CONTENTS

CHAPTER 1

INTRODUCTION

1 Introduction

We are making the web portal for a reputed institute of Karachi located in Defence Housing Authority Phase – VII Named as "Hidaya Academy". Hidaya Academy is a Professional and Well-disciplined Institute of traditional Islamic learning for Dars-e-Nizami. It strikes a good balance between being progressive in its outlook whilst holding fast to traditional Islamic values. A reputed Islamic institute registered and recognized by Wifaq Ul Madaris Pakistan, the institute offers Darse Nizami, Weekend Courses , Short Courses, Workshops and Seminar on different Islamic chapters .Special-care is taken to ensure good tarbiyah and nurturing of students. It incorporates their ideas and concerns with utmost flexibility to the furthest extent possible. This project is providing the solution for "Hidaya Academy" so, they can conduct classes online in effective manner. In teacher side panel teacher can conduct the class for those student who will enroll in that particular course, teacher can also record the lecture of that particular. In Student side panel student can enroll in course by using sign up and after admission formalities student can enroll in the course namely "Darse Nizami". The project is approaching to the solution of a basic problem of online classes in an effective manner. It will build a platform through which teacher of an institute and student can easily communicate and will be conducted in more professional manner.

1.1 Problem Statement:

The institute is giving free online classes for different Islamic courses and mainly for "Darse Nizami" (8^{th} Year Aalim e Deen Course).The institute prefer the software "skype" for their online classes but they are facing so many problems and limitations now so they are looking for an online web based portal for their institute that will make ensure there will be no any kind of problems that were faced by the students and faculty during their classes. Following are the problems faced by institute.

- Differentiating students and their classes.
- No automated attendance system.
- No automated marks / examination system.
- No automated maintained database.
- No automated Past records
- No proper class schedule.

1.2 Aim Statement:

- A web based portal that will solve their problems facing by both students and teachers.
- There will be an easy and simple portal according to their needs.
- Students and teachers can communicate in a more proper manner.
- Proper Management System.

1.3 Objectives

The objective of this project is to build a online Web Portal for Hidaya Academy that will help the students and faculty to conduct classes and make this processes easy for them in every possible way, by providing online facilities to students and faculty. There will be an online web based portal with proper functionalities according to the academy's requirement. Students and teachers can communicate in a more proper manner. This will be real world phase for the students where they will attend the classes from their homes. Both students and teachers will be online to attend the classes where students can see teachers and if required they can also ask the questions from teacher. In this project, a complete module of Learning Management System is present, which provides to Hidaya Academy, a way to view their academic progress.

Following are some major objectives of this project.

- Developing a platform for communication between student and teachers.
- Make it convenient for online classes.
- Student can able to see their subjects, class timing and upcoming events.
- This is a very cost-effective method because student can take class from their respective homes.
- This reduces the cost of transportation.
- Student can give exam from their home by taking their answer script pictures.
- It is very convenient for the overseas Muslims living in the Europe having no reputed Islamic
- Institute in their countries are able to conduct online classes through this web portal with Hidaya Academy.

1.4 Proposed System

This Learning Management System is a website which consists of module. The website is easy to use which means, user finds no hardship in interacting with the website as not all of the population is cent percent as literate. The interface is user friendly.

In this website, authorization takes place in academic module because academic data of the Hidaya Academy is on the database and the database is linked with the website, which means only the admin is authorized to access and visualize the academic data. This feature is only meant for the authorized person.

The features of the website are defined as under:

1. Virtual Classroom
2. Dashboard
3. Sign in/Sign Up Process
4. Forgot Password
5. Interview
6. Group Chat
7. White Board
8. Availability of Books
9. Recorded Lecture
10. Attendance System
11. Examination System
12. Marks / Sims
13. Students/Teachers Profile
14. Result Upload
15. Notice Board
16. Academic Calendar

1.5.1 IN SCOPE

- Virtual Classroom for student and teacher interaction.
- 2. Accuracy can also be measure of the proposed system.
- 3. This system can be useful for teacher for online teaching.
- 4. This system will give accuracy, time management.

1.5.2 OUT SCOPE

- As Hidaya Academy is providing their service free of cost so there is no finance details.

1.6 PROJECT ASSUMPTIONS

In order to identify and estimate the required tasks and timing for the project, certain assumptions and premises need to be made. Based on the current knowledge today, the project assumptions are listed below. If an assumption is invalidated at a later date, then the activities and estimates in the project plan should be adjusted accordingly.

- Assumption #1: Availability of PC/Laptop.
- Assumption #2: Availability of Internet.
- Assumption #3: Availability of browser.
- Assumption #4: Availability of Email Address.

1.7 Project Risks

Risk Area	**Level (H/M/L)**	**Risk Plan**
1. Server not working	H	Backup server.
2.Crashing of website for any reason	M	Retrieve website
3. Security	M	It is necessary to improve security

1.8 Future Enhancement

When we develop a portal for the Hidaya Academy, the requirements will eventually fulfill the user's need, but after time, the requirements can also be change. Some enhancement required in the future are as follows:

- In future when new technology arises the website can enhance according to that new technology and according to the need of the users.
- Virtual Classroom concept can be operated by the artificial technologies.

