INTERNSHIP PLATFORM

1437-1438

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Acknowledgments:

In performing our project, we had to take the help and guideline of some respected persons, who deserve our greatest gratitude. The completion of this project gives us much Pleasure. We would like to show our gratitude to **Dr.Radwa Msrzouk** for giving us a good guideline for the project throughout numerous consultations. We would also like to expand our deepest gratitude to all those who have directly and indirectly guided us in completing this project in Princess Nora Bint AbdulRahman University.

Abstract:

Internship Platform mobile application, this application will proved a lot of facilities to both teachers and students, the application will show the student all the institutions that provide the necessary training for theme. It will also help the communication with the supervisor, the supervisor is able to post announcements that the student will get notified with.

Keywords:

Chapter 1: Introduction
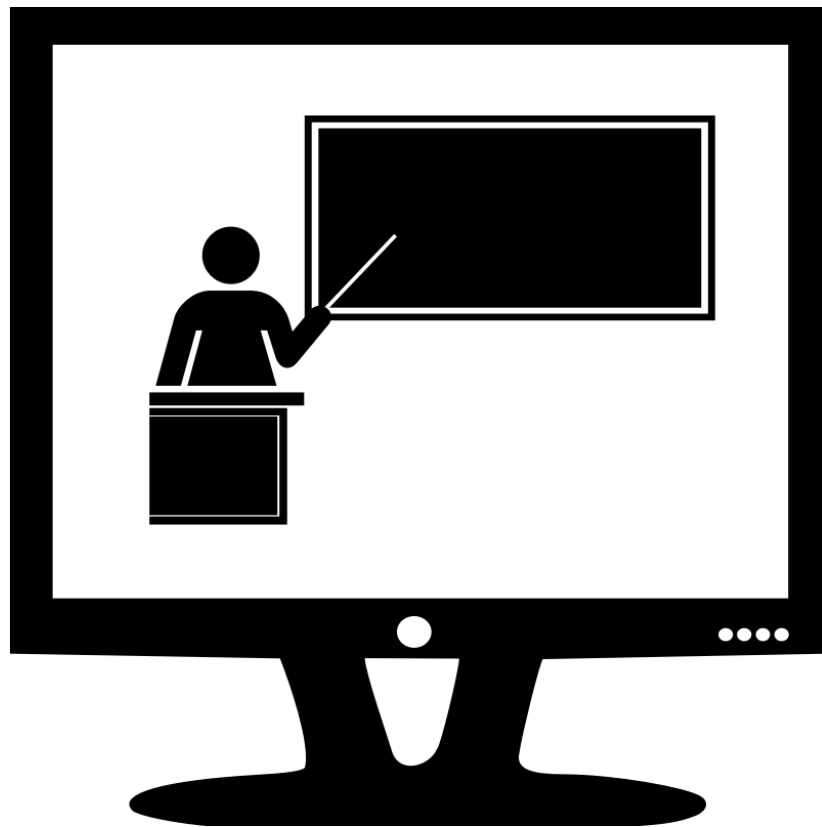
Chapter 1: Introduction

This chapter is a general description of our project, and this chapter contains5 sections starting with introduction ending with the methodology.

Section 1: Introduction

This section contains a description of our project and the purpose of it.

Section 2: problem

Here you will found a clear and specification content about the problem that let us choice this topic.

Section 3: Proposed solutions

As an analyst we know that the solutions are important to solve the problems we have faced, so in this section and as a team we write a proposed solutions that may help us to solve problems and what are the objectives.

Section 4: Domain and limitation

What is the domain of the Training Platform application? And what is the limitation?

Section 5: methodology

Methods that will be used in our study of the project.

1.1 Introduction:

In the past couple of years we have witnessed tremendous growth in mobile users all over the world as the entry of smartphones in the market at affordable prices has triggered their usage. In this time , phones are not just used for calling, playing games , etc., but with smartphones we can schedule our complete day, check emails, make conference calls, connect using social network and a perform a host of other activities.

Due to this growth we decided to make a mobile application that will help and assist and make it easy for student and supervisors to use.

The application will help student to register and communicate with their supervisor and the place that they would like to have their training at.

For all the announcements, the application will send notifications for the students' devices.

1.2 Problem Statement & Significance:

- In normal training blog it's have many problems we suffering of it as training students. The biggest one is we've don't know which training institutions are provide training to university students especially to the students of the Faculty of Computer.

- Another problem was in communication with training institutions such as some government ministries like Civil Affairs, we were provided to training there by send an email message but we don't receive any response, and when we call the unified number of this institution the answer was "we do not train computer students there".

- Some department, company and hospital can training us but they training limited number of students and don't know when the number is complete or not.

- Consequently, they losing my time and may be lose training on that semester I wanted when I can't take the accept of training on the specific time.

- On other side the supervisor in the department can't be found in her office when I needed because she has to gives a lectures of another subjects to her students.

1.3 Proposed Solution:

Due to the problems that we have suffering of it, we concluded that the best way to solve these problems is to developing a mobile application that provide:

1. Training institutions directory: this directory will contain the names of the institutions that provide training for computer students, also contain the communications ways with each institution.

2. The application will provide "registration forms" that linking to training institutions emails , when the student have been fills the form and submit it , the form will sends to institutions email directly , this solution will make easier communication to both students and institutions.

3. Students Counter: Depending on the specified number from the institution we will create a counter for each one that will show to students the currently available number in this institution.

4. Messages section : there will be a messages section in the application , the students and supervisor can use to communicate each other , when you receive a message you will also receive a notification on your mobile screen

5. Home page: this page will be for training announcements only, and the supervisors only will be able to write on it, and if there is any new announcement the application will send a notification of that to all student's devices.

6. Inquiring section: special space for student Inquires, all student able to replay to any Inquire in this section.

1.3.1 Objective:

- Design an android application for training.

- Design an application that provides the information about training for the students.

- Design an application with a simple interface and easy navigation.

- Make communication easy between all parts whose interest in training (students, supervisor, training institutions).

1.4 Project Domain & Limitations:

Project Domain:

Our project domain is application will serve the students and supervisors of PRINCESS NOURA UNIVERSITY that will help them in the field training.

Project Limitation:

The major limitation is that the application will only allow the student to register with their student ID, it is also limited for the student at of PRINCESS NOURA UNIVERSITY specifically in the college of computer sciences and information.

1.5 Methodology:

The used methodology is: **waterfall methodology**

1.5.1Planning

Mobile Application Training for Collage of computer science and information student to Make it easy for student who want to training and faced some problem to communication with supervisor or found and chosen institution to training.

1.5.2 Analysis:

- Survey: We used survey to gather a lots of information from the student they have bad or good experience to communication with supervisor or institution for training.

- Interview: We meet supervisor face to face to get more information about the problem she's faced with the student.

1.5.3 Design:

The design specifications created in this phase are used in the coding phase to actually write the code. The requirements are studied and evaluated, and the design of the system is prepared. The goal is to understand what actions need to be taken and what they should look like.

1.5.4 Implementation:

Any flowcharts or algorithms created in the design phase are translated into a programming language.

1.5.5 Maintenance:

Last final stage ensuring everything is working if the application start to use in the real world may will find any problem then we will need to solve the problem and modify or change in application if we need. [1]
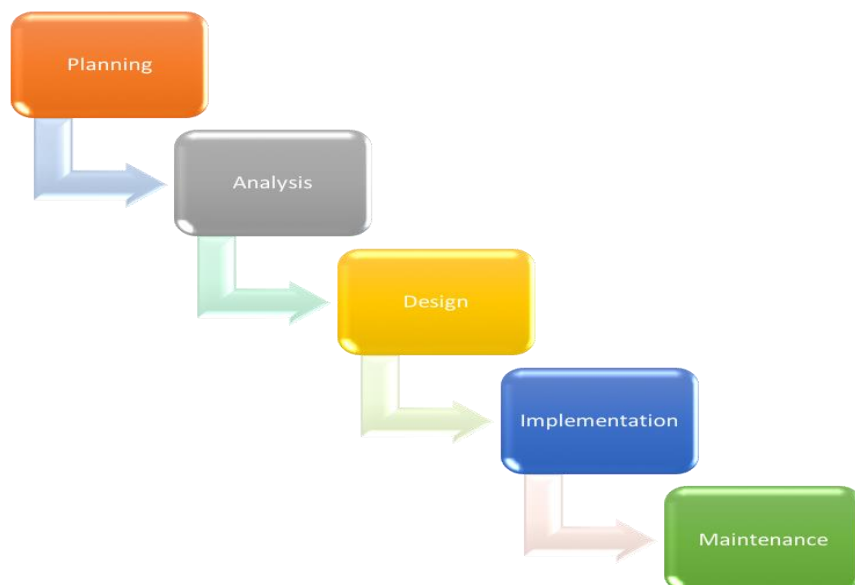

Figure1.1: Waterfall Methodology

Chapter 2: Background Information & Related Work

2.1 Introduction

In this chapter, provides the background information related to the project and the required tools and technology. It also gives a review of some similar system.

2.2 Background Information

One of the main requirements to get the bachelor of science in information system is complete the training course in any institutions that is willing to train the student and give her the right training to help them to know how the actual environment of working is like, web sites and mobile application will help speed up the process of communicating with the institutions and the students supervisor and send all the needed forms and to get the approvals.

Previously there was the use of the web sites and it had their advantages and disadvantages that we will discuss later on, and we will try to take these disadvantages in our advantage to make an application that the student will find everything they want.

Techniques to build and implement are:

1- **Database management system** (**DBMS**) is a computer software application that interacts with the user, other applications. This will store the information. . [2] [3]

2- **Application servers** are based on the Java™.

3- **Presentation layer** it is used to present data in an accurate, well-defined and standardized format. [4]

2.3 Related work

In this section we will describe four related work systems and state some of their weakness and strength points.

A) Web training blog

Site interface:
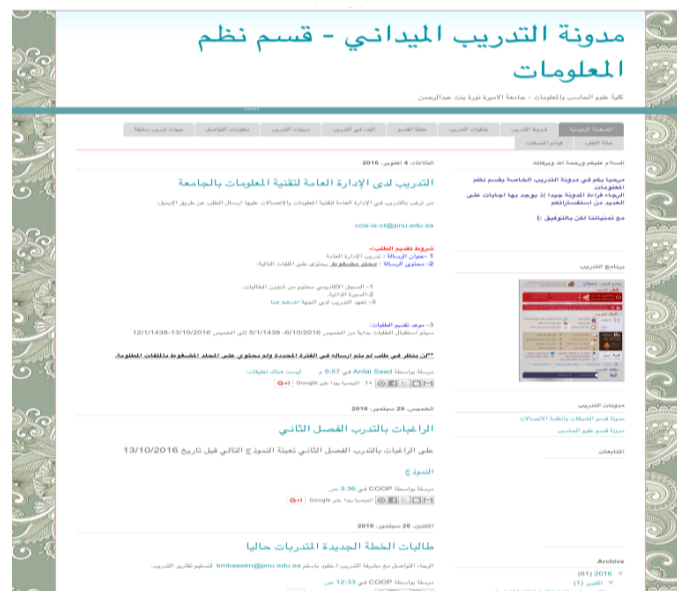
Figure2.1: Web training blog

Advantages:

- Design a website with a simple interface and easy navigation.

Disadvantages:

- Home page had very crowded content, because it including of announcement topics and the details of it at the same time, also there is an info graphic about training in my opinion it is better if they were in starting training section to have more arranging contents. [5]

List of Training information
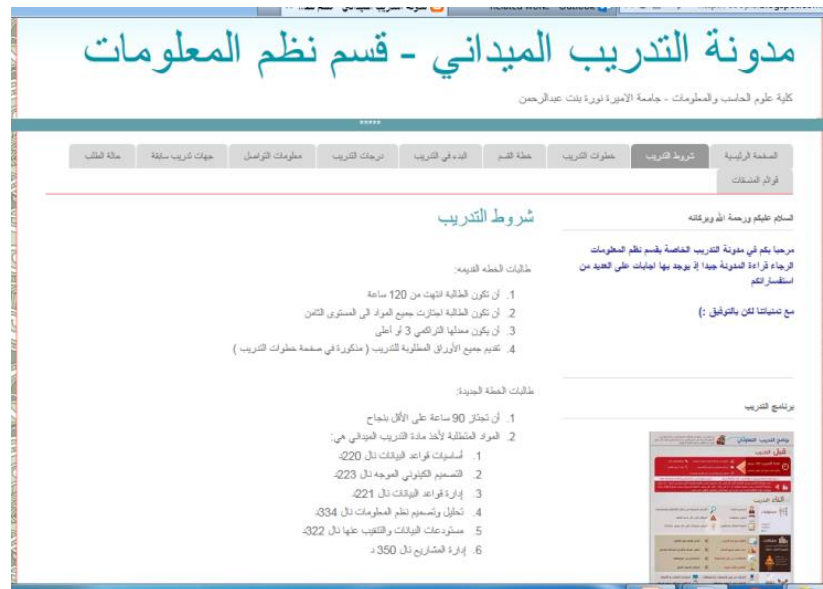
Figure2.2: Training qualifications

Figure2.3: Training Plan

Advantages:

- Every advanced information presented clearly

- It's easy and clear.

