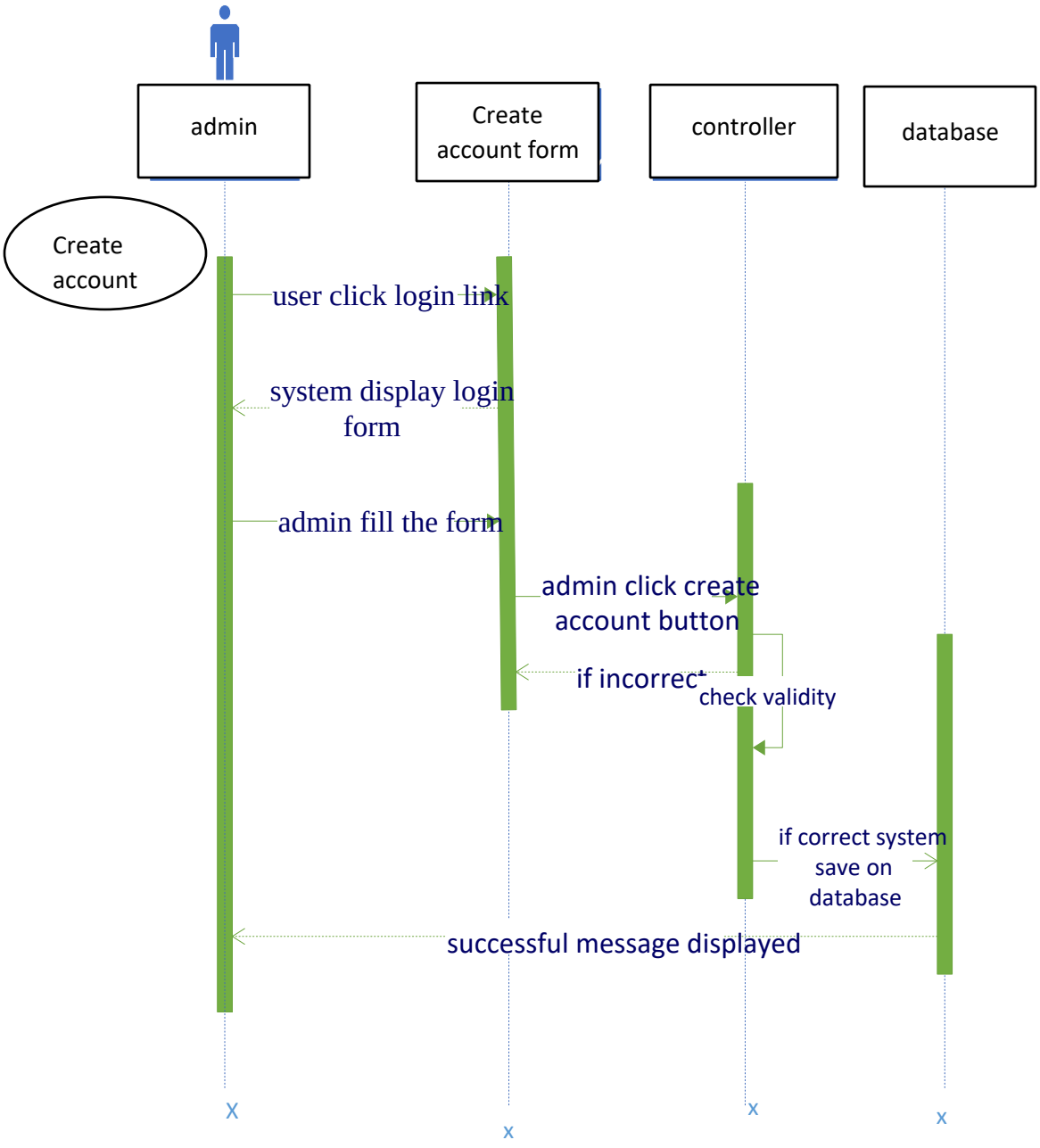

Figure 3. 4: Sequence diagram for create account

Delete account sequence diagram

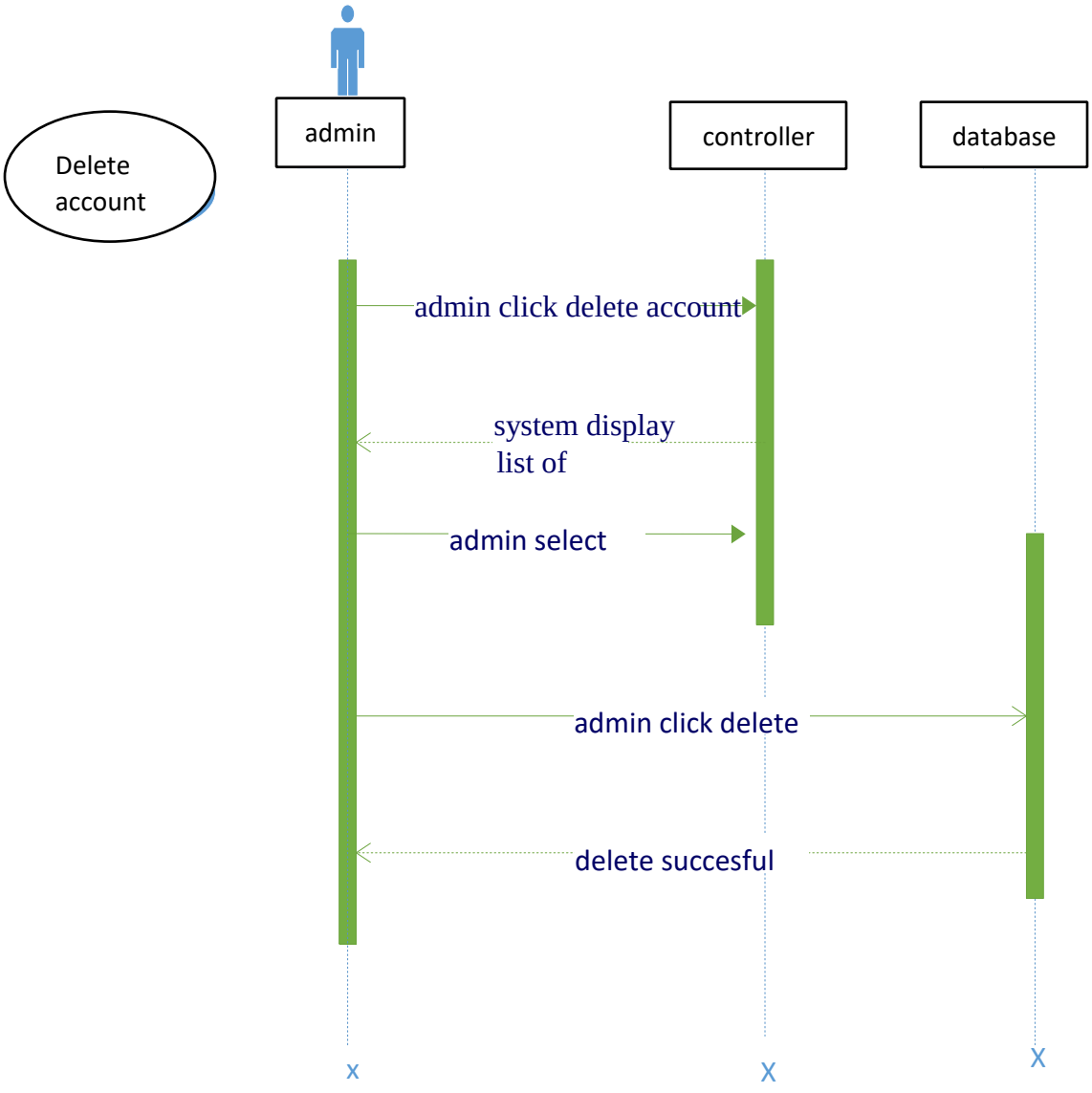

Figure 3. 5: Sequence diagram for delete account

View information sequence diagram

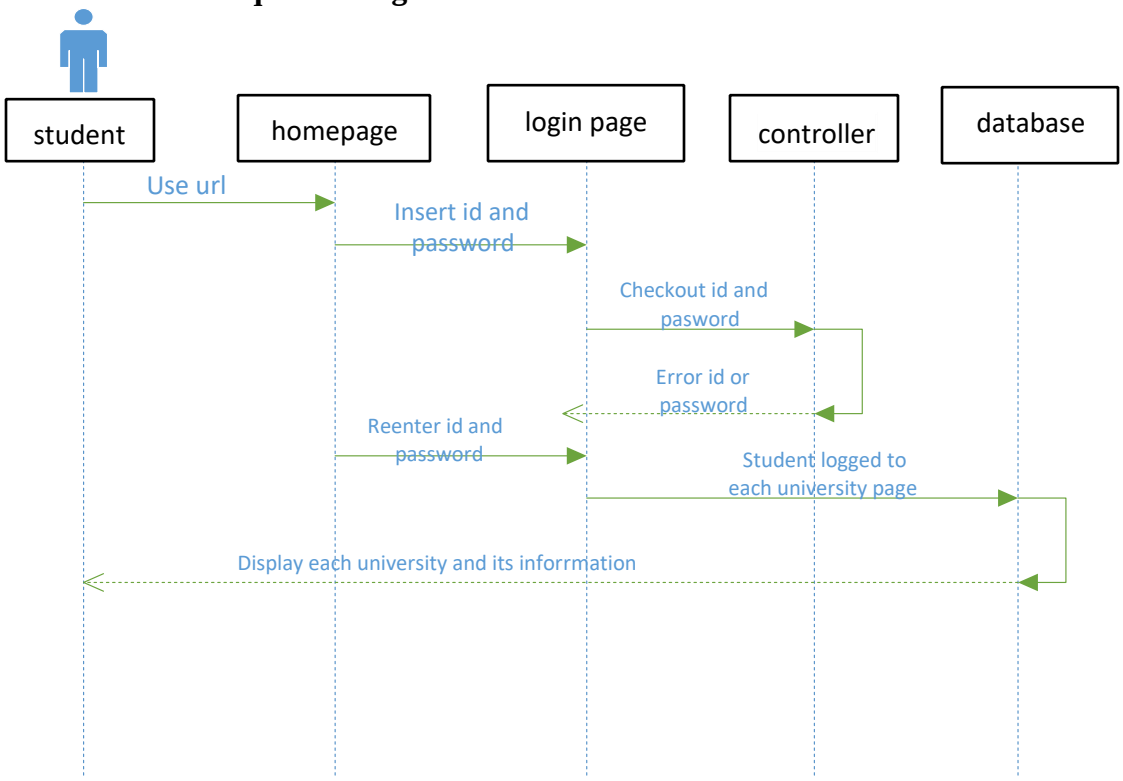

Figure 3. 6: view information sequence diagram

Placement chooser sequence diagram

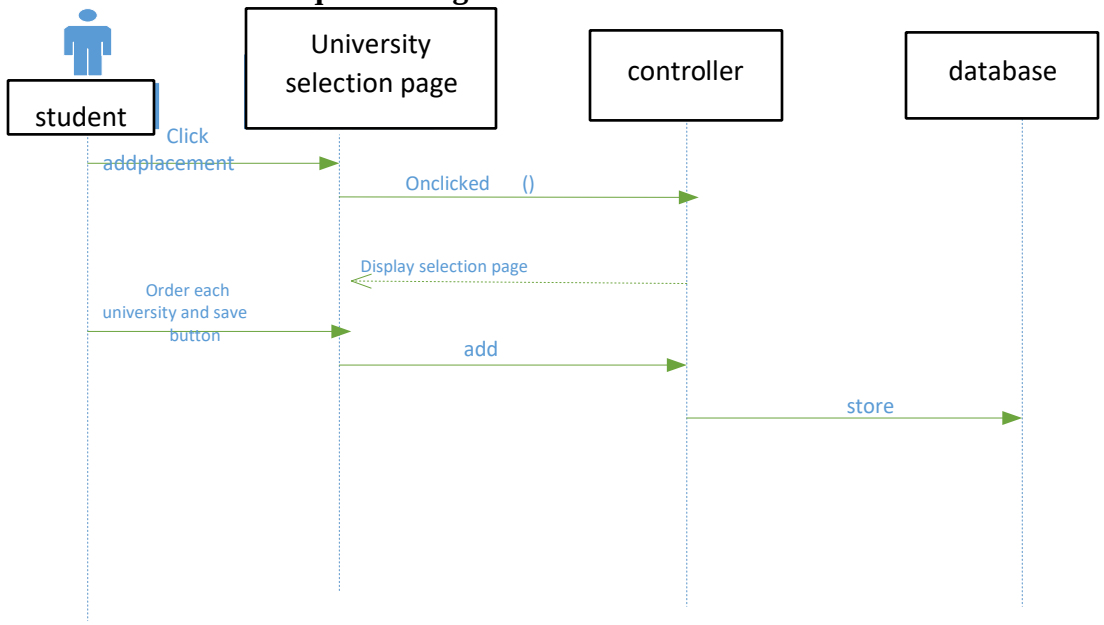