CHAPTER 2

LITERATURE SURVEY

2 Literature Review

Hidaya Academy is a Professional and Well-taught Institute of conventional Islamic learning for Dars-e-Nizami. It strikes a decent harmony between being dynamic in its standpoint while holding quick to customary Islamic qualities. A presumed Islamic establishment enlisted and perceived by Wifaq Ul Madaris Pakistan, the organization offers Darse Nizami, Weekend Courses , Short Courses, Workshops and Seminar on various Islamic sections .Special-care is taken to guarantee great tarbiyah and sustaining of understudies. It joins their thoughts and worries with most extreme adaptability to the uttermost degree conceivable. This task is giving the answer for "Hidaya Academy" thus, they can lead classes online in compelling way. In instructor sideboard educator can direct the class for those understudy who will enlist in that specific course, educator can likewise record the address of that specific. In Student sideboard understudy can enlist in course by utilizing join and after confirmation customs understudy can select in the course to be specific "Darse Nizami". The undertaking is drawing closer to the arrangement of a fundamental issue of online classes in a compelling way. It will construct a stage through which instructor of an organization and understudy can without much of a stretch convey and will be directed in more expert way. We are making the web-based interface for a presumed foundation of Karachi situated in Defense Housing Authority Phase – VII Named as "Hidaya Academy". The establishment is sans giving on the web classes for various Islamic courses and mostly for "Darse Nizami" (eighth Year Aalim e Deen Course).The initiate incline toward the product "skype" for their online classes however they are confronting such a large number of issues and constraints now so they are searching for an online electronic entrance for their foundation that will make guarantee there will be no any sort of issues that were looked by the understudies and staff amid their classes. Currently the Hidaya Academy is Supervised by Hazrat Sheikh Iqbal. Hidaya Academy is a professional and well disciplined institute of traditional Islamic learning for Dars-e-Nizami. It stakes a good balance between being progressive in its outlook whilst holding fast to traditional Islamic value. Special-care is taken to ensure good tarbiyah and nurturing of students. It incorporates their ideas and concerns with utmost flexibility to the furthest extent possible.

2.2 What Is Dars-e Nizami?

Dars-I Nizami is an study educational modules or framework utilized in customary Islamic organizations (madrassas) and Dar Ul Ulooms, which began in the Indian subcontinent in the eighteenth century and can now likewise be found in parts of South Africa, Canada, the United States, the Caribbean and the UK.The founder or designer of the Dars-i Nizami system was Mulla Nizam Uddin As Sihaalwi (1161 hijri/1748 c.e.) from the Farangi Mahal ulema (Islamic scholars) group, after whom the Dars-i Nizami were named (Robinson, 2001: p72). It was that period when in Khurasan, Transoxiana, and so forth however, alongside Tafsir and Hadith, Grammar and Syntax, Rhetoric and Literature, Jurisprudence, Logic, Scholastic Theology and Tasawwuf were being viewed as the standard learning. Statute and the Principles of Jurisprudence held higher significance. The Muslims that had come to India had for the most part originated from these exceptionally nations, and normally in this way, the happening to their leanings too was inescapable. In that capacity every one of these sciences were incorporated and were an integral part of the syllabi of this time in India. Maulana Hakim Sayyid Abdul-Hayy Lakhnavi has settled the accompanying four times of the old Indian educational programs.

2.3 Learning Management System

Utilization of the learning Management System has turned out to be about pervasive in the cutting edge school involvement and fundamental components of the cutting edge school understanding. Regardless of whether remove or on the other hand customary understudy, private or suburbanite grounds, undergrad or graduate, these frameworks have quickly been acknowledged all through advanced education. In the previous ten years, online course Management System have supplanted other elective intends to convey class substance, for example, live satellite or shut circuit TV (Falvo and Johnson, 2007). The presentation of learning Management System, alongside expanded PC use in the home and in business has brought an expanding number of understudies and educators to the web based learning condition (Falvo and Johnson, 2007). Both innovation in general and learning management systems particularly have had fast changes in the course of recent years. Business programming organization Blackboard has come to rule the learning management system showcase in the Joined States, anyway starting at 2009 there has been a lot of development in the use of open source learning management systems in advanced education

organizations in the US, with the main open source item being Moodle (Rooji, 2011). E-learning platforms there are different expressions used to describe educational computer applications, such as e-learning Systems, Learning Management Systems (LMS), Course Management System (CMS) or even Virtual Learning Environment (VLE). In these systems, students can access courses' contents in different formats (text, image, sound), as well as interact with teachers and/or colleagues, via message boards, forums, chats, video-conference or other types of communication tools [1]. These platforms provide a set of configurable features, in order to allow the creation of online courses, pages of subjects, work groups and learning communities [2]. In addition to the pedagogical dimension, these systems have a set of features for registering, monitoring and evaluation activities of students and teachers, enabling the contents' management via Internet. According to the approach of Piotrowski [3], an e-learning platform represents a system, which provides integrated support for six different activities: creation, organization, delivery, communication, collaboration and assessment. In a technical perspective, there are different types of LMS, some of them representing commercial solutions (such as Blackboard/WebCT) and others open-source solutions (such as Moodle). Regardless the type, several studies revealed the existence of strong advantages on using e-learning platforms [4-6], however, their adoption involves some challenges to the institutions as well as an appropriate choice of the technologic platform. Concerning open-source solutions, there are some studies that identify the Moodle (Modular Object-Oriented Dynamic Learning Environment) as the most used platform in higher education, as well as the most easy to use [2, 7-14]

References

- Craig, E. M. (2007). Changing paradigms: Managed learning environments and web 2.0. Campus-Wide Information Systems, 24(3), 152-161.

- Falvo, D. A., & Johnson, B. F. (2007). The use of learning management systems in the United States. TechTrends, 51(2), 40-45.

2.3 E-Learning

There are diverse articulations used to portray instructive PC applications, for example, e-learning Systems, Learning Management Systems (LMS), Course Management System (CMS) or even Virtual Learning Environment (VLE). In these systems, understudies can get to courses' substance in various configurations (content, picture, sound), and additionally cooperate with educators as well as associates, by means of message sheets, gatherings, talks, video-gathering or different kinds of specialized instruments. These stages give an arrangement of configurable highlights, with the end goal to permit the formation of online courses, pages of subjects, work gatherings and learning networks. Notwithstanding the academic measurement, these systems have an arrangement of highlights for enrolling, checking and assessment exercises of understudies and educators, empowering the substance's management by means of Internet. As per the methodology of Piotrowski, an e-learning stage speaks to a system, which gives coordinated help to six distinct exercises: creation, association, conveyance, correspondence, cooperation and evaluation. In a specialized point of view, there are diverse kinds of LMS, some of them speaking to business arrangements, (for example, Blackboard/WebCT) and others open-source arrangements, (for example, Moodle). Notwithstanding the type, a few examinations uncovered the presence of solid points of interest on utilizing e-learning stages [4-6], be that as it may, their selection includes a few difficulties to the foundations and in addition a fitting decision of the technologic stage. Concerning open-source arrangements, there are a few examinations that recognize the Moodle (Modular Question Oriented Dynamic Learning Environment) as the most utilized stage in advanced education, and additionally the most simple to utilize.