Contact information:

Figure2.4: Contact information

Former training institutions:

Figure2.5: Former training institutions

Disadvantages:

- There is no information to connect with the training institution.

B) University of Dammam unit of training and development Site.

- Site interface :

Figure2.6: AL Dammam university interface

Advantages:

Interface site are easy to understand and clean and simple.

Disadvantages:

Show's partners on the front of the site. [6]

List of Training information:

Figure2.7: Training announcement and accepting rules

Figure2.8: Training forms and guide

Advantages:

- List of training concise and informative

- And there have page of training registration

Disadvantages:

The details of the terms of acceptance training non-existent

Communication information page:

Figure 2.9: communication information

Advantages:

- It's easy and clear.

Disadvantages:

- The names of the supervisors not present that responsible for communication and coordination with training institutions.

- The office hours of supervisor not present because the student need to come his office and submission training requirements.

C) Salman Bin Abdul-Aziz University

Site interface:

Figure 2.10: Site interface of Salman Bin Abdul-Aziz University

Advantages:

- Interface Easy to navigate and clear.

- They have a Search box helpful features.

- The design and color nice.

- List of helpful information about training like steps, Condition. [7]

Figure 2.11: Training information & steps

- Two ways to contact if they have a problem on Email they can answer on Twitter:

Figure 2.12: Communication ways

- Map site

Figure 2.13: Map site

Disadvantages:

- The home doesn't have enough information about training like who's the supervisor for a student or how the student know if they accepted or not and they don't have training Institutions.

- Empty section on Goals of training, plan of training and this is most important things.
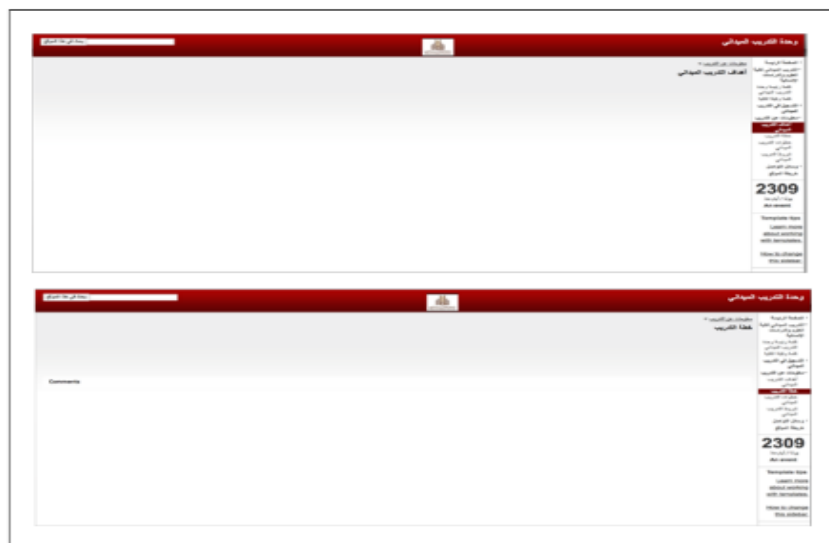
Figure2.14: Training goals & plan

- No attachment on Special forms for training
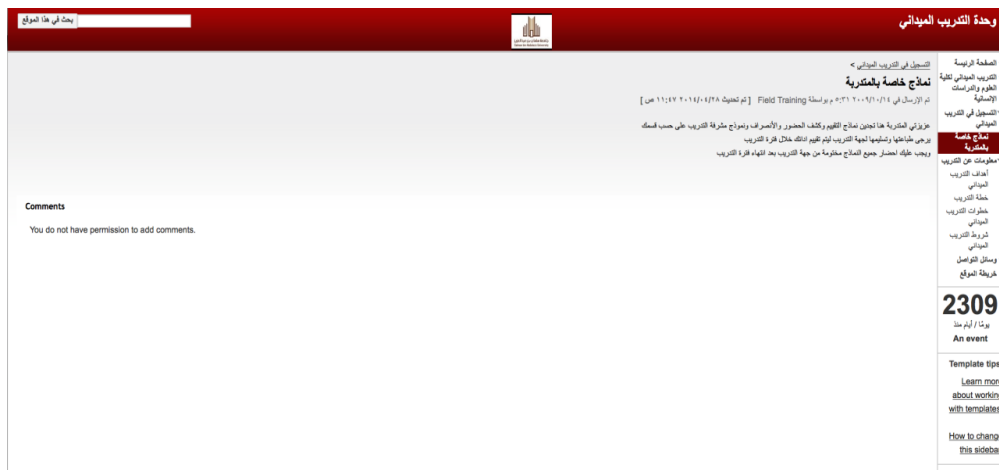
Figure 2.15: Forms for training

D) Site of King Feisal University

Site interface:

Figure 2.16: Site interface of King Feisal University

Advantages:

- They have a Search box to help the users find any subjects.

- The training subjects are organized and contains models of training for the students.

Disadvantages:

- The colors of the site and its design is not good.

- There are no names of proposed training institutions for students.

- Some pictures of the website advertisements are not showing, this problem will be impacting the appearance of the website**.**

- Lack an information about communication with the supervisors and their names. [8]

2.3.1 Related work Survey
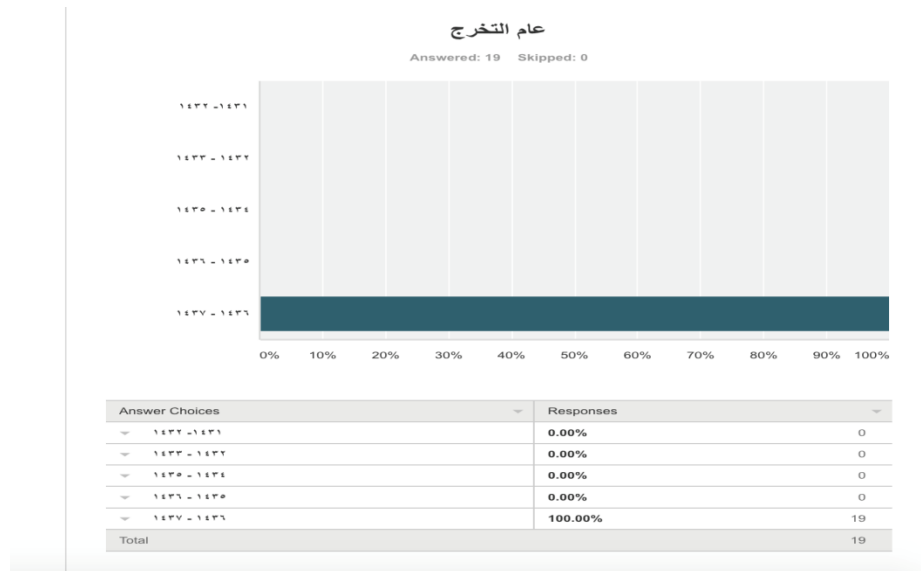
Figure 2.17: Related work survey (graduation year)
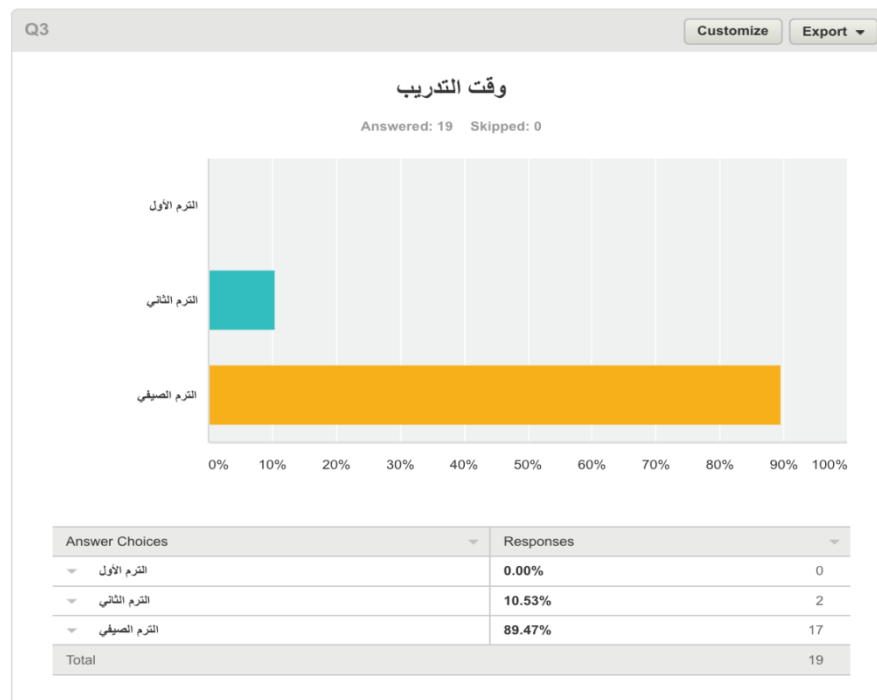
Figure 2.18: Related work survey (training time)
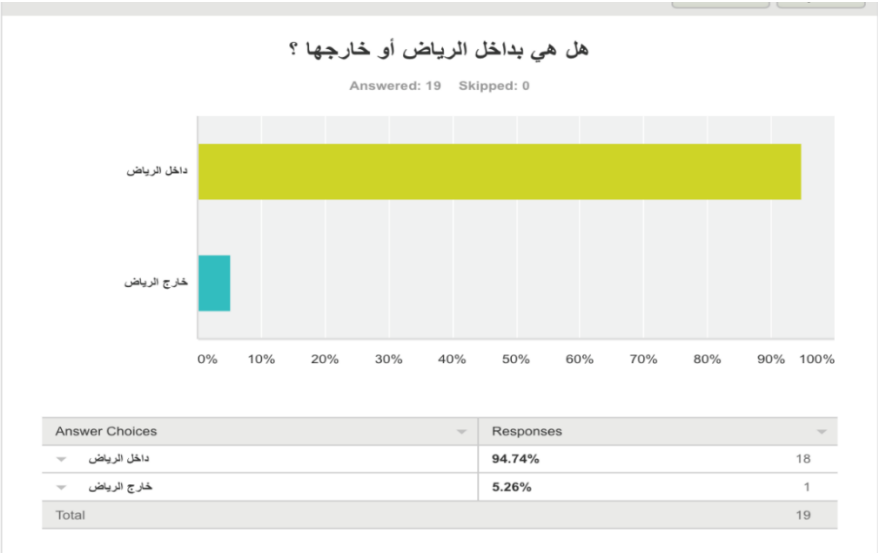
Figure 2.19: Related work survey (city of training)
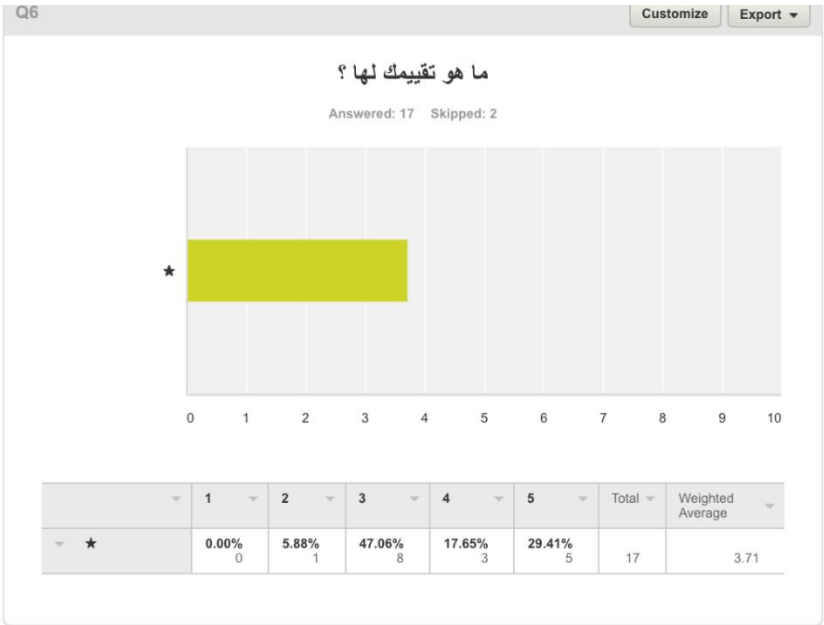
Figure 2.20: Related work survey (rating)
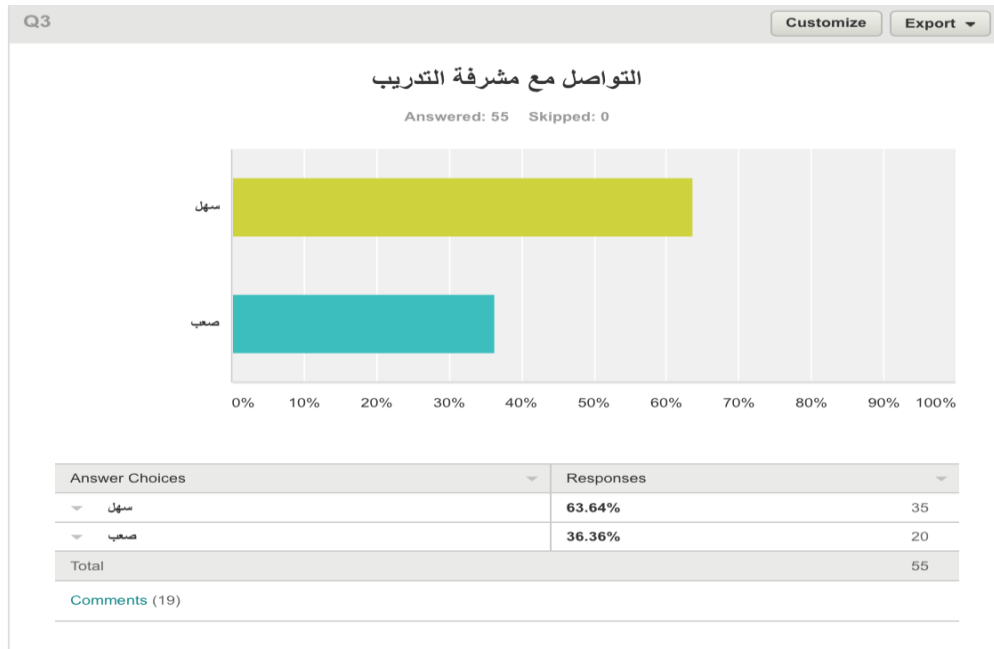
Figure 2.21: Related work survey (communication with the supervisor)
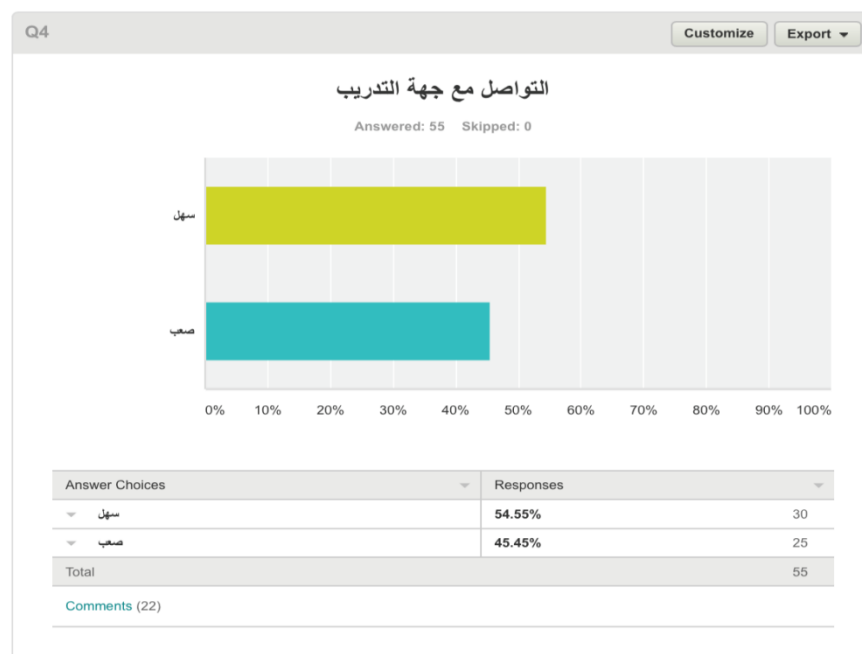
Figure 2.22: Related work survey (communication with the institution)