Figure 3. 7: Placement chooser sequence diagram

Sequence diagram Update account

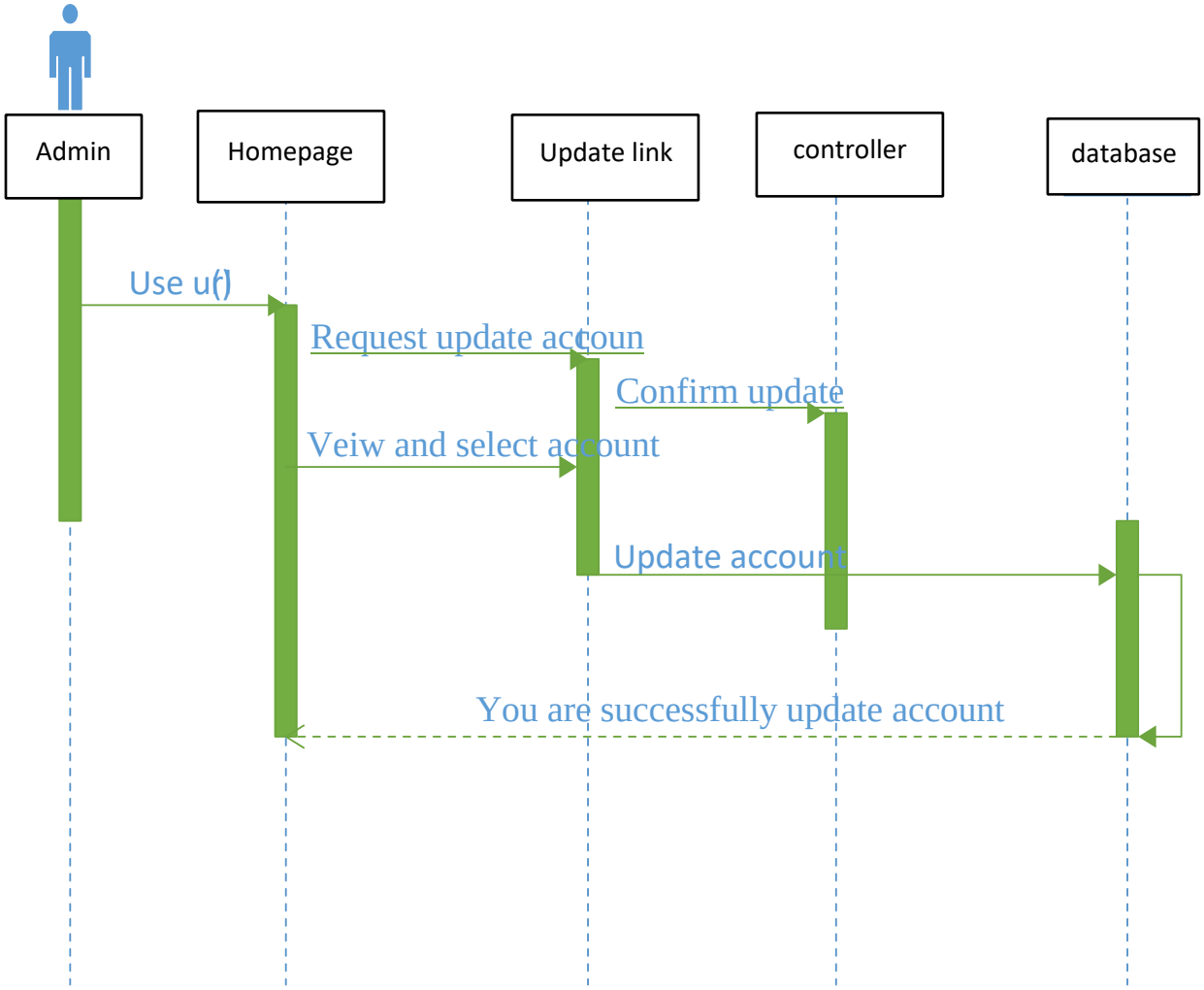

Figure 3. 8: Sequence diagram Update account

3.4. Activity Diagram

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the unified modeling language, activity diagrams can be uses to describe the business and operational step-by-step workflows of components in a system.