CHAPTER 3

HARDWARE, SOFTWARE ANALYSIS AND REQUIREMENTS

3 Requirements

The project Web Portal For Hidaya Academy is a web-based application and used by the Students, Teachers and Admin of Hidaya Academy. Development of the application includes its development requirements. Our project is a web-based application so it does not need much hardware requirements; the only hardware requirement is a PC with internet connection.
Some requirements of this project are as under:

3.1 SOFTWARE REQUIREMENTS

The main purpose in verification and validation of software requirements is to clarify and resolve software issues and high risk early in the software life cycle. [16]

- PLATFORM: web.
- PROGRAMMING LANGUAGE: PHP.
- SERVER: Mysql.
- IDE: VS Code.

3.1.1 SOFTWARE INTERFACE

The operating systems like Mac, Linux, and Windows are required to run this web application. Since it is a web application, the user requires a web browser to run it and visualize the content. This website is developed using PHP which is a server side language itself so it needs a browser to visualize it.

3.1.2 DEPENDENCIES

- We are using Mysql for the database purpose.
- The technology we are using is PHP because it is secure and since we are developing a Academy website so it should be more secure.
- Requires a web browser for viewing the application.

3.1.3 ASSUMPTIONS

We are assuming that:

- User has the basic knowledge of how to use internet and possess little knowledge about websites.

3.2 HARDWARE REQUIREMENTS

- As it is a web application so it does not have much hardware requirements.
- Minimum hardware requirements are:
- System: Pentium 4 and above.
- Ram: 1 GB
- Hard Disk: minimum amount of space required on hard drive.

3.3 GRAPHIC REQUIREMENTS

- To get high resolution graphics on website make sure that the system supports high resolution graphics for you to visualize the graphics easily.
- PC should be internet enabled to use the services provided by this application.

CHAPTER 4

METHODOLOGY

4.1 METHODOLOGY

A Portal that can help user to Conduct their classes in more efficient manner and also having their profile by which they can access their marks, attendance detail, notice, upcoming events, reminder, can get Course Book's PDF, all the documents which teacher wants to share, can download their examination papers and upload their answer sheets, can view teacher profile, can chat with the teachers, counselors, and with other students. The portal is so user friendly so anyone can use this. The Virtual Class is there to conduct classes so the foreigner student can also study at their places.

4.1.1 OBJECTIVES

The objective of this project is to build a online Web Portal for Hidaya Academy that will help the students and faculty to conduct classes and make this processes easy for them in every possible way, by providing online facilities to students and faculty. There will be an online web based portal with proper functionalities according to the academy's requirement. Students and teachers can communicate in a more proper manner. This will be real world phase for the students where they will attend the classes from their homes. Both students and teachers will be online to attend the classes where students can see teachers and if required they can also ask the questions from teacher. In this project, a complete module of Learning Management System is present, which provides to Hidaya Academy, a way to view their academic progress.

4.1.2 PROJECT GOALS

The goal of the project is to provide an efficient portal which is simple, flexible and provides the user, a complete module of Learning Management System.

4.1.3 OVERVIEW OF THE PROJECT

In this project, a complete portal for the student of Hidaya Academy is Presents, it includes their login credentials to be logged in in their account, where they can see their attendance, their marks throughout the academic year, their upcoming events, their examination schedule, their reminders which is set by the Admin, their notices which admin wants to show them, their courses in which they are enrolled and can contact with their counselor.

In teacher module, which can start the online class, can update the marks of the student, can mark and update attendance, can check their attendance, can upload documents, can start class, can chat with the students, can upload examination paper.

A module for Admin can maintain class schedule, can update attendance, can add/remove teachers, update notice board, can conduct interview, add/update academic calendar, can generate reports, can schedule examinations, add/remove students.

4.2 SYSTEM LAYOUT

Layout of the main components on which the system is going to work:

- Login/Signup
- Student Registration

- Login ID Verification
- Online SIMS
- Online Class Room
- Notice Board
- Events Timeline
- Examination Portal
- Report Generation