Table 1.1: Advantages &Disadvantages table

	Advantages	**Communicate**	**Disadvantages**
Web training blog	• Ease and simple • To understand • All student girl know the web training blog and knows how work with it • All information's about training found there	• The student communicates with the supervisor by going to supervisor's office	• The web training blog can't send notifications to student • It is traditional way in 21 st sentry
University of Dammam unit of training and development Site	• Interface site are easy to understand and clean and simple. • List of training concise and informative and there have page of training registration	• The student communicates with the supervisor by sending email or contact phone number	• The training site can't send notifications to student • General for male and female students

Salman University website for training	• Interface Easy to navigate and clear. • They have a Search box helpful features. • The design and color nice	• They have two ways to contact with supervisor • Email • Twitter	• The training site doesn't have enough information for student like training plan. • They don't have section for training Institutions. • Most section do not have complet information for students .

Site of king Feisal university	• They have a Search box to help the users find any subjects. • The training subjects are organized and contains models of training for the students.	• Traditional way " by going to the supervisors offices	• The colors of the site and its design is not good. • There are no names of proposed training institutions for students. • Some pictures of the website advertisements are not showing, this problem will be impacting the appearance of the website. • Lacking information about communication with the supervisors and their names.

Mobile application(android)	• The application will send notifications for students' devices. • Student can show all about training institutions such as: how to communicate with them and them location in maps. • In application the student can directly communicate with supervisors by chatting or call his phone office	• There messages section in the application, students can communicate and supervisor of each other and when you receive message you will receive notice on the phone	• Shortened on android software devise

Table 1.2: proposed and similar comparisons

	Create account	Chat	Rating	Comment	Location of training institution
Web training blog	×	×	×	×	×
University of Dammam unit of training and development Site	√	×	×	×	×
Salman University Web site for training	×	×	×	×	×
Site of king Feisal university	×	×	×	√	×
Mobile application(android)	√	√	√	√	√

CHAPTER 3: System Analysis
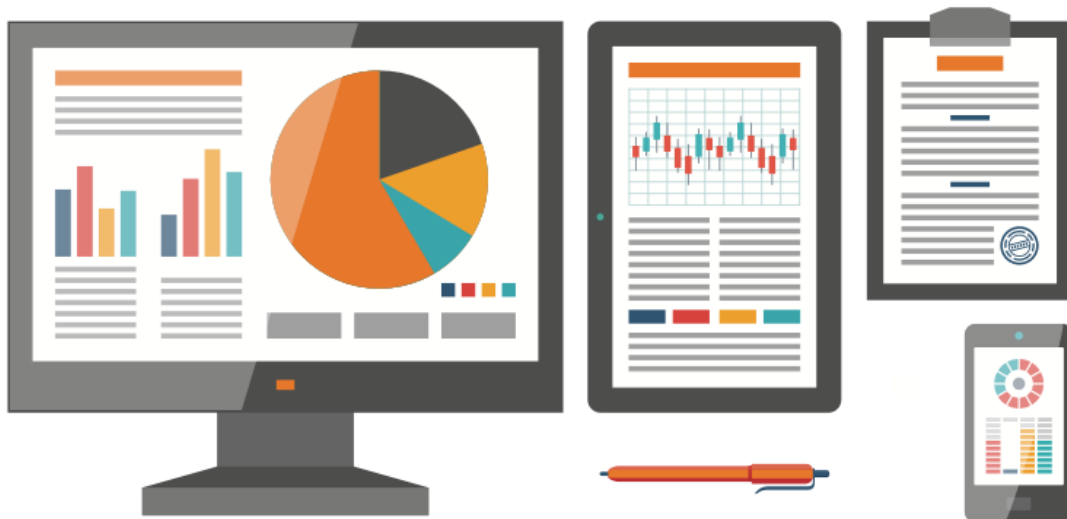
Chapter 3: System analysis

3.1 System Analysis Approach:

System analysis an important phase it divide system into its component pieces to study how these component pieces interact and work. It consist of two major task: analysis functions requirement and functional requirement document. For internship system analysis functions requirement it done by collect result from online questionnaire on the other hand the functional requirement document done by using DFD, ERD, Use Case Diagram[9] [10]

3.2 Gathering Information

In order to collect information about existing system publish an online questionnaire by use "Survey monkey" in English language It a helpful and simplify way that all supervisors and graduate students can do it and submitted in the same time and can gathering the information from all supervisors and graduation stand in a short time and less effort to interpretation the results without biased, The questionnaire contained thirteen question and it was close ended question, the total number of responders to the questionnaire was 77. See appendix for question and results.

3.3 Requirements Analysis

In this section we will present the results of analyzing requirements. Hardware and software requirement, the functional and nonfunctional requirements, and use case diagram that is a representation of a user's interaction with the system.

3.3.1 Actors Glossary

Our mobile application contain two actors table 3.1 show the actor description

Actor	Description
Supervisor	Person who will supervise the student approval and post announcement.
Student	Person who will register and send request to institute.

3.4 The use case diagram:

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of set possible sequence between systems and users in particular environment and related to a particular goal. In the following we present the actor and their tasks and the diagram of use case with its description.

3.4.1 Use case diagram:
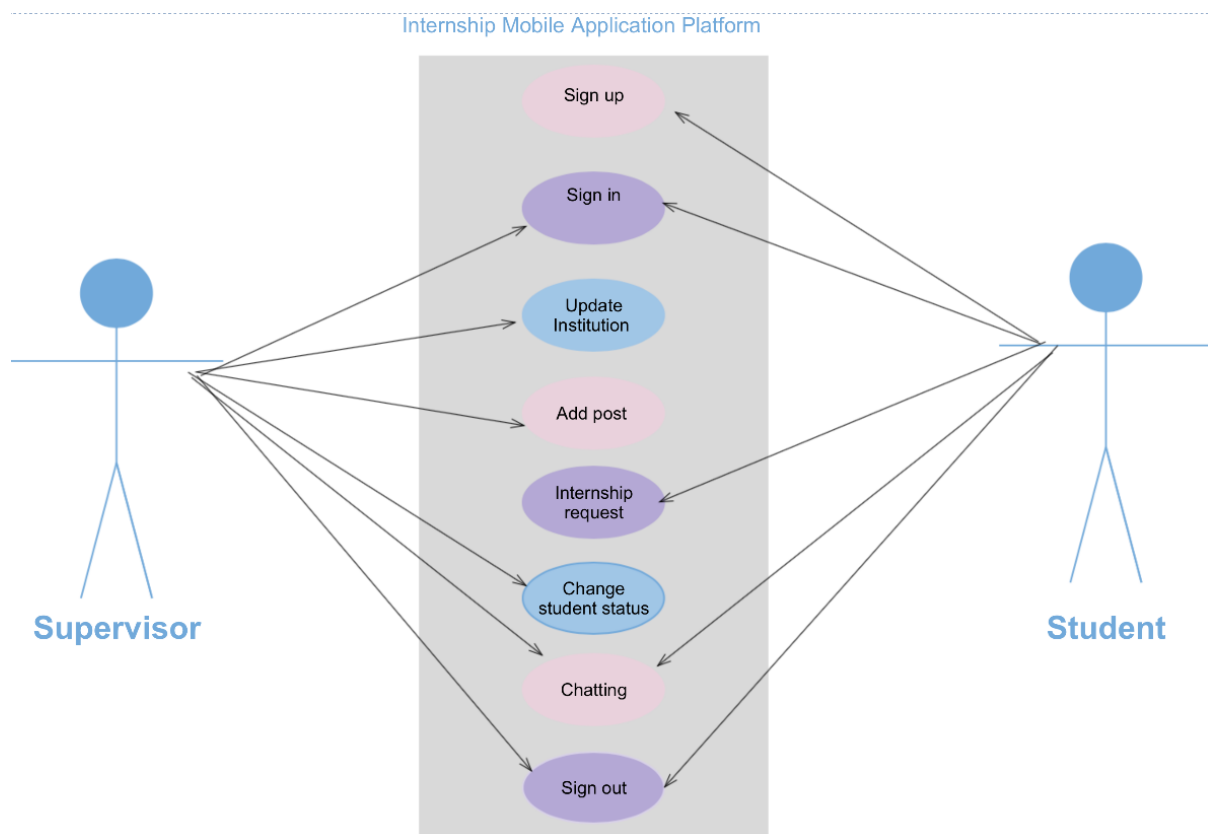
Figure3.1: Internship mobile application platform Use case