View information activity

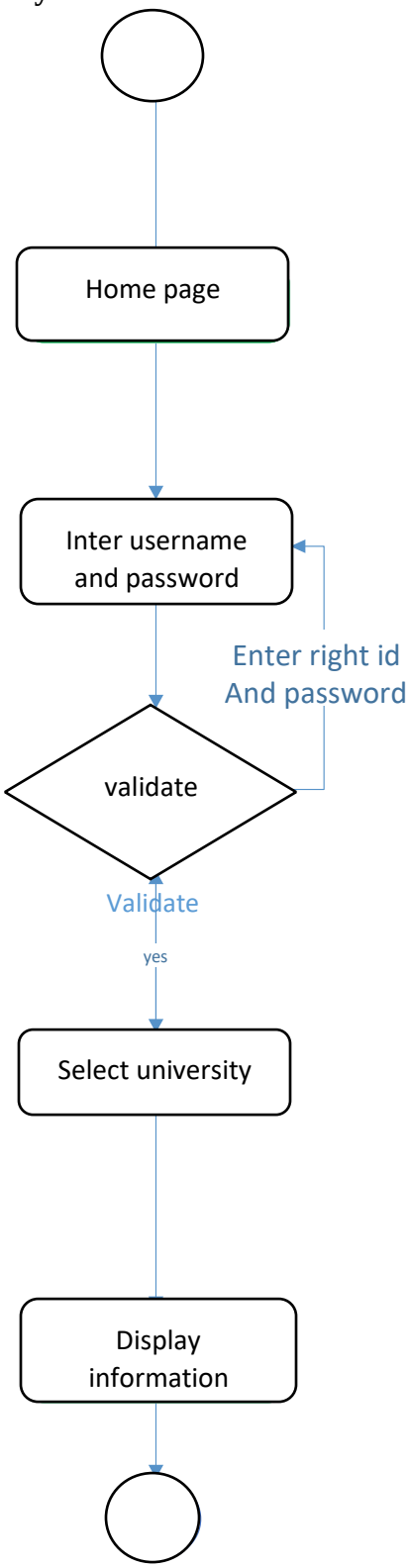

Figure 3. 9: View information activity diagram

Add placement activity diagram

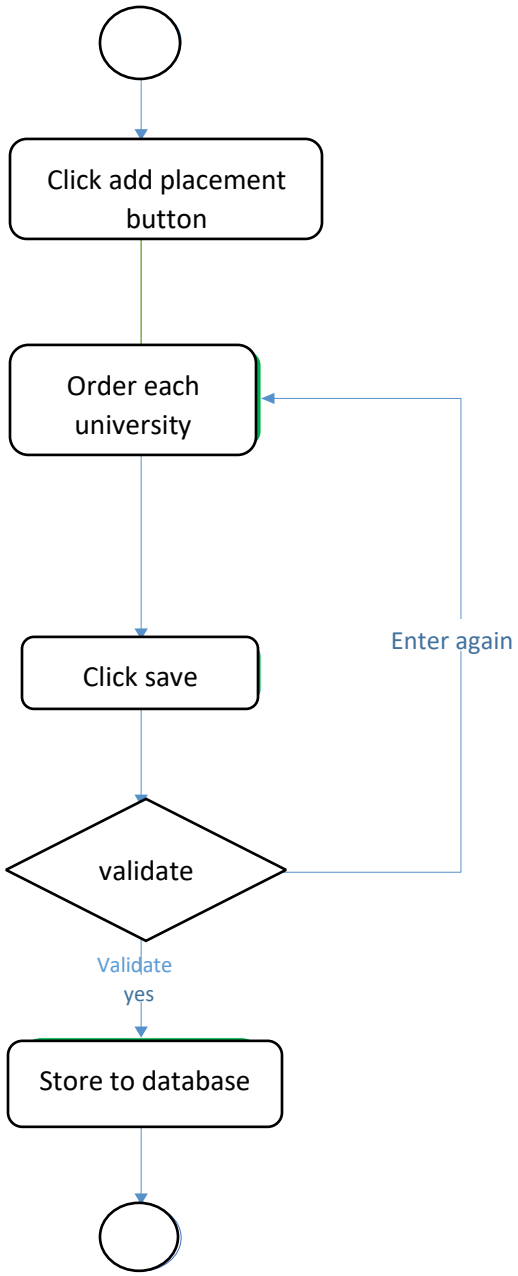

Figure 3. 10: Add placement activity diagram

Activity diagram for login

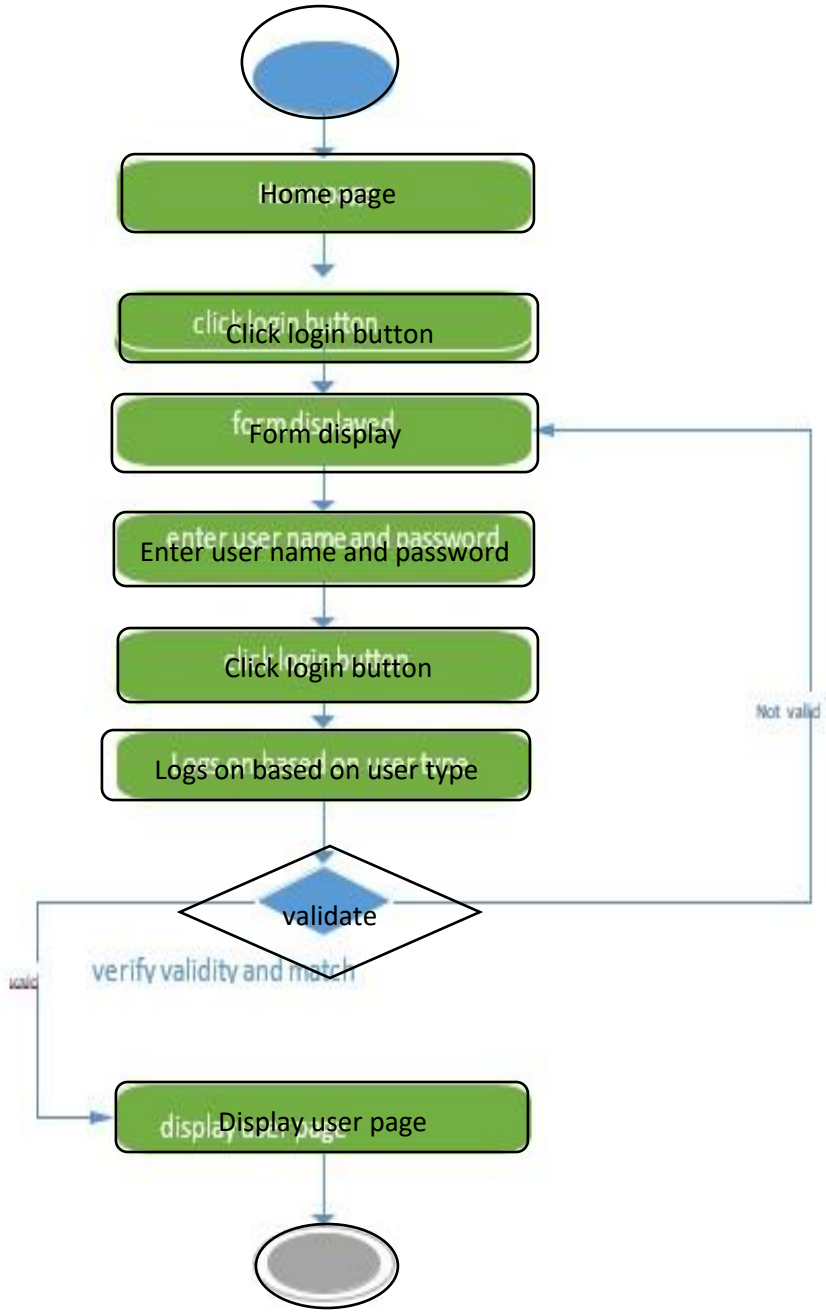

Figure 3. 11: Activity diagram for login

Note that Logs on user type means either in student account or admin account **Activity diagram for create account**