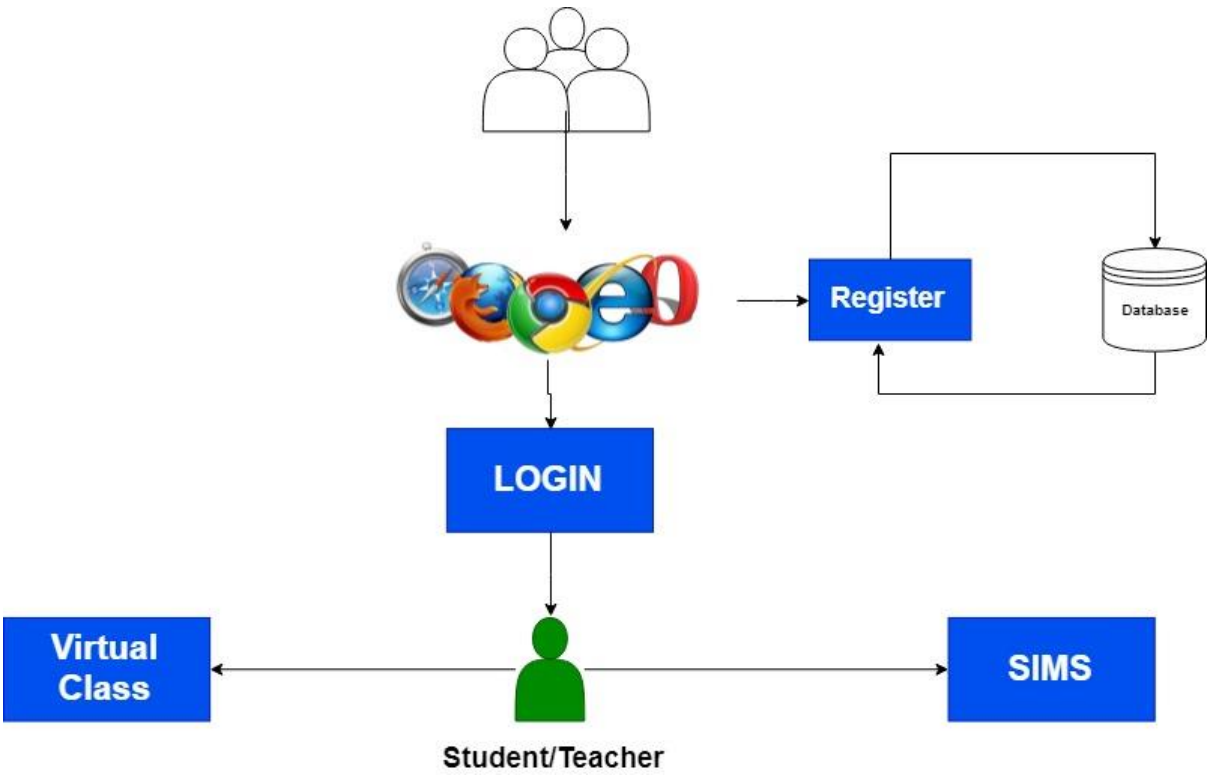


Figure 1 System Layout

4.3 GUI (GRAPHICAL USER INTERFACE)

Graphical user interfaces are provided for all three stakeholders to perform operations. For the overall layout of the project, a GUI is designed according to the different screens and modules of the project. At first Dashboard is designed and then there is several options to further proceed, all the functions can be easily accessible from the dashboard. As this application is web based, Php, jQuery, MySQL and bootstrap are used for the development.

4.4 MODULES

- This system is divided into following modules.
- Module 1 (Database)
- Module 2 (Complete LMS Portal)
- Module 3 (SIMS)
- Module 4 (Admissions)
- Module 5 (Examination)
- Module 6 (Academics)

4.4.1 Module 1(Database)

The Database of the system is going to be implemented using Xampp – Php My Admin. There is one database in this project containing multiple tables of which one database holds a table of teacher's detail, Admin details, students, a table of student attendance, result, result details, student class, class, course, teacher class course. This database will be maintained on strong terms and conditions and will be updated timely based on the need to update it.

4.4.2 Complete LMS Portal

This module defines the complete learning management system, where students enrolled in the year wise course, the teacher can conduct their classes, and the admin module is there to supervise the portal. The portal also has the ability to let the stakeholders interact with each other. The main Module of this portal are Admission, Academics, and Examination.

4.4.3 SIMS (Student Information Management System)

Student Information Management System (SIMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. [18]

This module shows the academic progress of students such as assessment marks, examination marks, etc., similar to UIT SIMS that operates in a similar manner, displaying the summative and formative assessment marks.

4.4.4 Admissions

The Admission process in the portal is same as any institute, first candidate have to fill the Registration form then Admin will approve the student then the admission takes place and the ID will be given to that student and the class in which he admitted, so the course will allocate accordingly.

4.4.5 Examination

In this feature, there will be examination portal where teacher can upload the examination paper and students have to see the paper and upload the answer sheet there in a suggested time. After that the teacher will update the marks of student in the SIMS so that the student can see their result.

4.4.6 Academics

This is a feature consisting of a the academics need to run an institute, there is a SIMS, there is a class room, students, teacher and all the resources which is required for the institute so that the classes will be conducted in more efficient manner.

4.5 General Operations

General operation is as follow:

4.5.1 Student

- They have login credentials to be logged in in their account
- they can see their attendance
- can see their marks throughout the academic year
- can see upcoming events
- can see examination schedule
- can see their reminders which is set by the Admin,
- can see their notices which admin wants to show them
- can see their classes in which they are enrolled
- Can contact with their counselor.

4.5.2 Teacher

- can start the online class
- can update the marks of the student
- can mark and update attendance
- can check their attendance
- can upload documents
- can start class

- can chat with the students
- Can upload examination paper.

4.5.3 Admin

- Has full access to all the modules of this system.
- Responsible for the accounts of all candidates
- Update, modify or delete queries and details
- Admin can access academic records in the SIMS
- Data’s responsibility access will be accessible to the admin
- Academic records will be updates in the SIMS.
- Prepares and submits also Daily reports, user reports, event reports, etc.
- can maintain class schedule
- can update attendance
- can add/remove teachers
- update notice board
- can conduct interview
- can add/update academic calendar
- can generate reports
- can schedule examinations

- Add/remove students.

4.6 SOFTWARE USED IN THE PROJECT

- Visual Code
- Bracket
- Notepad++
- Microsoft Project
- MySQL
- Draw.IO

4.7 PROJECT PROPOSED MODEL

The Model which is being followed in the project is Iterative model, is a way of breaking down the software development of a large application into smaller chunks. Less time is required for integration as the process of integration goes on throughout the software development life cycle. This is a complete methodology in itself with an emphasis on accurate documentation. It is proactively able to resolve the project risks associated with the client's evolving requirements requiring careful change request management. The development time required is less due to reuse of components.

Six "engineering disciplines"

- Requirement analysis
- Data requirements
- Analysis and design
- Implementation
- Test
- Deployment

CHAPTER 5

SOFTWARE DESIGN & MODELING

5.1 System Flow Diagram (SFD)

System Flow Diagram (SFD) is widely used for structured software analysis and design. The system flow diagram is shown below.

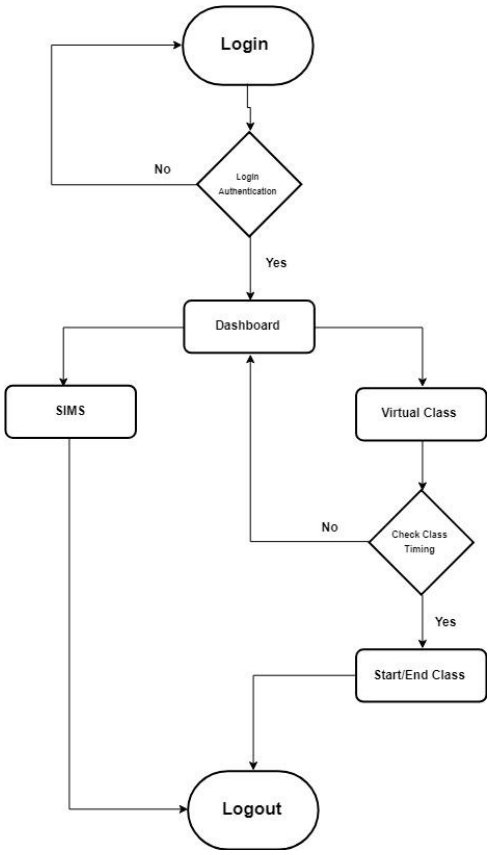


Figure 2 System Flow Diagram

The student will have to login himself/herself first, in order to register. If the student is not registered, he will have to register first, then login.