3.4.2 Actor description

Actor	Description
Supervisor	Person who manage the application and can add new institution or new list of student and chatting with student
Student	Person who register and look and select institution for internship and can chatting with supervisor

3.4.4 Use Case description

- Sign up

Actor	Student
Description	It allow users to sign up to the application in many steps: 1. Users must fill up the form contains , ID, password, department to sign up to application 2. if the users do not complete all the form information she cannot sign up.
Precondition	Actors must access the mobile application to sign up
Post condition	The system allow actors to access the system

- Sign in

Actor	Students, supervisor
Description	It allow users to access application in many steps: 1. Users must have account in application to sign up 2. if the users does not an account she must sign up.
Precondition	Actors should have ID and password in the system
Post condition	The system allow actors to log in to the system

- Update institution

Actor	supervisor
Description	Supervisors add institution this directory will contain the names of the institutions that provide training , also contain the communications ways with each institution
Precondition	Supervisors should be registered in the system
Post condition	The system allow supervisor to Update institution

- Add Post

Actor	Supervisor
Description	Supervisor must sign in and then can add any post for student

Precondition	The supervisor must sign in
Post condition	The application will allow to the supervisor to add any post

- Internship Request

Actor	**Student**
Description	Student select internship in many step : 1- Student must have account in Internship application . 2- If student doesn't have account she must sign up . 3- The institution must have available to internship .
Precondition	The institution must have green color that's mean the institution have available to internship
Post condition	You can select this institution

- Change student status

Actor	**Supervisor**
Description	1- Must sign in 2- Student request an internship
Precondition	Institution Accept or rejection the student for internship
Post condition	Supervisor can change status of student

- Chatting

Actor	**Supervisor , student**
Description	1- Must sign in 2- If student don't have account must sign up
Precondition	Supervisor and student can chatting
Post condition	The application will allow supervisor and student to chatting

- Sign out

Actor	**student**
Description	The student can sign out from application: 1- The student select "sign out " 2- The application will sign out the student
Precondition	The student must sign in in the application
Post condition	The application allow student to sign out from the application

3.5 Entity-Relationship Model

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 that system. An ERD is a data modeling technique that can help define business processes and can be used as the foundation for a relational database.

3.5.1 Our system by Entity-Relationship Model

An Entity Relationship Diagram of our system contains three entities (supervisor, institution, and Student) and each entity has a set of attributes and there are six relationships between those entities are shown in the following diagram.
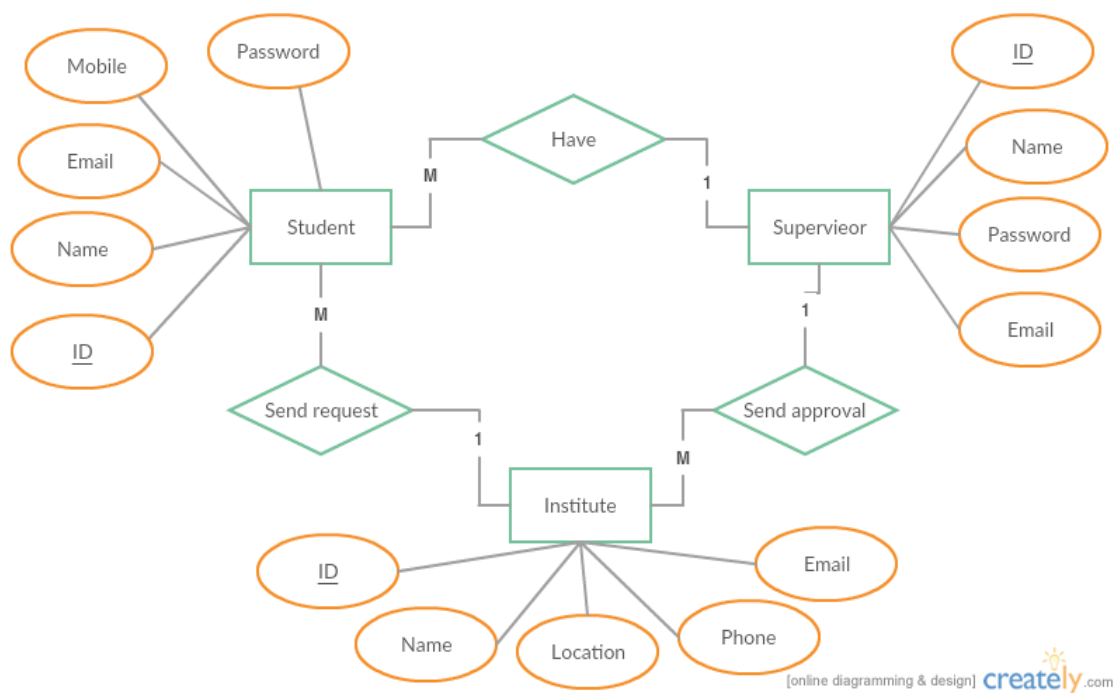

Figure3.2: internship mobile application platform ERD

Table3.2: Relationship description between entities

Number	Relation		Type	Description
1	Student	Have	Many to one	Many student can have one supervisor
2	Student	Send request	Many to one	Many student can send a request to the same institute
3	Supervisor	Have	One to many	One supervisor can have many students
4	Supervisor	Send approval	One to many	One supervisor can send many approval to students
5	Institute	Send approval	Many to one	Many institute can send approval to the supervisor

- ## **Functional Requirements**

Factional requirements capture the intended behavior of the system. This behavior may be expressed as services, tasks or function the system is required to perform. In software engineer a function also is described as a set of inputs, the behavior and outputs. Factional requirements may be collections, technical details, and data manipulation and processing and anther specific functionality that show how the use case are to be satisfied. [11]
Below are the minimum factional requirements and the description of it.

1. Coordinate approval
   The supervisor can receive approval from training institution and notice student that is accepted.
2. View and send request
   Students can view all training institution and send request to training.
3. Receive and send approval
   Training institution can receive email from student and send approval to supervisor
4. View students information
   The supervisor can view student information

5. Change student approval status
   The supervisor can change status of student approval "Red, Green or Gray".
6. Change training institution status
   The supervisor can change status of training institution "Red, Green or Gray".

- ## **Non Functional Requirements**

Non factional requirements include constraints and qualities. Qualities are properties or characteristics of the system that its stakeholders care about and hence will affect their degree of satisfaction with system .constraints are not subject to negotiation. [12]

1. User-friendly interface
The design of user interface should be user friendly and easily understand for end user. The icon applied in the system must unambiguous and
2. Accessibility
The system ensures the ability of users to access and benefit from the system.
3. Security
The system ensures the security by verifying user's identity using the username and password during log in. This is to prevent information from unauthenticated user.
4. Reliability
The system should be reliable ad shall not cause unnecessary downtime.

3.6 Data Flow Diagram:

The Data Flow Diagram (DFD) is a graphical representation of the flow of data through an information system. It enables you to represent the processes in your information system from the viewpoint of data. The DFD lets you visualize how the system operates, what the system accomplishes it will be implemented, when it is refined with further and how specification.13 Figure 3.6 show context DFD Diagram.

It shows how information enters and leaves the system, what changes the information and where information is stored. The purpose of a DFD is to show the scope and boundaries of a system as a whole. It may be used as a communications tool between a systems analyst and any person who plays a part in the system that acts as the starting point for redesigning a system.

- **Diagram Notations:**

1. **External Entity**

An external entity can represent a human, system or subsystem. It is where certain data comes from or goes to. It is external to the system we study, in terms of the business process. For this reason, people used to draw external entities on the edge of a diagram.
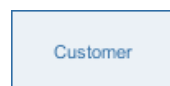
2. **Process**

A process is a business activity or function where the manipulation and transformation of data takes place. A process can be decomposed to finer level of details, for representing how data is being processed within the process.
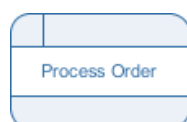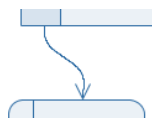
3. Data Store

A data store represents the storage of persistent data required and/or produced by the process. Here are some examples of data stores: membership forms, database table, etc.

4. Data Flow

A data flow represents the flow of information, with its direction represented by an arrow head that shows at the end(s) of flow connector.
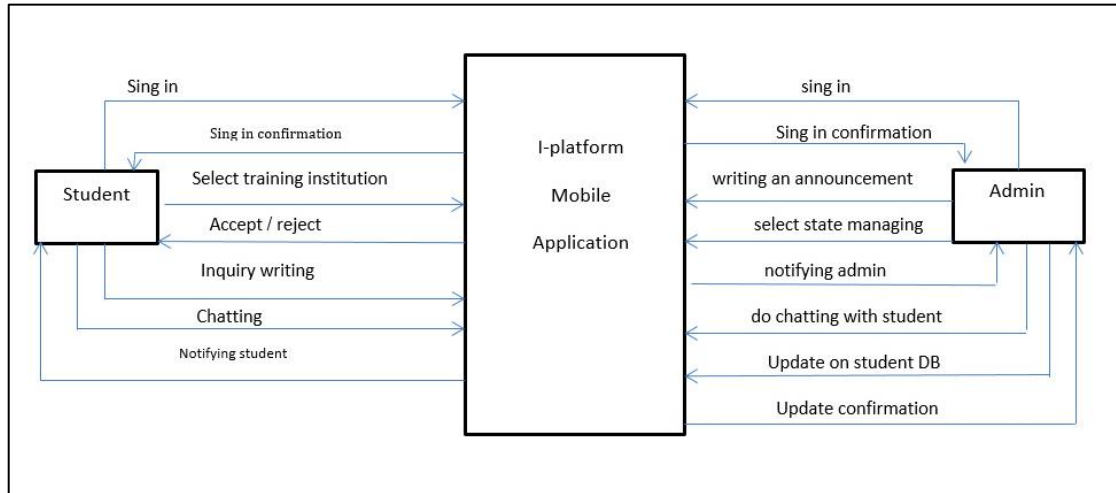
3.6.1 Context diagram:

Figure3.3: internship mobile application platform context diagram
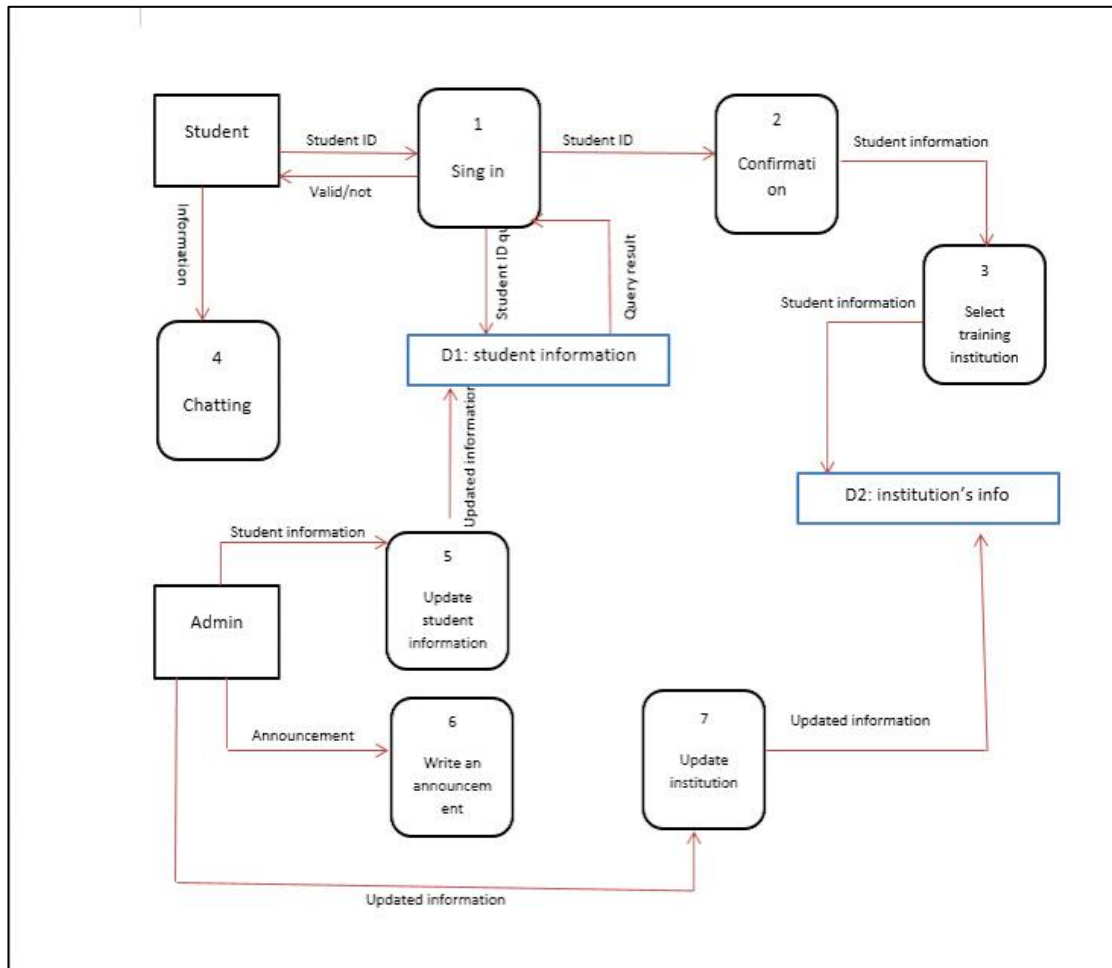
3.6.2 Level 1 DFD diagram:

Figure3.4: internship mobile application platform level 1 DFD diagram.

CHAPTER 4: System Design

Chapter 4: System Design

4.1 introduction

In this chapter we will learn more about Android Studio including its architecture and its user interface. We will see snapshots from Android Studio as a prototype. Also; in this chapter we will have description of the interface that is going to be created.

4.2   System architecture
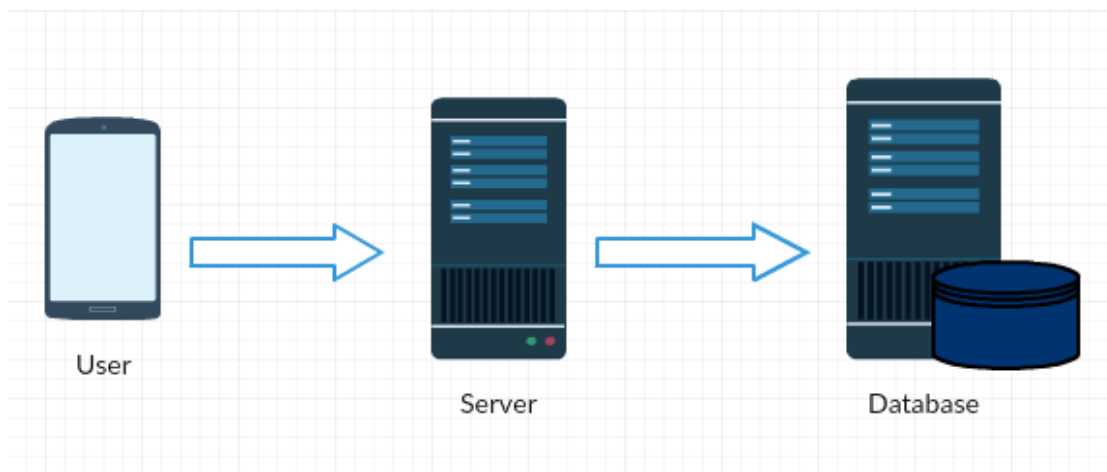
Figure4.1: system architecture

The design architecture in the figure 4.1 is inspired by 3-tier architecture that separates the presentation, the business and the data access layers.

1- The presentation layer is the user inter face(UI) which displays data to the users and accept input from the user
2- The business layer will process the business logic such as; data processing it will work as a middle dynamic content processing.
3- Data Tier: Houses database servers where information is stored and retrieved. Data in this tier is kept independent of application servers or business logic. [13]

4.3 Hardware and software requirement

- o **Hardware**
- Mobile that is able to access the internet at high speed.
- Devises connect to the Internet such as Digital Subscriber Line (DSL), Broad Band Modem as well as Internet Service Provider (ISP).
- Server: computer server with high speed and large capacity.

- o **Software**
- Android studio to programming our app.
- Android operating system.
- Android studio to design our app.
- Database management system.
- Google Play store.
- Email is required to communicate between members.

Why Android studio?

- Android is an open source platform where anybody can design their application, it is becoming much better in terms of user friendliness and applicability.
- Does not require a particular operating system or a certain environment or a specific language such as IOS.
- There are many devices compatible with android such as (Samsung, Tablet, Motrella and HTC) as the opposed to what it is for IOS compatible with few of devices such as iPhone and iPad only.
- Expanded template support for Google services and various devices types.
- Rich layout editor with support for theme editing.

Programing Language

       o **Java**

Java is a programming language expressly designed in the distributed environment of the Internet.

Why Java?
- It is easy to learn.
- Java is object oriented.
- It is platform independent.
- Java is distributed.
- It is secure.

- **Database**
  In our project we need to use two databases:
- One for university database.
- The second for application extra features.

4.4 User Interface Design:

❖ User Interface Design: The interface of application is supervisor and student.
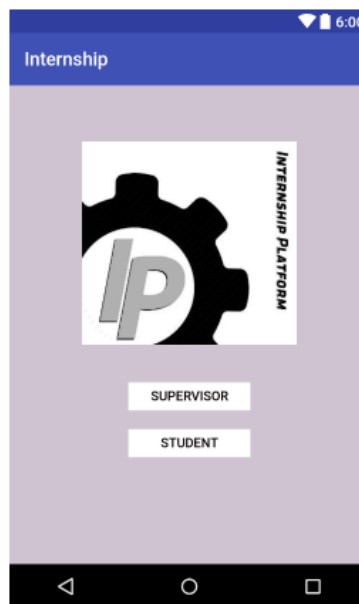❖ The design of the "Home "page is show in figure 4.2.

Figure 4.2: Interface design of application

❖ SIGN IN supervisor in this page the supervisor can enter his name and password.

Figure4.3: Sign in supervisor

❖ Sign in student: student must fill up the form contains, ID, password, sign up to application.

Figure 4.4: Sign in student

❖ If the student does not have an account she must sign up.
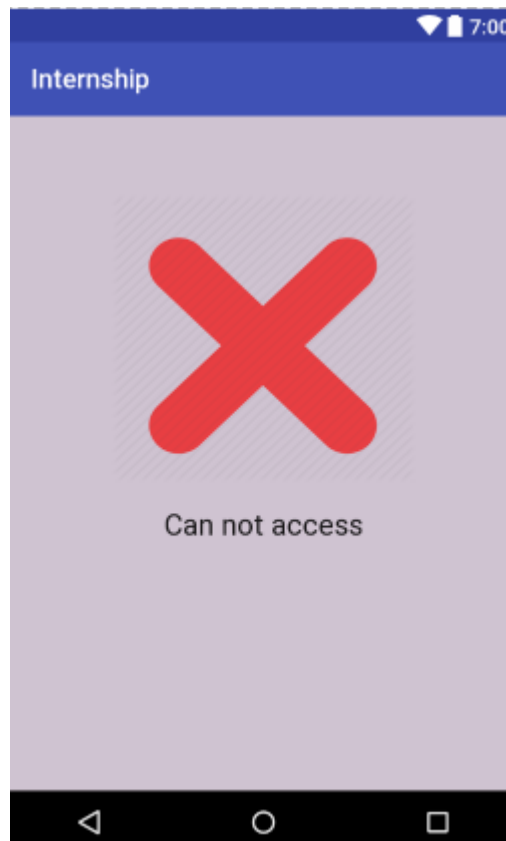
Figure 4.5: Cannot access

❖ If a student has an account in the application will successfully access.
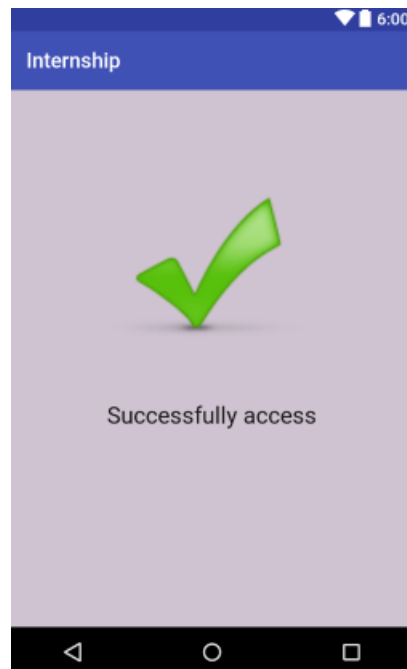
Figure 4.6: Successfully access

❖ Home for student can show the Announcement only and have icons for chatting with Supervisor.
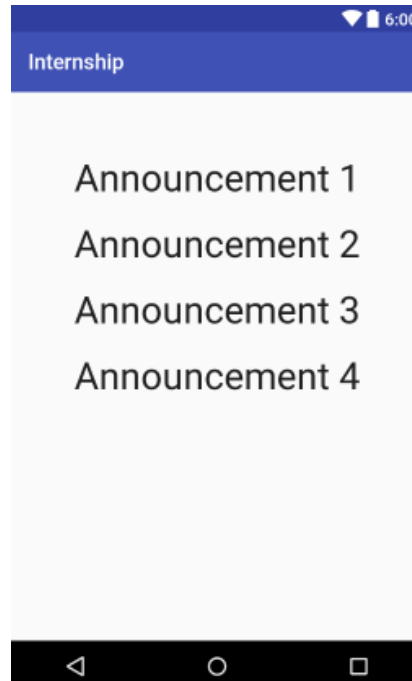
Figure 4.7: Home for student

- ❖ Institution section every section have phone number, email and location.
- ❖ Student can rate the Institution.
- ❖ Student can write review.
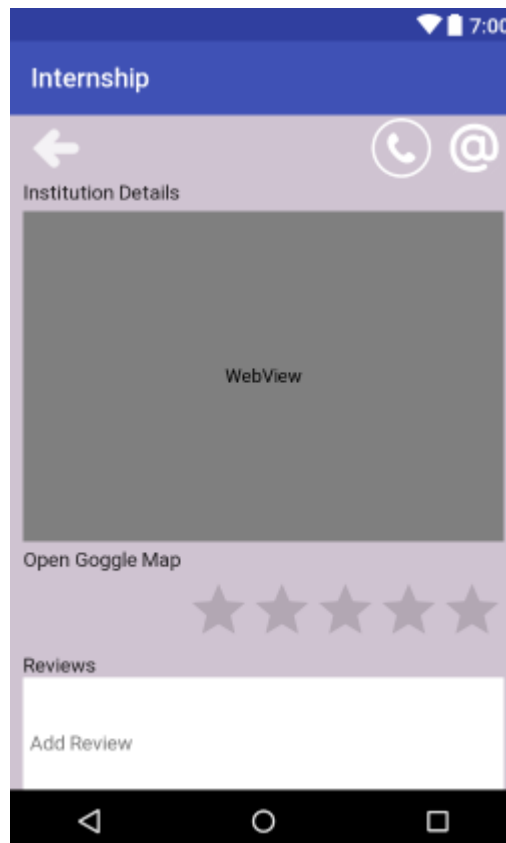
Figure 4.8: Institution Details