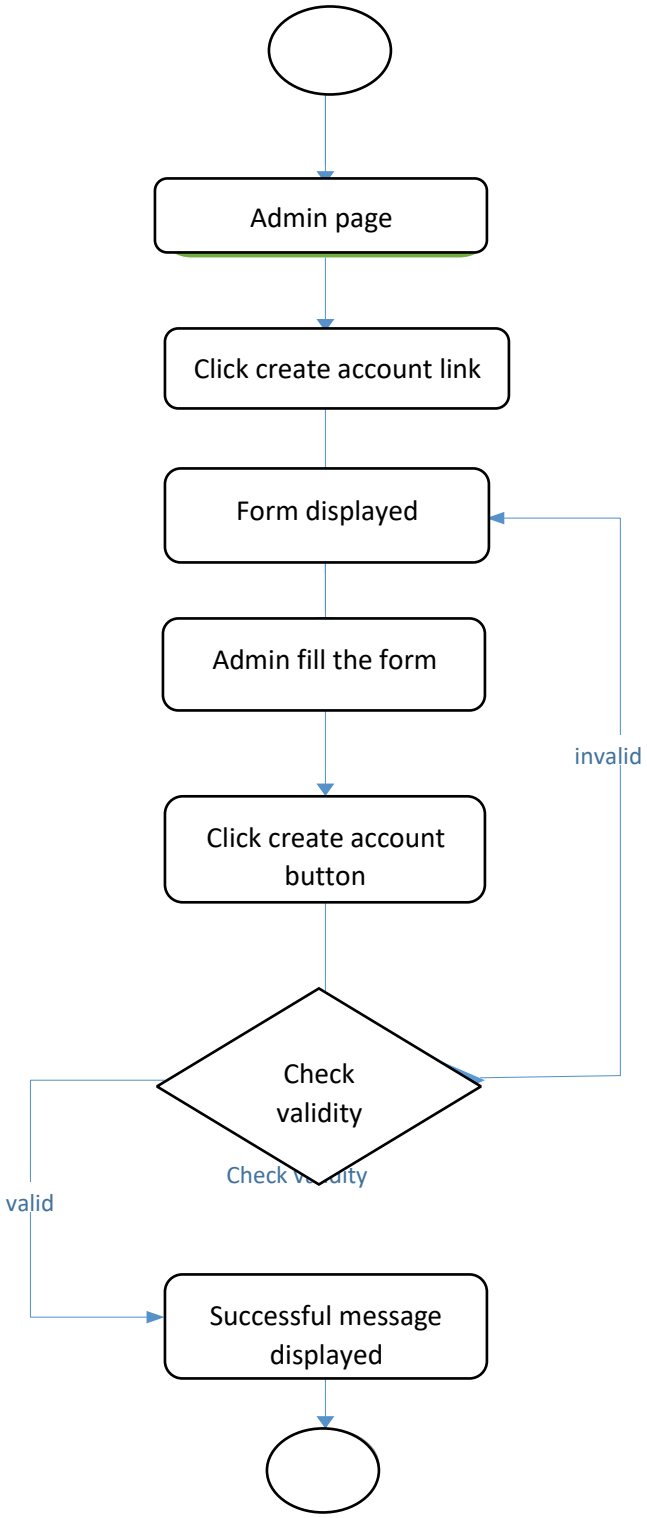

Figure 3. 12: Activity diagram for create account

Activity diagram for update account

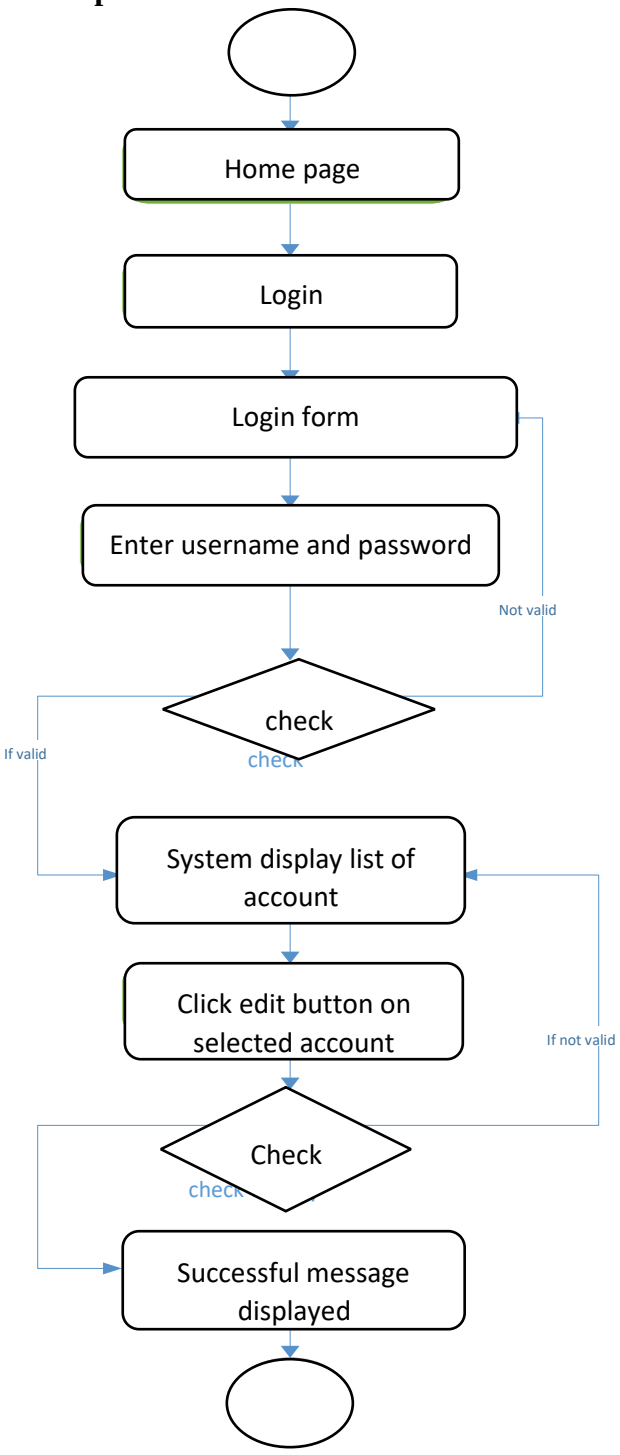

Figure 3. 13: Activity diagram for update account

3.5. Flow Diagram

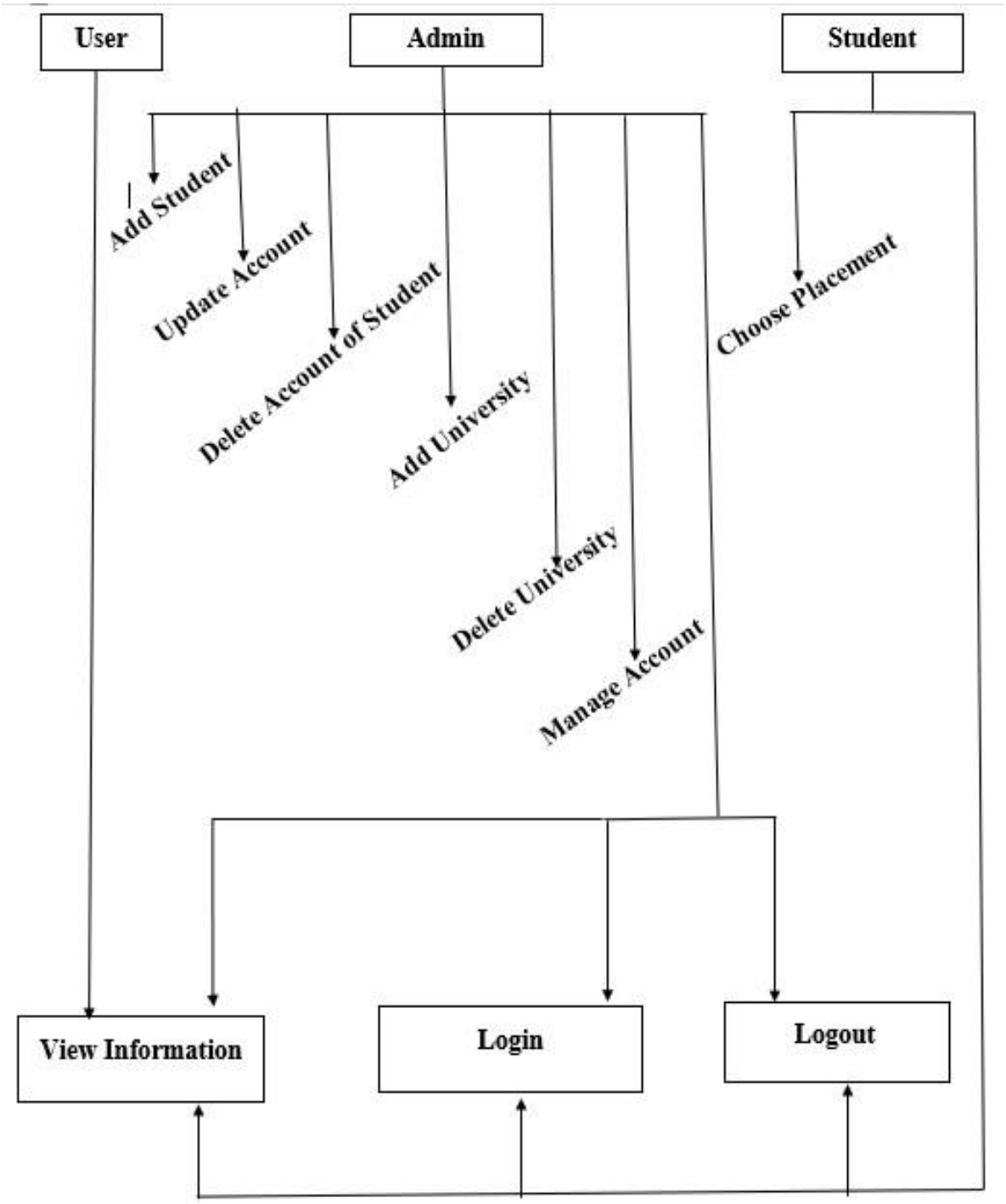

Figure 3. 14: Flow diagram of the system

3.6. Graphical and other diagrammatical representation of the system

Index page/ Homepage

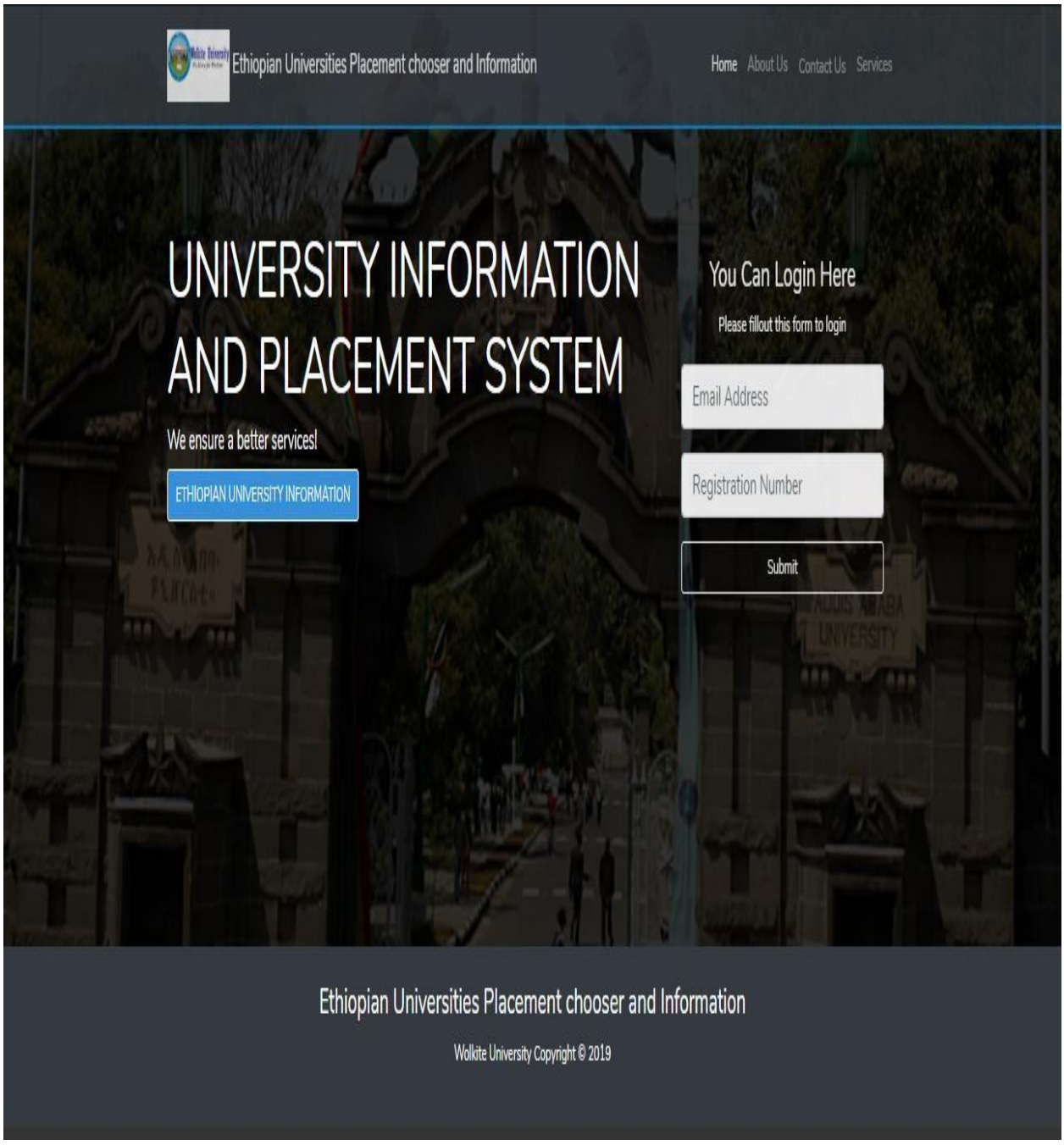

Figure 3. 15: Index/ Homepage

- **Placement chooser page**

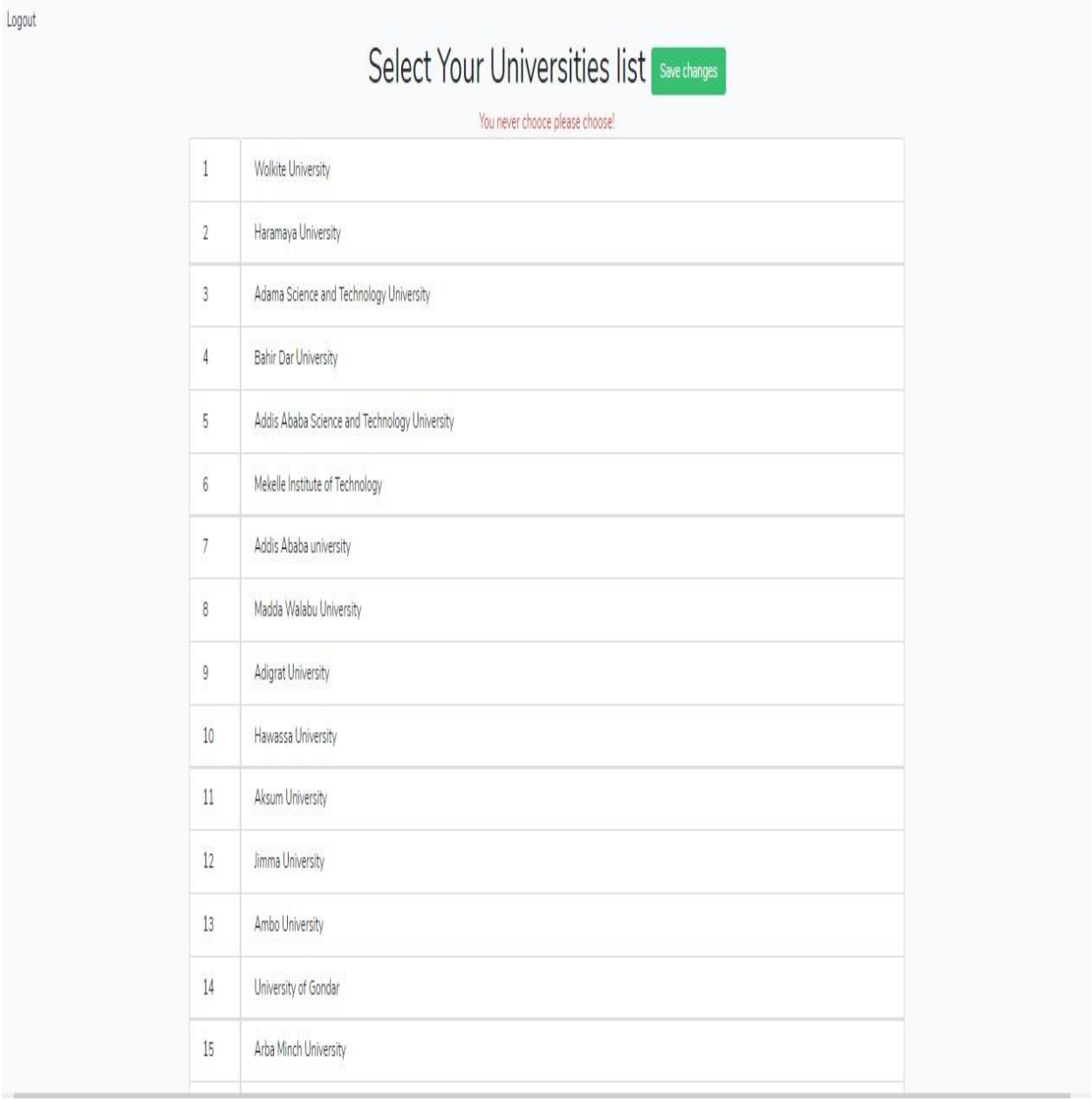

Figure 3. 16: Placement chooser page

Add universities by admin page

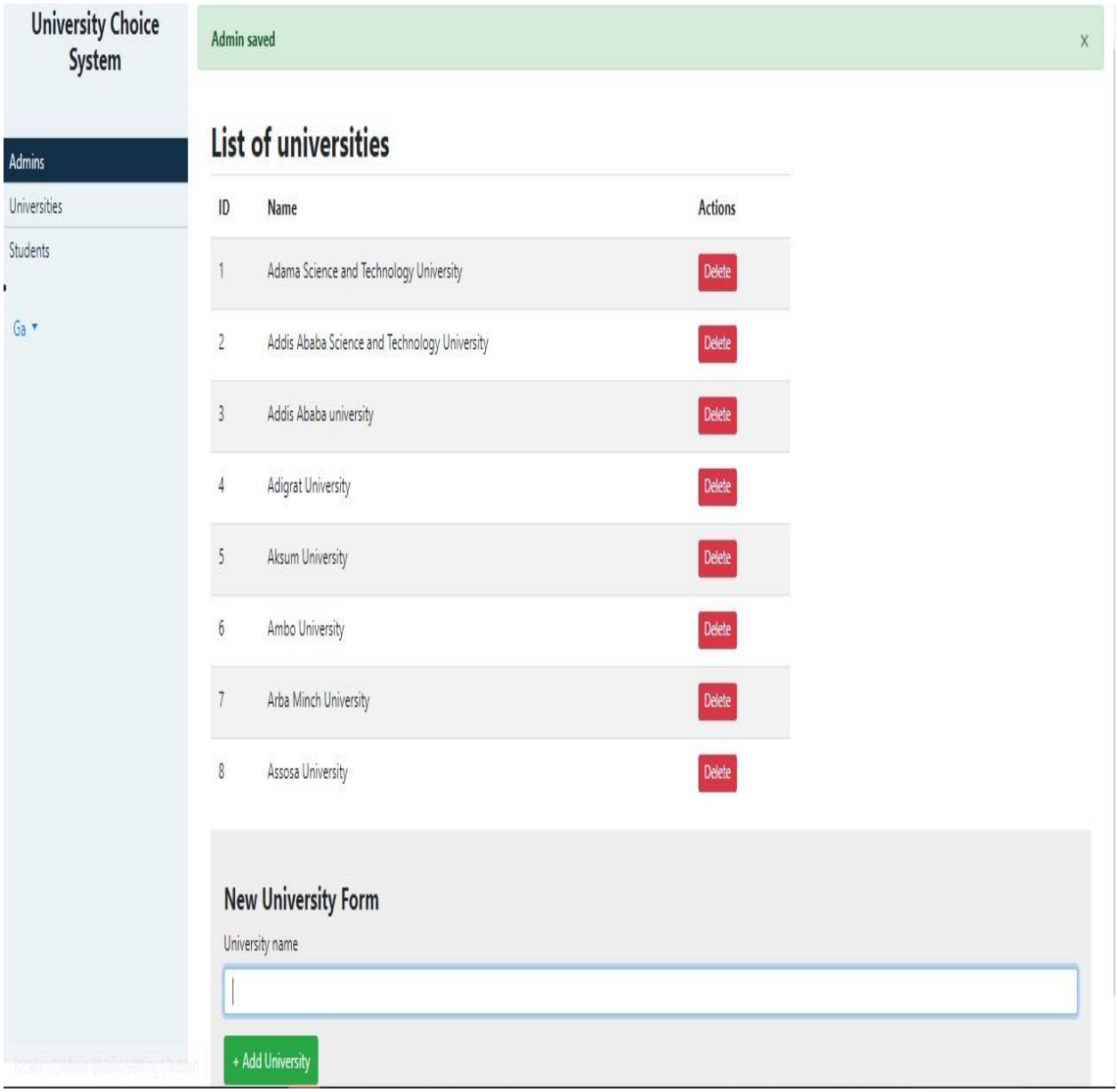