The candidate will have to register his/her entire profile in the first interface containing information.

After the candidate registers himself/herself fully, he/she will then have to register the Class which will be offered.

After the student has logged in after registering himself/herself, and has gone through the process of both interface registrations, the candidate will easily be able to keep a track of his

academic progress by viewing marks obtained in formative and summative assessments on the online SIMS, throughout the academic time and then, if the candidate does not want to go through anything else, he will then logout from the website.

5.2 UML Diagrams

UML diagram for the system are as follow:

5.2.1 Class Diagram

To produce a precise and analyzable software model, it is essential for the modeling technique to have formality in the syntax and the semantics of its notation. In this class diagram, the Web user can directly visit the dashboard first after logging in by entering the username and password. The class Home will have three methods and the class Account will have three methods which will be required initially to gather the login details, and will then proceed onto the Candidate Registration in the classes. The Teacher will teach the student in virtual class environment. Where teacher having their own ID and having access to update the marks and attendance of students, so that is updated on SIMS.

The diagram below depicts the details mentioned above.

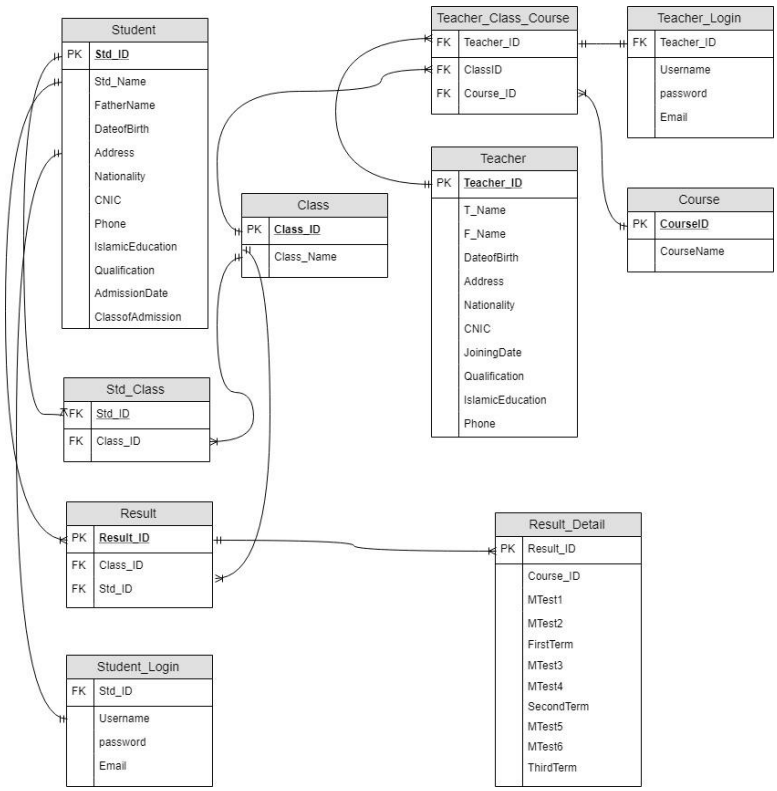


Figure 3 Class Diagram

5.2.2 Use Case Diagram

A use case diagram, as a requirements model, plays an important role in giving requirements for a software system. A use case diagram is referred to as a set of diagrams that depicts a certain behavior followed by the actors.

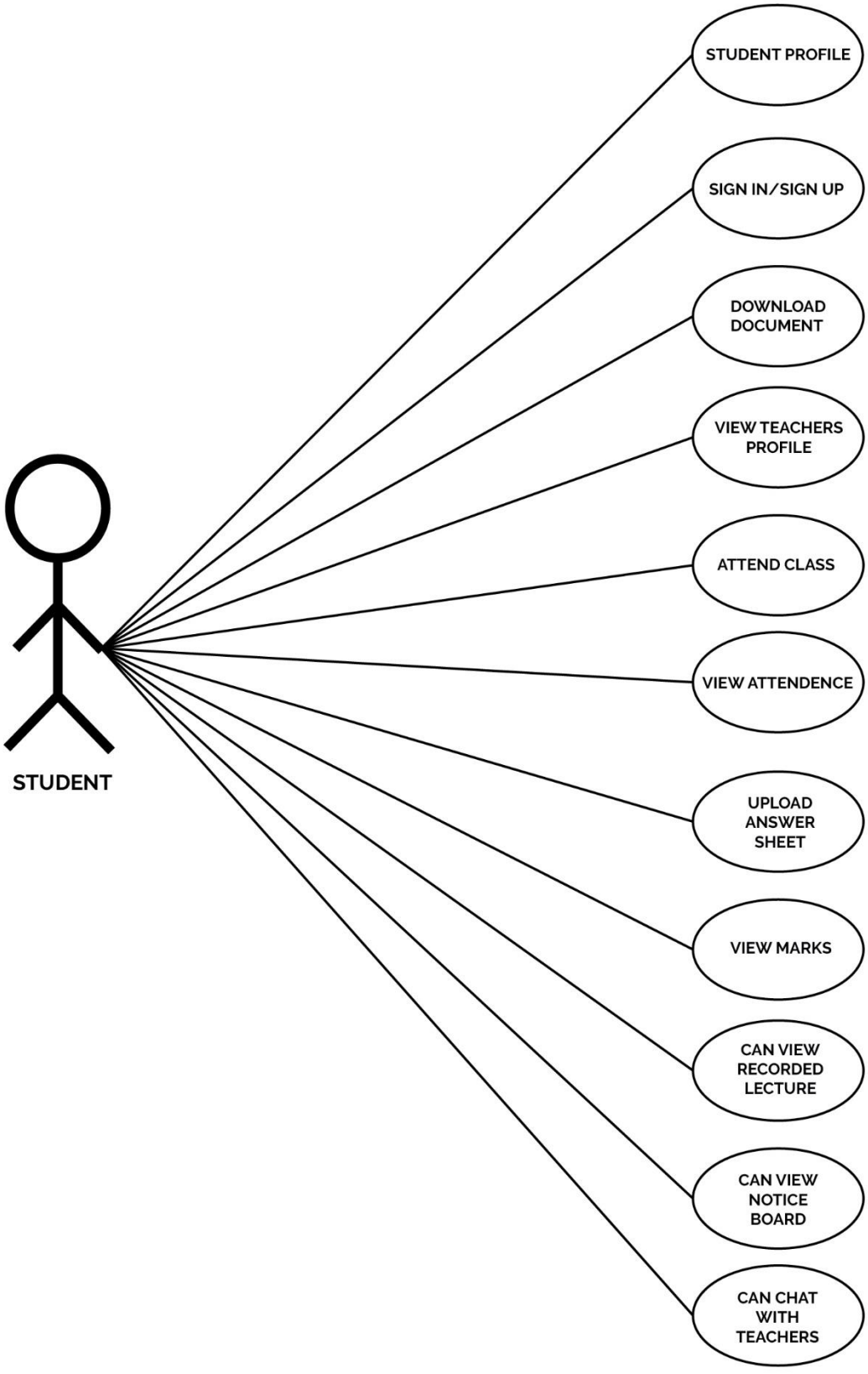
In this use case, we have three actors and multiple use cases.