❖ Student can send report to supervisor by attach.
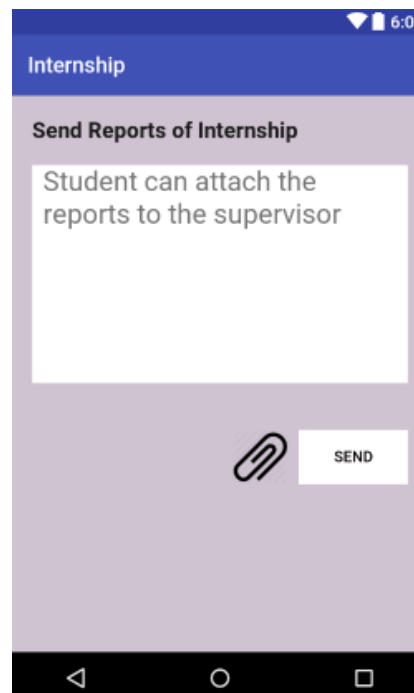
Figure 4.9: Attach report

❖ Personal information for student can edit First name , last name , phone number
❖ Application status have 3 parts Green , Grey , Red:
  • Green: The institution accept the student to internship.
  • Grey: Unknown.
  • Red: The institution doesn't accept the student to internship.
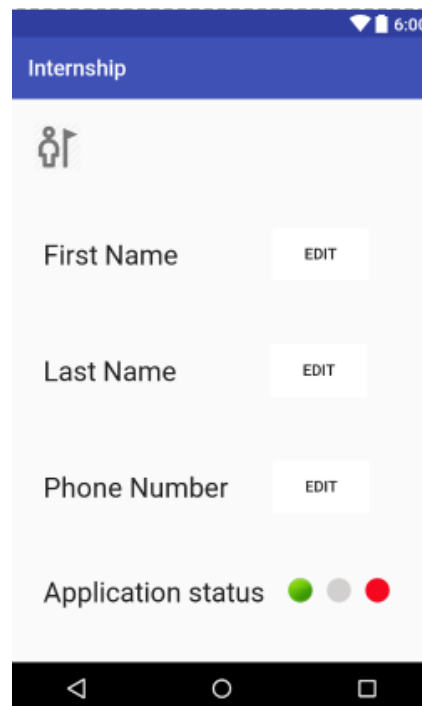
Figure 4.10: Personal information for student

❖ Home for supervisor have icon can click to add post and have icon for chatting with student and see the announcement.
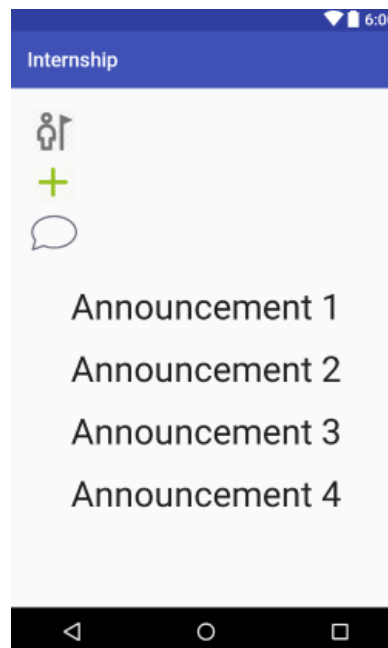
Figure 4.11: Home for supervisor

❖ Add post for supervisor can write announcement.
❖ Supervisor can post attachment.
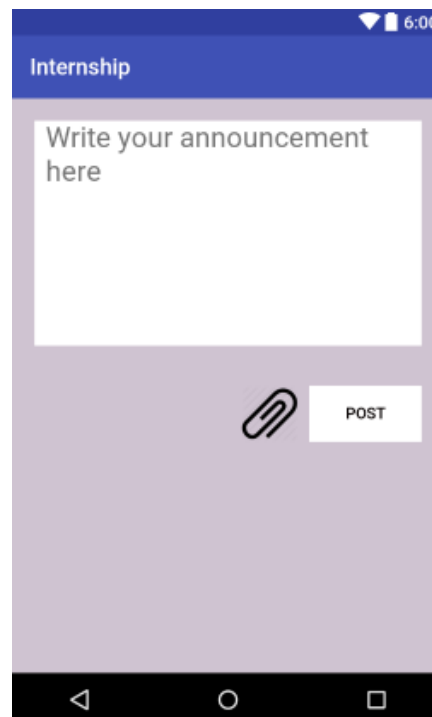
Figure 4.12: Post for supervisor

Chapter 5: Implementation

Chapter 5: Implementation

5.1 Implementation requirements:

In this suction will describe how our application is implemented, which programming language was used and how database built. The implementation process concentrates on factional and non-factional requirements execution.

- o **Hardware requirement**
- Mobile that is able to access the internet at high speed.
- Devises connect to the Internet such as Digital Subscriber Line (DSL), Broad Band Modem as well as Internet Service Provider (ISP).
- Server: computer server with high speed and large capacity.

- o **Software requirement**
- Android studio to programming our app.
- Android operating system.
- Android studio to design our app.
- Database management system.
- Google Play store.
- Email is required to communicate between members.

5.2 Implementation details:

In this suction we will display a brief description of how our application was actually implemented using the specific software and hardware requirements. The implementation phase is the next phase after the previous phase like plane, analysis and design. We have started by installing the main development tools like:

- Android Studio
- Java SDK
- Android SDK
- SQL database server

In our application we have implemented the database using SQL database. The database is composed of 3 relation tables are as following:

- Supervisor: keeps information about supervisor.
- Student: keep information about students.
- Institute: keep information about Institute.

5.3 I/O screens:

Now you can find the main input and output screens of internship platform application.

Supervisor I/O Screens.

Supervisor interface screens are as follows.
It's contain the applications logo and Supervisor and Student buttons.
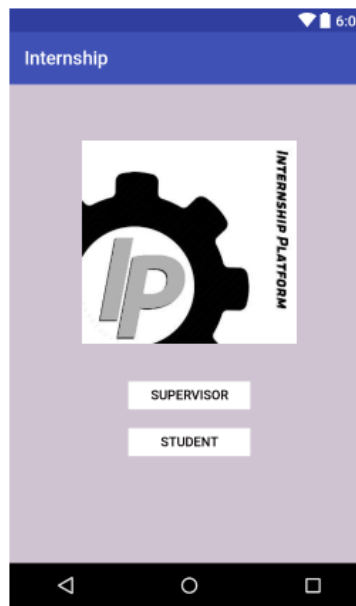
Figure 5.1: Interface design of application

Supervisor I/O Screens.
The supervisor need to enter user name and a password.
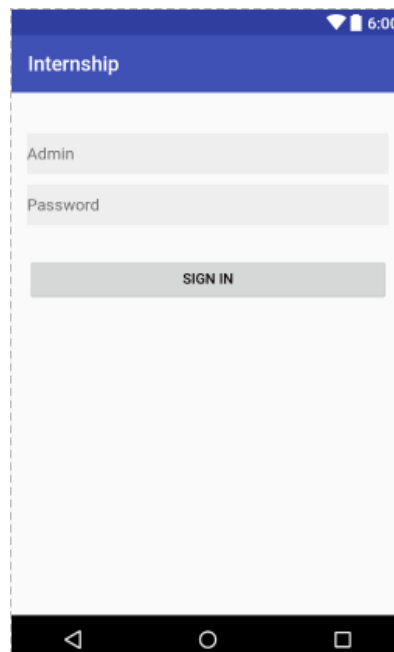
Figure 5.2: login for supervisor

Supervisor I/O Screens.

This screen will show when the access successful.
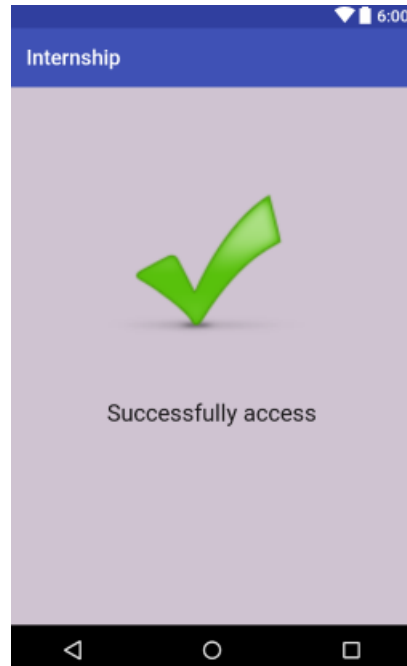
Figure 5.3: success login

Supervisor I/O Screens.

Supervisor screens are as follow. Starting from the home page, and the how the admin login and performing the functions designed specifically for him/her.
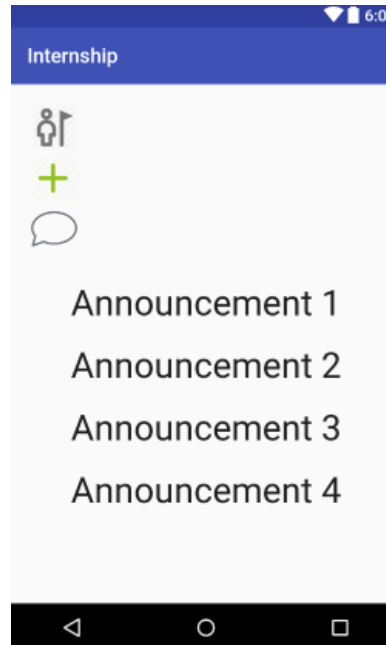
Figure 5.4: announcement page

Supervisor I/O Screens.

In this page the supervisor will be able to add announcements and attach photos.
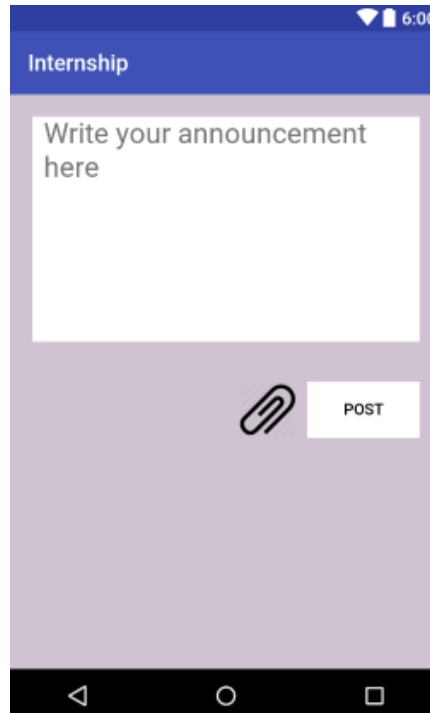
Figure 5.5: add announcement page

Student I/O Screens.

Student screens are as follow. Starting from the home page, and the how the student login and check for the announcements and the request status.
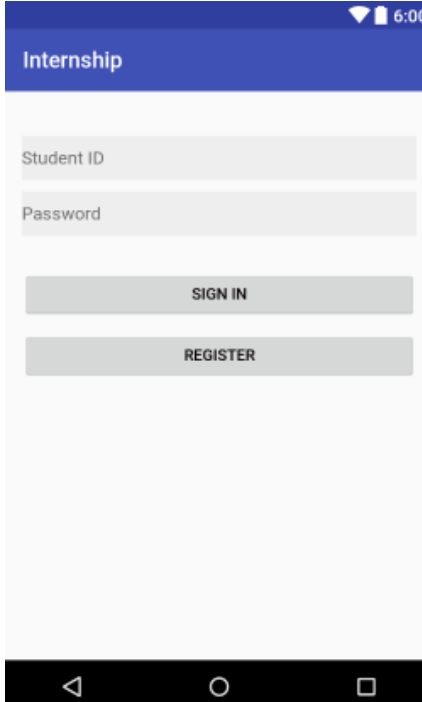
Figure 5.6 : student login

Student I/O Screens.

This screen will show when the access successful.
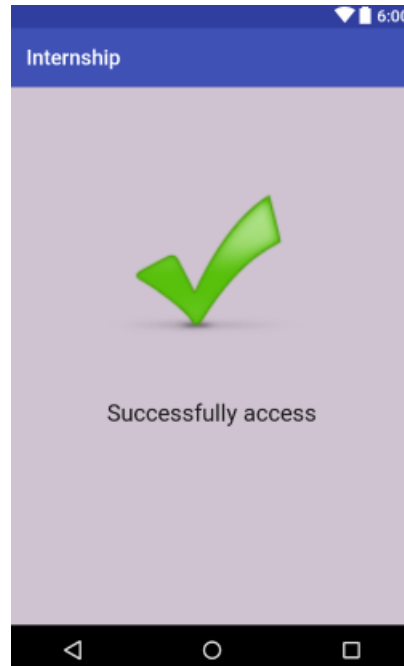
Figure 5.7: success to login

Student I/O Screens.