Figure 3. 17: Add universities by admin page

University Information Page

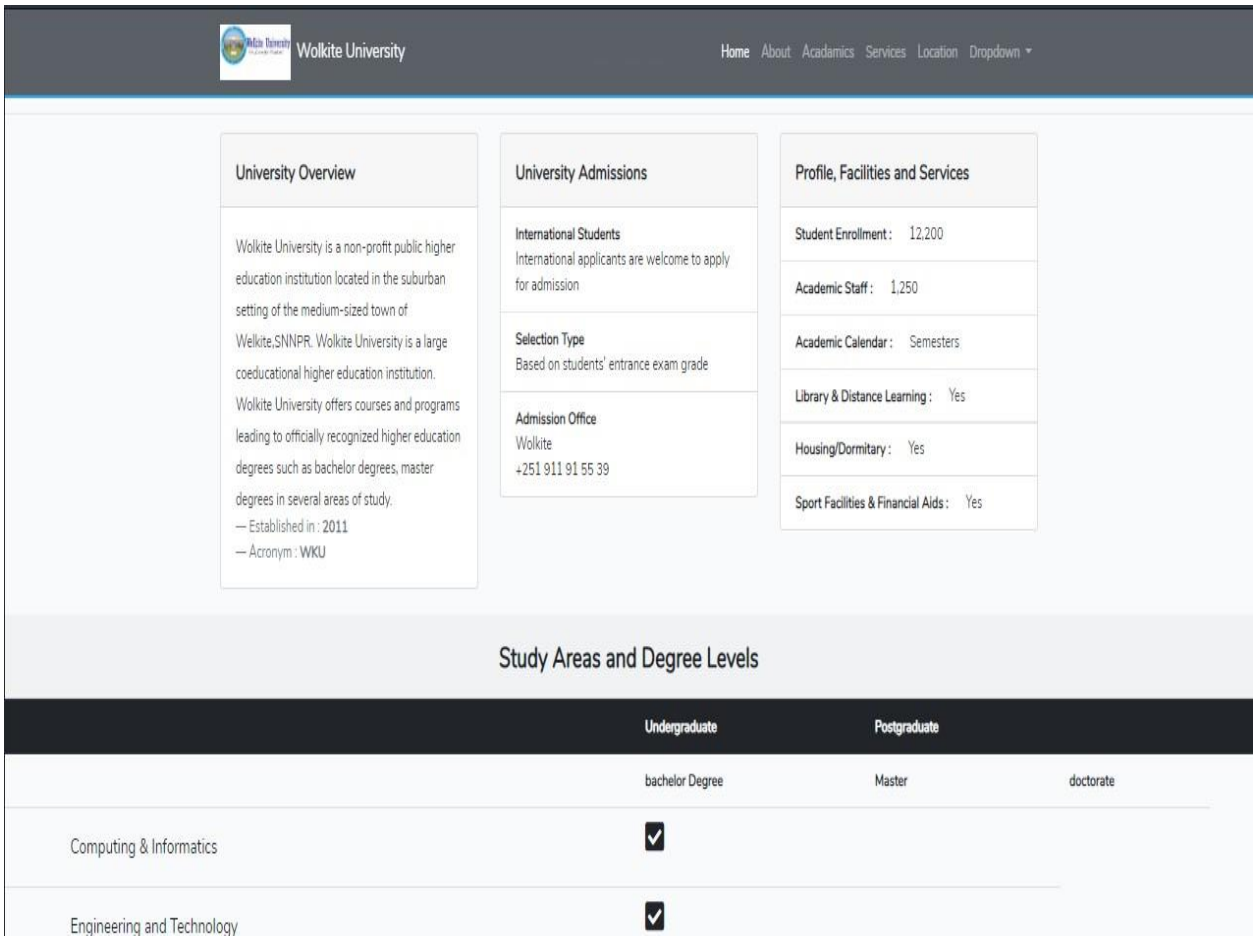

Figure 3. 18: University Information Page

Chapter Four

Conclusion and Recommendations

4.1. Conclusion

In conclusion, it can be claimed that the project of University Placement chooser and information system provide benefits in improving the current manual system of choosing placement at all preparatory schools. The university placement chooser enables a student to choose a desired university, then this information will be stored on database for the admin user. The university information system enables a user to view any Ethiopian university information simply either on website or on offline android application. Finally, By the end of this project a website that enables an admin to create students account, delete students account, adds university list, delete university lists, adding another admin to the system, delete added admin from the system, view admins and students account and others. And enables a student to view university information, login to the system, choose the placement, update the placement after choosing the placement of university.

4.2. Recommendations for Future work

In the future we are set to add some feature on this web-based and android system by introducing:

- Clearly explained accessible academic advising system before the student make their university choice.
- Using image that reflect the universities value and priorities.
- Adding why the student choose universities by updating the universities statics, ranking and award.
- Providing information about job placement after graduation and linking it to other job vacancy website.
- Giving the information about the dead line to apply the university placement date.
- Keeping track of the universities update for some information that maybe added like addition college, department….
- Adding student's chatting website that the student may give each other information other than the website gives.