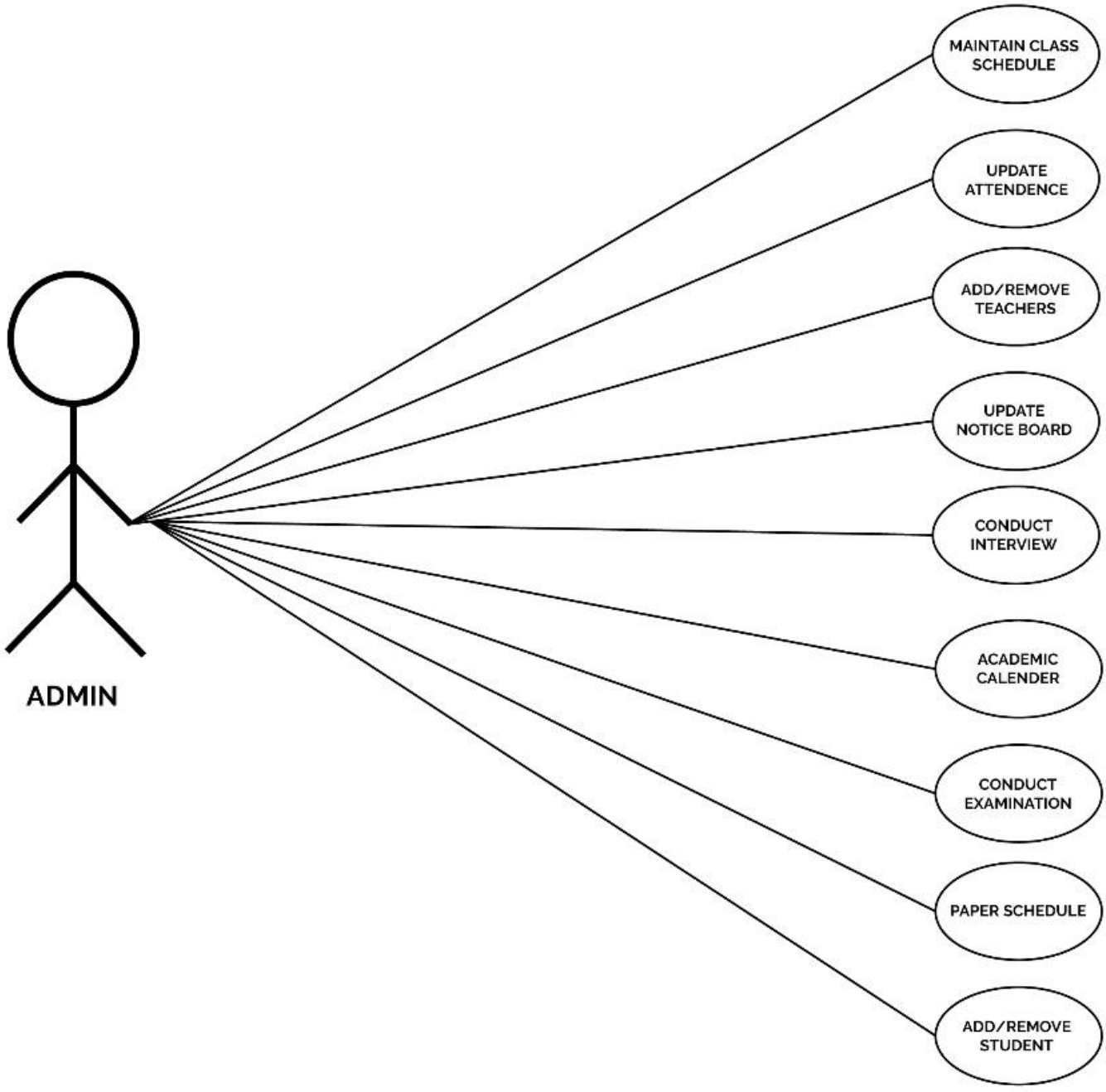
When the student will visit the website, the student can register on the website, can register the desired class on the website, and can also see their attendance and marks. The student can visit and view his academic progress on the portal.