This the home page for the student.
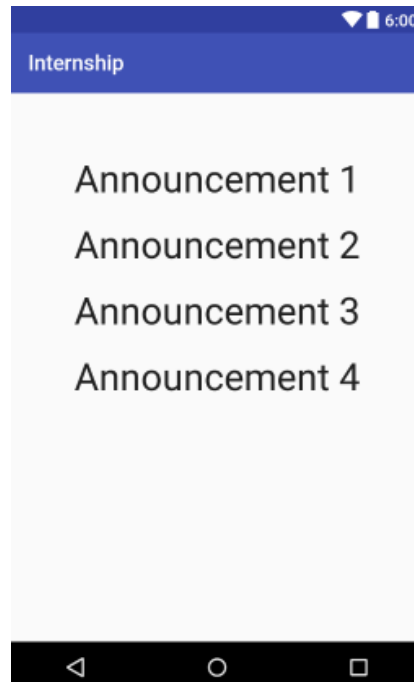
Figure 5.8: home page for student

Student I/O Screens.

This screen will show when the access successful.
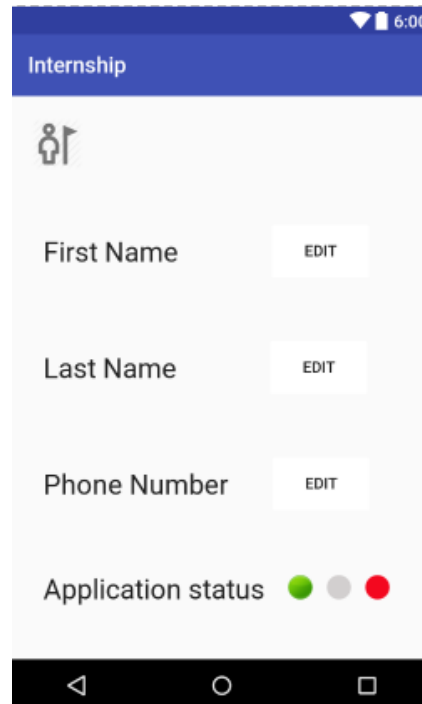
Figure 5.9 : student profile

Student I/O Screens.

This screen will show when the access successful.
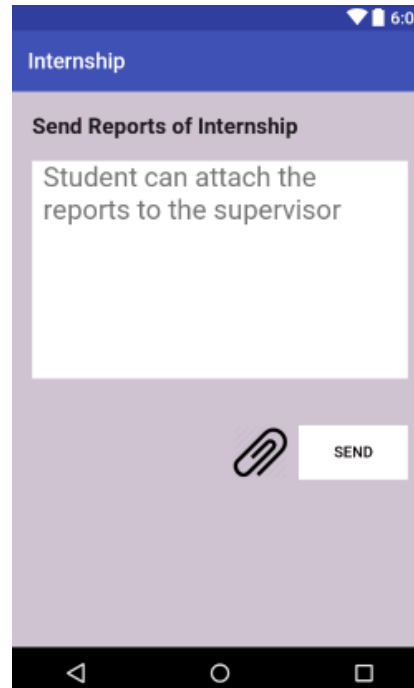
Figure 5.10: send request page

Student I/O Screens.

This is the chatting screen the student will be able to chat with the supervisor.
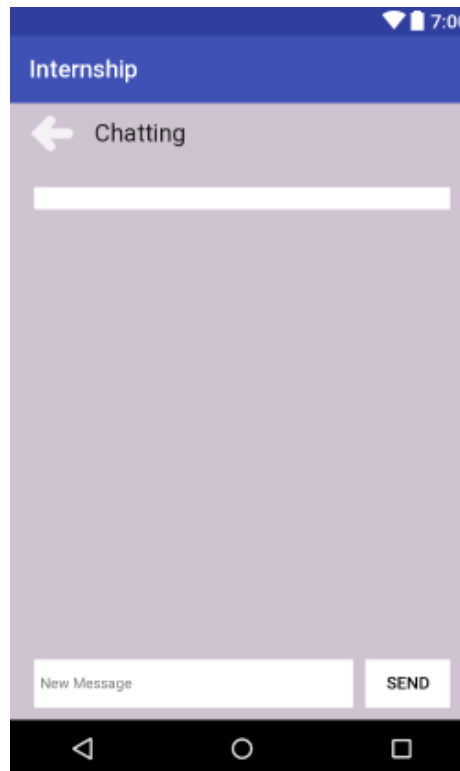
Figure 5.11: chatting page

Chapter 6: Testing

Chapter 6: Testing

After our application has been implemented, we have tested it to verify
that it has been applied functional and non- functional requirements that has been
specified in chapter three.

Testing is a process of executing an application with the intent of finding the software
bugs. [14]

- It can also be stated as the **process of validating and verifying** that an
  application:
  - o Meets the technical requirements that guided it's design and
    development
  - o Works as expected
  - o Can be implemented with the same characteristic.

6.1Test plan:

A successful test is a test that makes the application perform incorrectly and so
exposes a defect in the application, we created main test plan to test our application
strategies.

6.2 Objectives:

This stage is very important for software development, as it tends to find out many
bugs that the users will probably be able to find on their own. Addressing these
issues and fixing them before the application is published in making the
application more likely to launch successfully in the market. It also helps in
finding out how the requirements match the implementation.

The reasons of executing a test plan are as follow:

- Split the application into smaller segments to test each segment's features and problems.

- Having a detailed description of the sent information and the expected outcome.

- Discovering problems that may arise to users while using the application.

- Fixing the existing bugs through a predefined procedure.

- Setting a set of acceptance conditions for the built application.

6.3 Test scope:

Testing will cover the functionality of database component and the application features. We will test the application using the following test strategies as shown in the table:

Test strategies	Features to tested	Test activates	Duration
Unit test	• Database script files • Procedures validation • Individual tables • Independence between tables	Checks the validity of all database components.	5 days
Functional test	• Register • Sing in • Sing out • Add comments • Chatting	Comparing the result for a given input against the specification.	4 days
Acceptance test	• Navigation • Accessibility • Availability • User friendly • Understandability	Interface is tested to reach acceptable result.	1 week

Table: 6.1 test scope

6.4 Types of Testing:

This section describes the different type of testing which may be used to test application during the system development life cycle. [14][15]

1- **Unit testing**: It is basically done by the developers to make sure that their code is working fine and meet the user specifications.

2- **System testing**: In system testing the testers basically test the compatibility of the application with the system.

3- **Acceptance testing**: Acceptance testing are basically done to ensure that the requirements of the specification are met.

6.5 Test activity schedule:

Test activity schedule shows in the table 6.2 are estimation of how long it will take to complete the testing phase including all its components.

No	Test activity	Output	Duration
1	Test plan	Test plan	3 days
2	Develop test case	Test case	3 days
3	Execute test	Record the application problem	3 days
4	Evaluate test	Correct the recorded problem	1 week
5	Document test result	Test result	5days

Table: 6.2 activity schedule

6.4 Testing task:

Here are some of the functions in our application, and whether it was success or fail.

function	Success /fail?
Register to the application "student"	**Success**
Log in "supervisor"	**Success**
Log in "student"	**Success**
Add post	**Success**
Chatting	**Success**
Change student status	**Success**
Update training institution	**Success**
Rating	**Success**
Add comments	**Success**
Sing out	**Success**
Send notice	**Success**

Table 6.3 testing task

No	Function	Input	Description	Action	Expected Result	Actual Result	Status
1	Register to the application "student"	student ID , password , name , Mobil , email	Student enter all required information (student ID , password , name , Mobil , email)	Click Register	Student register to the app	As expected	**Pass**
2	Log in	student ID , password or supervisor ID , supervisor password	Student and supervisor enter correct information (student ID , password)	Click log in	Student and supervisor will log in to the app	As expected	**Pass**
3	Add post	Information and attachment	Supervisor will add new post	Click post	The post added to the homepage	As expected	**Pass**
4	Chatting	Text message	Student will sent message to supervisor	Click send	The text message will sent	As expected	**Pass**
5	Change student status	Non	supervisor will change student status color	Click change	The student status will change	As expected	**Pass**
6	Rating	Non	Student will choice the rating of institution	Click Rating	The rating will updated	As expected	**Pass**
7	Add comments	Text information	Student will add comments to the training institution information page	Click send	The comment will added	As expected	**Pass**
8	Sing out	Non	Student and supervisor wont to log out from the application	Click sing out	The Student and supervisor log out from the	As expected	**Pass**

					application		
9	Send notice	Non	When supervisor add post the application will send notice to the student phone	Non	The notice will sent to student phone	As expected	**Pass**

Table 6.4 application test case

6.5 Testing Results:

Team members have achieved an integrated and successfully working through conducting a different set of tests include unit-testing and system testing.

The figure below show the student want to register in to the application but she does not complete requirement information "email" then the application shows notice of errors registration.
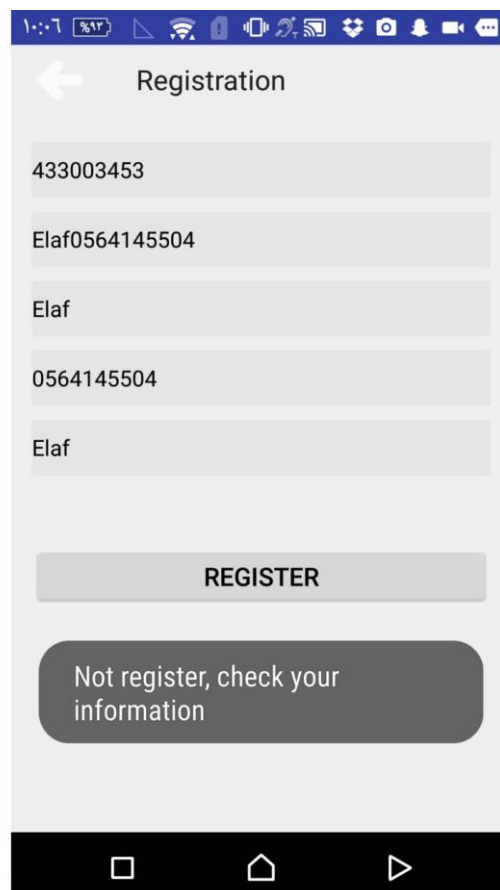

Figure6.1: error in register

The figure below show the student want to log in in to the application but she enter error information "password or ID" then the application shows notice of cannot access.
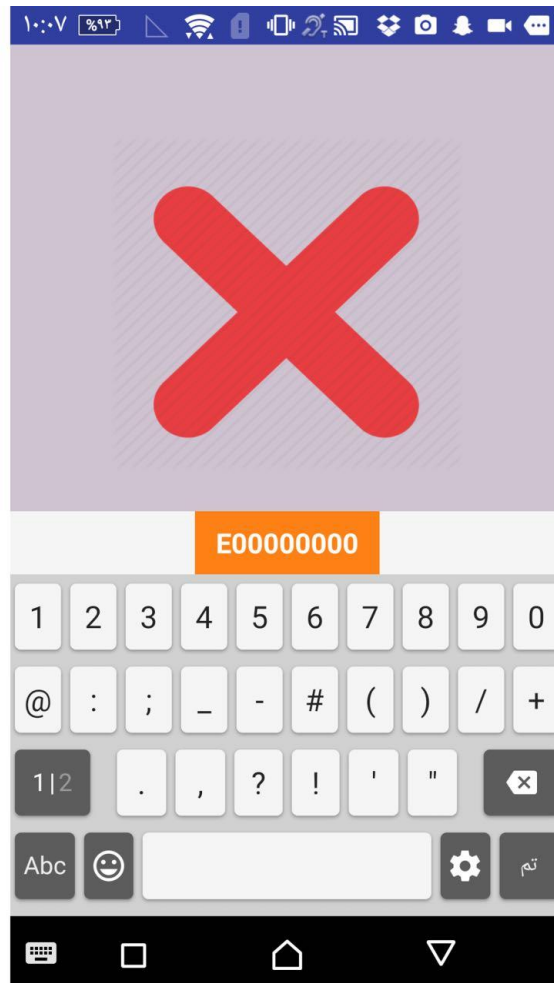

Figure 6.2: cannot access

Chapter 7: Conclusion

Chapter 7: Conclusion

Internship Platform mobile application, this application will proved a lot of facilities to both teachers and students, the application will show the student all the institutions that provide the necessary training for theme. It will also help the communication with the supervisor, the supervisor is able to post announcements that the student will get notified with.