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[10]https://www.4icu.org/et/ethiopian-universities.htm

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[12]https://www.wku.edu.et/index.php/en/14-general

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Appendices Some Programs of the system

Route web

```
<?php

/*
|-------------------------------------------------------------------------- |
Web Routes
|-------------------------------------------------------------------------- |
| Here is where you can register web routes for your application. These
| routes are loaded by the RouteServiceProvider within a group which |
contains the "web" middleware group. Now create something great!
|
*/

// Route::get('/', function () {
//     return view('welcome');

// });

//  All Normal Pages Routes
Route::get('/', 'PagesController@index');
Route::get('/index2', 'PagesController@index2');



// All University Routes
Route::get('/AdamaScienceandTechnologyUniversity',
'UniversityPageController@AdamaScienceandTechnologyUniversity');
Route::get('/AddisAbabaScienceandTechnologyUniversity',
'UniversityPageController@AddisAbabaScienceandTechnologyUniversity');
Route::get('/AddisAbabaUniversity',
'UniversityPageController@AddisAbabaUniversity');
Route::get('/AdigratUniversity',
'UniversityPageController@AdigratUniversity');
Route::get('/AksumUniversity', 'UniversityPageController@AksumUniversity');
Route::get('/AmboUniversity', 'UniversityPageController@AmboUniversity');
Route::get('/ArbaminchUniversity',
'UniversityPageController@ArbaminchUniversity');
Route::get('/AssosaUniversity', 'UniversityPageController@AssosaUniversity');
Route::get('/BahirdarUniversity',
'UniversityPageController@BahirdarUniversity');
Route::get('/BulehoraUniversity',
'UniversityPageController@BulehoraUniversity');
Route::get('/DeberebirhanUniversity',
'UniversityPageController@DeberebirhanUniversity');
Route::get('/DeberemarkosUniversity',
'UniversityPageController@DeberemarkosUniversity');
Route::get('/DeberetaborUniversity',
'UniversityPageController@DeberetaborUniversity');
Route::get('/DillaUniversity', 'UniversityPageController@DillaUniversity');
Route::get('/DeredawaUniversity',
```

```
'UniversityPageController@DeredawaUniversity');
Route::get('/HaramayaUniversity',
'UniversityPageController@HaramayaUniversity');
Route::get('/HawassaUniversity',
'UniversityPageController@HawassaUniversity');
Route::get('/JimmaUniversity', 'UniversityPageController@JimmaUniversity');
Route::get('/JigjigaUniversity',
'UniversityPageController@JigjigaUniversity');
Route::get('/MekelleInstituteOfTechnology',
'UniversityPageController@MekelleInstituteOfTechnology');
Route::get('/MekelleUniversity',
'UniversityPageController@MekelleUniversity');
Route::get('/MaddawalabuUniversity',
'UniversityPageController@MaddawalabuUniversity');
Route::get('/MettuUniversity', 'UniversityPageController@MettuUniversity');
Route::get('/MizanTepiUniversity',
'UniversityPageController@MizanTepiUniversity');
Route::get('/SemeraUniversity', 'UniversityPageController@SemeraUniversity');
Route::get('/UniversityofGonder',
'UniversityPageController@UniversityofGonder');
Route::get('/WachamoUniversity',
'UniversityPageController@WachamoUniversity');
Route::get('/WoldiaUniversity', 'UniversityPageController@WoldiaUniversity');
Route::get('/WolkiteUniversity',
'UniversityPageController@WolkiteUniversity');
Route::get('/WollegaUniversity',
'UniversityPageController@WollegaUniversity');
Route::get('/WolloUniversity', 'UniversityPageController@WolloUniversity');
Route::get('/AboutUs', 'UniversityPageController@AboutUs');
Route::get('/ContactUs', 'UniversityPageController@ContactUs');
```

University page controller

```
<?php
namespace App\Http\Controllers;

use Illuminate\Http\Request;
 class UniversityPageController extends
Controller
{    public function
AdamaScienceandTechnologyUniversity(){        return
view('universitypages.AdamaUniversity');
   }
   public function AddisAbabaScienceandTechnologyUniversity(){
return
view('universitypages.AddisAbabaScienceandTechnologyUniversity');
   }
   public function AddisAbabaUniversity(){
        return view('universitypages.AddisAbabaUniversity');
   }
    public function AdigratUniversity(){
            return view('universitypages.AdigratUniversity');
    }
```

```
 public function AksumUniversity(){
        return view('universitypages.AksumUniversity');
}
public function AmboUniversity(){
            return view('universitypages.AmboUniversity');
}
public function ArbaminchUniversity(){
       return view('universitypages.ArbaminchUniversity');
}
public function AssosaUniversity(){
    return view('universitypages.AssosaUniversity');
}
public function BahirdarUniversity(){
    return view('universitypages.BahirdarUniversity');
}
public function BulehoraUniversity(){
    return view('universitypages.BulehoraUniversity');
}
public function DeberebirhanUniversity(){
    return view('universitypages.DeberebirhanUniversity');
}
public function DeberemarkosUniversity(){
    return view('universitypages.DeberemarkosUniversity');
}
public function DeberetaborUniversity(){
    return view('universitypages.DeberetaborUniversity');
}
public function DillaUniversity(){
    return view('universitypages.DillaUniversity');
}
public function DeredawaUniversity(){
    return view('universitypages.DeredawaUniversity');
}
public function HaramayaUniversity(){
    return view('universitypages.HaramayaUniversity');
}
public function HawassaUniversity(){
    return view('universitypages.HawassaUniversity');
}
public function JigjigaUniversity(){
    return view('universitypages.JigjigaUniversity');
}
public function MaddawalabuUniversity(){
    return view('universitypages.MaddawalabuUniversity');
}
public function MettuUniversity(){
    return view('universitypages.MettuUniversity');
}
public function JimmaUniversity(){
            return view('universitypages.JimmaUniversity');
}
public function MekelleInstituteOfTechnology(){
            return view('universitypages.MekelleInstituteofTechnology');
}
```

```
    public function MekelleUniversity(){
                return view('universitypages.MekelleUniversity');
    }
    public function MizanTepiUniversity(){
        return view('universitypages.MizanTepiUniversity');
}
public function SemeraUniversity(){
    return view('universitypages.SemeraUniversity');
}
public function UniversityofGonder(){
    return view('universitypages.UniversityofGonder');
}
public function WachamoUniversity(){
    return view('universitypages.WachamoUniversity');
}
public function WoldiaUniversity(){
    return view('universitypages.WoldiaUniversity');
}
public function WolkiteUniversity(){
    return view('universitypages.WolkiteUniversity');
}
public function WollegaUniversity(){
    return view('universitypages.WollegaUniversity');
}
public function WolloUniversity(){
    return view('universitypages.WolloUniversity');
}
public function AboutUs(){
    return view('universitypages.AboutUs');
}
public function ContactUs(){
    return view('universitypages.ContactUs');
}
 }
```

Student choice model

```
<?php
namespace App;

use Illuminate\Database\Eloquent\Model;
 class StudentChoice extends
Model
{
    public function scopeOfStudent($query, $student_id)
    {
        return $query->whereStudentId($student_id);
    }      public function
University(){

    }
}
```

University model

```
<?php
 namespace
App;
use Illuminate\Database\Eloquent\Model;

class University extends Model
{
 }
```

User model

```
<?php  namespace App;  use
Illuminate\Notifications\Notifiable; use
Illuminate\Contracts\Auth\MustVerifyEmail; use
Illuminate\Foundation\Auth\User as Authenticatable;

class User extends Authenticatable
{
    use Notifiable;

    /**
* The attributes that are mass assignable.
     *
* @var array      */
    protected $fillable = [
'name', 'username', 'password',
    ];

    /**
* The attributes that should be hidden for
  arrays.
     *
* @var array      */
    protected $hidden = [
        'password', 'remember_token',
    ];
 }
```