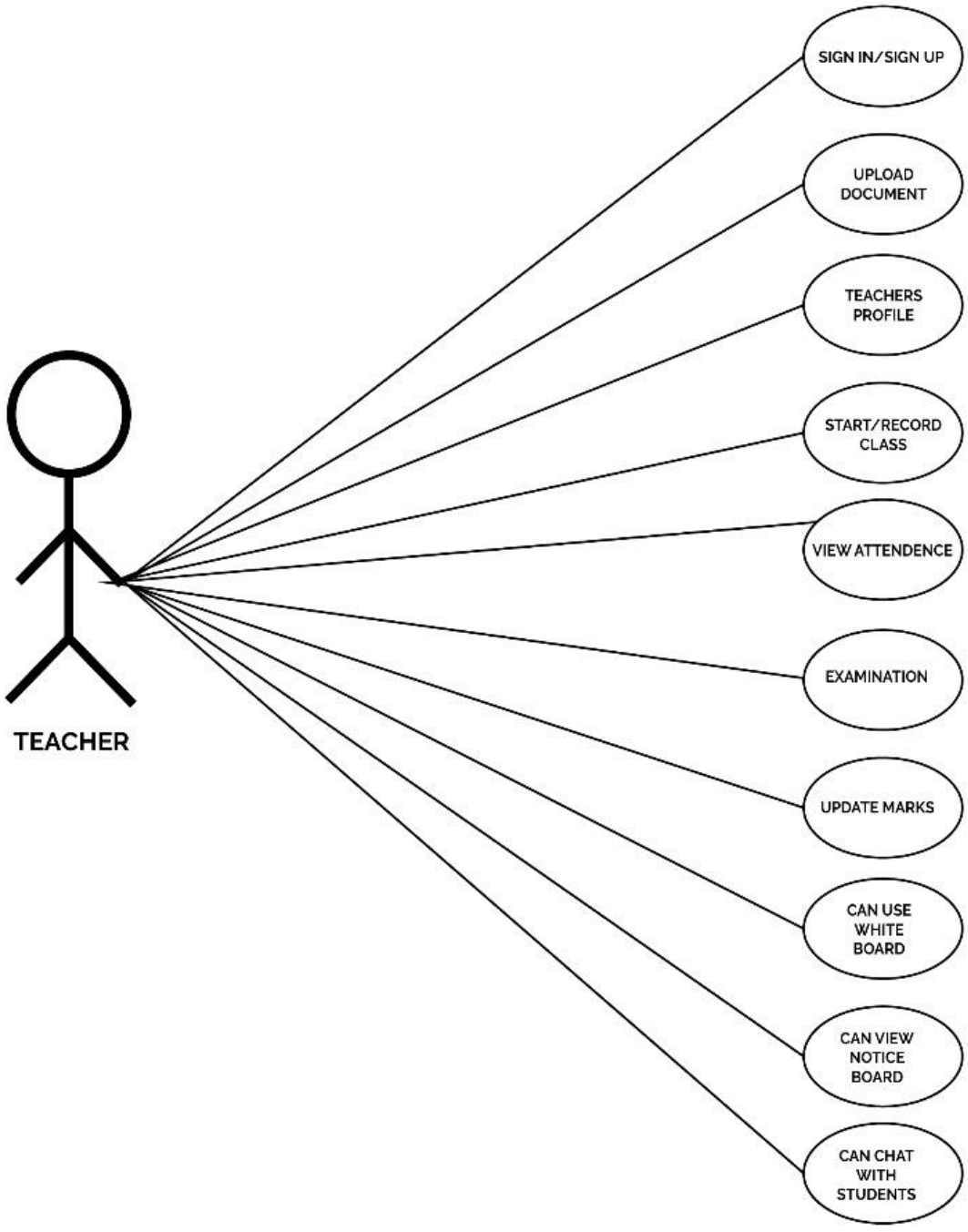
In teacher actor, which can start the online class, can update the marks of the student, can mark and update attendance, can check their attendance, can upload documents, can start class, can chat with the students, can upload examination paper.

An actor for Admin can maintain class schedule, can update attendance, can add/remove teachers, update notice board, can conduct interview, add/update academic calendar, can generate reports, can schedule examinations, add/remove students.

The diagram for the modules described above is displayed below:


STUDENT PROFILE
SIGN IN/SIGN UP
DOWNLOAD DOCUMENT
VIEW TEACHERS PROFILE
ATTEND CLASS
VIEW ATTENDENCE
UPLOAD ANSWER SHEET
VIEW MARKS
CAN VIEW RECORDED LECTURE
CAN VIEW NOTICE BOARD
CAN CHAT WITH TEACHERS
STUDENT


ADMIN
MAINTAIN CLASS SCHEDULE
UPDATE ATTENDENCE
ADD/REMOVE TEACHERS
UPDATE NOTICE BOARD
CONDUCT INTERVIEW
ACADEMIC CALENDER
CONDUCT EXAMINATION
PAPER SCHEDULE
ADD/REMOVE STUDENT


SIGN IN/SIGN UP
UPLOAD DOCUMENT
TEACHERS PROFILE
START/RECORD CLASS
VIEW ATTENDENCE
EXAMINATION
UPDATE MARKS
CAN USE WHITE BOARD
CAN VIEW NOTICE BOARD
CAN CHAT WITH STUDENTS
TEACHER

CHAPTER 06

ALGORITHM ANALYSIS AND

PSEUDO CODE COMPLEXITY

6. Searching

6.1 Algorithm

1. position= -1;
2. while ((the listed item is more than one) and (the target is haven't yet found))
   2A. glance at the middle item
   2B. if (the item in the middle
   is the target)
   have found target
   else
   2C. if (target < central item)
   list = to start with half of the
   rundown
   2D. else (target > central item)
   list = last half of the rundown
   end while
3. if (desired target has been found)
   position = location of target in original list
4. return position as the result

6.1.1 Pseudo Code

```
position = -1;
    initial = 0;
    last = number of items minus 1;
    while ((number of items remaining for the search operation>= 1)
    and (target not found))
     middle = position of central item, somewhere between first and last
      if (target is at the central (middle) position)
```

```
target    found
else
    if  (target  <  middle  item)
search for in the lower half of
the array next
last = middle - 1;
        else
search for in the upper half of the array next
            initial          =
middle + 1;  end while
if (target found) (i.e., middle item == target)
    position = location of target in array (i.e., middle)
return position as the concluded result
```

6.1.2 Complexity

To assess seek, include the quantity of correlations the best case and most pessimistic scenario. This examination precludes the normal case, which is more troublesome, and overlooks any contrasts between calculations in the measure of calculation relating to every correlation.

The best case happens if the center thing happens to be the objective. At that point just, a single correlation is expected to discover it. As previously, the best-case investigation does not uncover much.