Advantages:

- ✓ It is fast, efficient and reliable

- ✓ Avoids data redundancy and inconsistency

- ✓ Provides more security and integrity to data

- ✓ Provides notifications

7.1 Evaluation

During performing test case we try to make user –entry error (mistake) which result in a defect (bug) in the application source code. If there is any errors executed in certain situation the application will shows wrong result.

As a result of all test internship platform achieved an error-free application, gained user satisfaction and showed the expected result. Table 7.1 and 7.2 below shows the evaluate of non-functional and functional requirement.

Requirement	Description	Status
Security	We have provide our student with student ID and password to identify them self before log in in to application	Pass
Accessibility	Ensure the ability of student to access	Pass
Usability	Our design shows a simple user-friendly interface and easily understand and memorize our application	Pass
Privacy	Ensure that all student information is confidential and can't be viewed by anyone , also user identification cannot be modified by other student	Pass

Table: 7.1 non-functional requirement

Requirement	Description	Status
Register to the application "student	Student enter all required information (student ID , password , name , Mobil , email)	Pass
Log in	Student and supervisor enter correct information (student ID , supervisor ID , password)	Pass
Add post	Supervisor will add new post	Pass
Chatting	Student will sent message to supervisor	Pass
Change student status	supervisor will change student status color	Pass
Rating	Student will choice the rating of institution	Pass
Add comments	Student will add comments to the training institution information page	Pass
Sing out	Student and supervisor wont to log out from the application	Pass

Table: 7.2 functional requirement

Working on this project from scratch to the very end was challenging and difficult judging from the poor knowledge and background in mobile development and programing language, starting from the time needed to learn and practice to the hard situation regarding designing android application interfaces. However, it was indeed a beneficial instructive journey in order to develop the application.

By working on the project has been achieving the following:

 1. Display all the information the students need about the training institutions.

2. Provide all the resource and document that the students need such as (training plan, weekly report and attendance report).

3. Application can notify student if there any announcements are posted.

This application had a high performance with friendly interfaces; it is so efficiency and usability.

7.2 Future work

There are many features that could add it into the application, which are:

1- Provide all the college in the university.

2- IOS application.

3- Provide Arabic support

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Appendix:
Questionnaire:

We made the questionnaire by survey monkey; it is shared through social networking and messaging applications: WhatsApp, twitter.

The questionnaire contains 8 questions; we came up with 166 responses.

1- What year did you graduate or will graduate in?

We came up with 100% 1436-1437.

2- What semester will have your internship in?

We came up with 10.53% in the second semester, and 89.47% in the summer semester.

3- Is you institution will be in Riyadh or out?

We came up with 94.74% in Riyadh, and 5.26% out Riyadh.

4- Is your communication with your supervisor easy or difficult?

We came up with 63.64% easy, and 36.36% difficult.

5- Is your communication with your institution easy or difficult?

We came up with 54.55% easy, and 45.45% difficult.
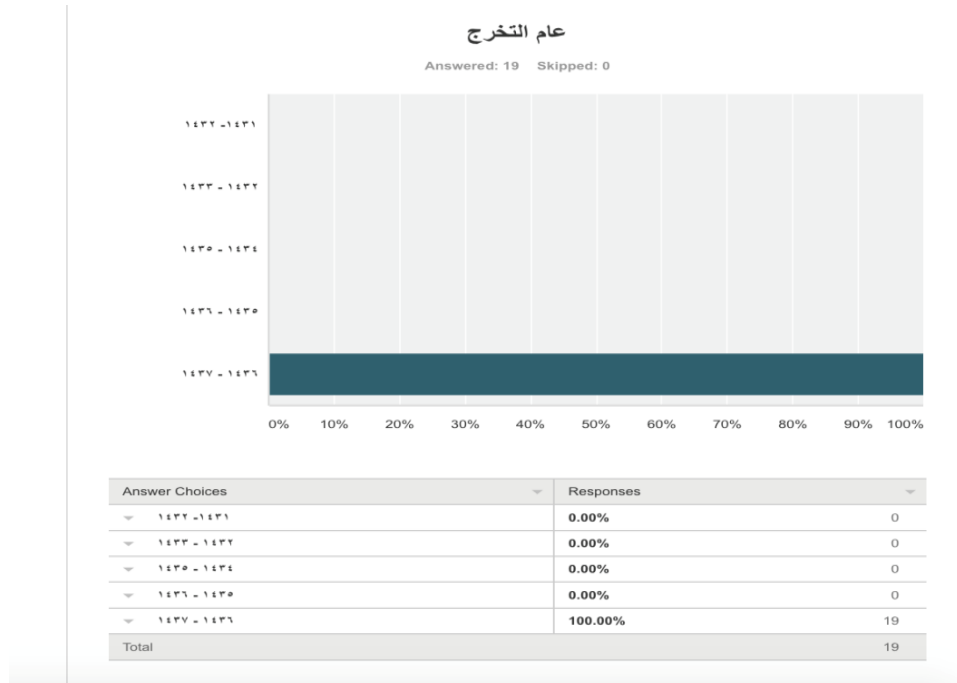
The questionnaire sample is below:

عام التخرج

Answered: 19   Skipped: 0

Answer Choices	Responses	
١٤٣٢ ـ ١٤٣١	0.00%	0
١٤٣٣ ـ ١٤٣٢	0.00%	0
١٤٣٥ ـ ١٤٣٤	0.00%	0
١٤٣٦ ـ ١٤٣٥	0.00%	0
١٤٣٧ ـ ١٤٣٦	100.00%	19
Total		19

Figure 4.14: Related work survey (graduation year)

Figure 4.15: Related work survey (training time)

هل هي بداخل الرياض أو خارجها ؟

Answered: 19   Skipped: 0

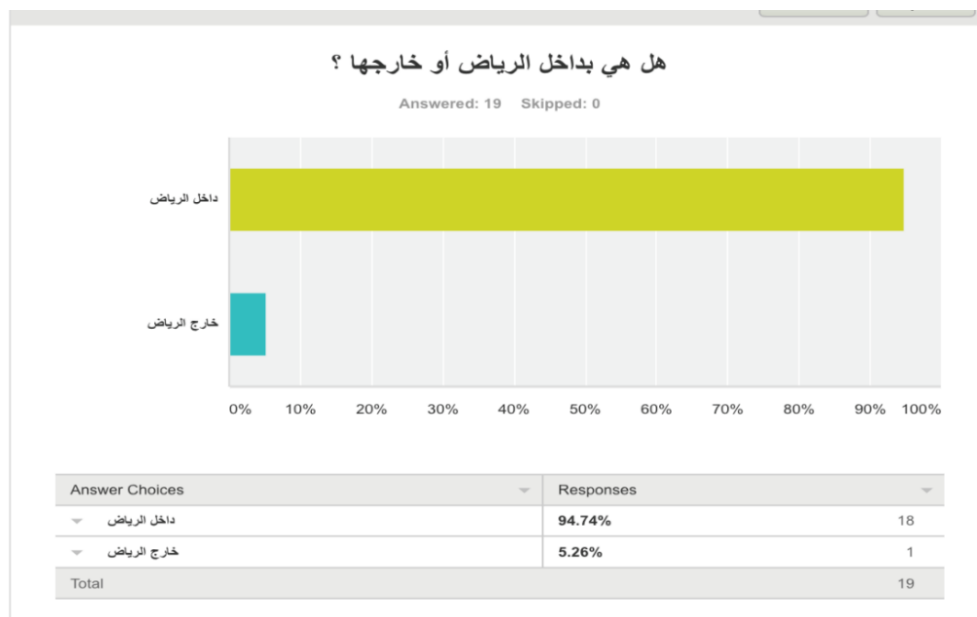| Answer Choices	Responses	
داخل الرياض	94.74%	18
خارج الرياض	5.26%	1
Total		19

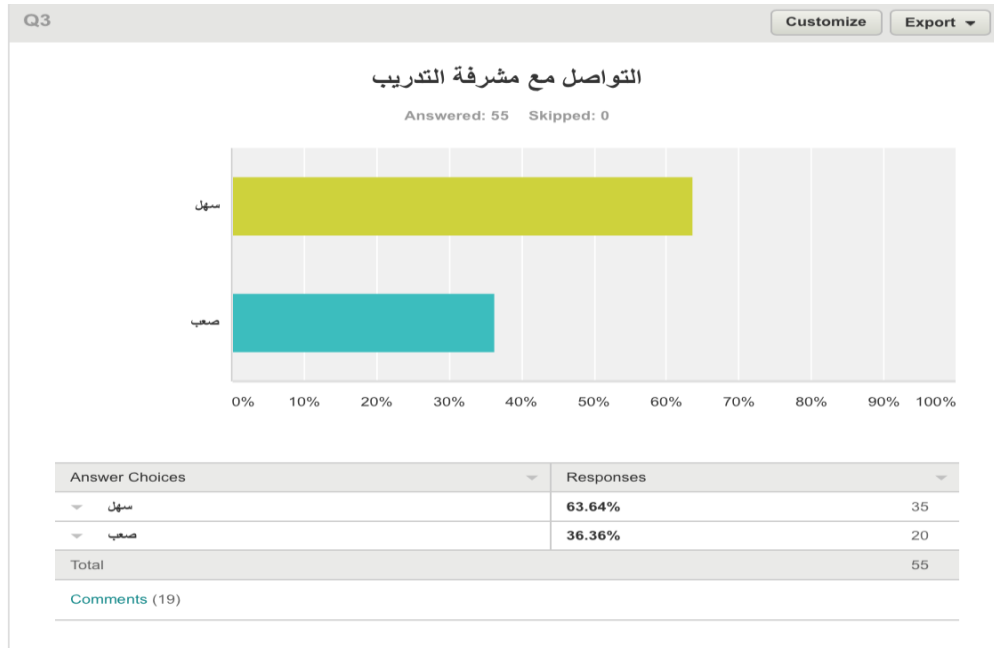Figure 4.16: Related work survey (city of training)

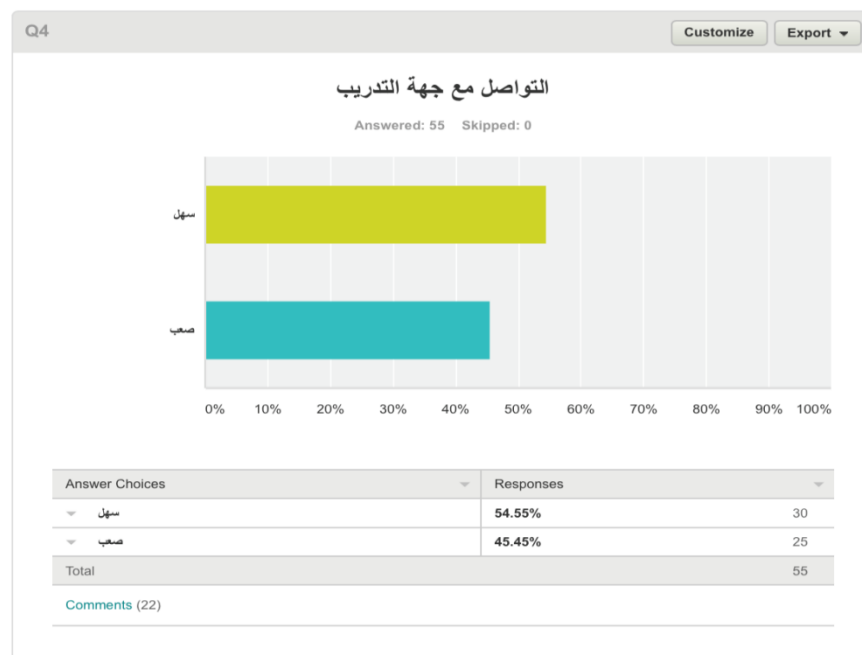Figure 4.17: Related work survey (communication with the supervisor)

Figure 4.18: Related work survey (communication with the institution)