In the event that the objective isn't in the cluster then the way toward isolating the rundown down the middle proceeds until there is just a single thing left to check. Here is the example of the quantity of examinations after every division, given the rearranging presumptions of an underlying cluster length that is an even intensity of 2 (1024) and correct division down the middle on every cycle:

Items left to search	Comparison so far
1024	0
512	1
256	2
128	3
64	4
32	5
16	6
8	7
4	8
2	9
1	10

Table 6.1

For a rundown size of 1024, there are 10 correlations with achieve a rundown of size one, given that there is one examination for every division, and every division part the rundown estimate down the middle.

As a rule, if n is the span of the rundown to be sought and C is the quantity of correlations with do as such in the most pessimistic scenario, **C = log2n**. In this manner, the productivity of inquiry can be communicated as a logarithmic capacity, in which the quantity of correlations required to discover objective increments just logarithmically with the span of the rundown.

The following table 6.3 summarizes the analysis for searching algorithm.

Model	**Number of Comparisons** (for n = 100000)	**Comparisons as a function of n**

Best Case (Least/fewest Comparisons)	1 (target is middle item)	1
Worst case (Most comparisons)	16 (target not in array)	Log_2n

Table 6.2

Complexity Representation in Big O

Best Case: O (1)
Worst Case:
$O(log_2n)$

6.1.3 Graphical Representation

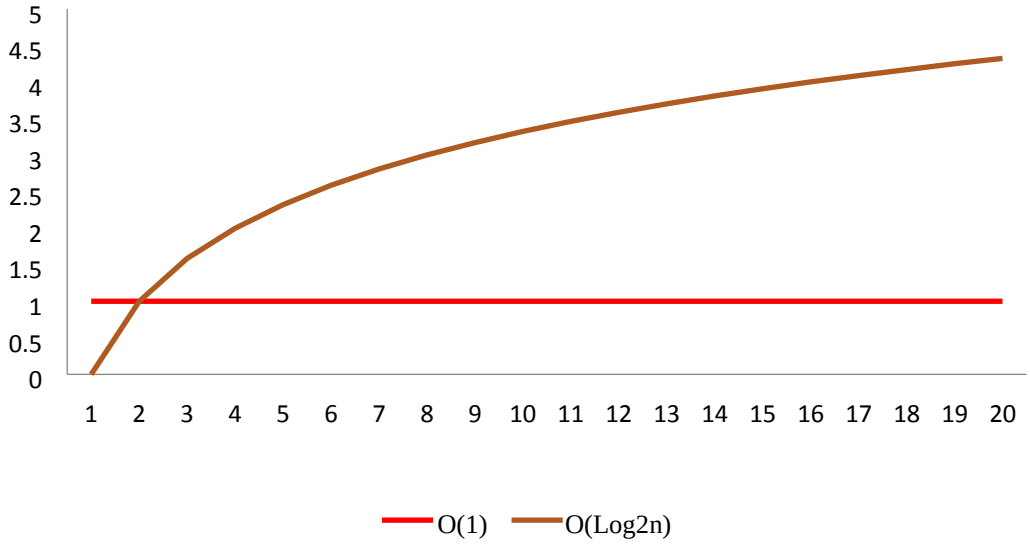


Figure. 6.1 Graphical Representation

6.3 Data Sorting

6.3.1 Algorithm

1. partition (array, left, right)
1.1. pivotIndex := choosePivot(array, left, right)
1.2. pivotValue := array[pivotIndex]
1.3. swap array[pivotIndex] and array[right]
1.4. storeIndex := left
1.5. for i from left to right - 1
1.6. if array[i] <pivotValue
1.6.1 swap array[i] and array[storeIndex]
1.6.2 storeIndex := storeIndex + 1
1.7. swap array[storeIndex] and array[right] // Move pivot to its final place
1.8. returnstoreIndex end

6.3.2 Pseudo Code

STEP 1. Choosing the pivot

Picking the rotate is a fundamental advance.

Contingent upon the turn the calculation may run quick, or in quadric time.:

Some settled component: e.g. the main, the last, the one in the center

This is an awful decision - the rotate may swing to be the littlest or the biggest component, at that point one of the allotments will be unfilled.

Arbitrarily picked (by arbitrary generator) - still a terrible decision.

The middle of the exhibit (if the cluster has N numbers, the middle is the [N/2] biggest number.

This is hard to figure - expands the multifaceted nature.

The middle of-three decision: take the main, the last and the center component. Pick the middle of these three components.

Case:

8, 3, 25, 6, 10, 17, 1, 2, 18, 5

The primary component is 8, the center - 10, the last - 5.

The three components are arranged: [5, 8, 10] and the center component is 8. This is the middle.

STEP 2. Partitioning

Dividing is delineated on the above case.

In the wake of finding the rotate the cluster will resemble this:

5, 3, 25, 6, 8, 17, 1, 2, 18, 10

1. The first activity is to get the rotate off the beaten path - swap it with the beside the last component

5, 3, 25, 6, 18, 17, 1, 2, 8, 10

2. We need bigger components to go to one side and littler components to go to one side.

Two "fingers" are utilized to check the components from left to right and from ideal to left:

[5, 3, 25, 6, 18, 17, 1, 2, 8, 10]

^ I j

Note: we realize that the main component is littler than the turn, so the principal component to be prepared is the component to one side. The last two components are the rotate and a component more prominent than the turn, so they are not prepared.

While I is to one side of j, we move I right, skirting every one of the components not as much as the turn. On the off chance that a component is discovered more prominent then the rotate, I stops While j is to one side of I, we move j left, skirting every one of the components more noteworthy than the turn. In the event that a component is discovered less than the turn, j stops When both I and j have ceased, the components are swapped. When I and j have crossed, no swap is performed, examining stops, and the component indicated by I is swapped with the rotate.

In the illustration the primary swapping will be somewhere in the range of 25 and 2, the second somewhere in the range of 18 and 1.

3. Reestablish the turn.

Subsequent to reestablishing the rotate we acquire the accompanying dividing into three gatherings:

[5, 3, 2, 6, 1] [8] [18, 25, 17, 10]

6.3.3 Complexity

T(N) = T(i) + T(N - I - 1) + cN an opportunity to sort the record is equivalent to an opportunity to sort the left segment with I components, in addition to an opportunity to sort the correct parcel with N-I-1 components, in addition to an opportunity to manufacture the allotments

6.3.4 Complexity Representation in Big O

Assuming the worst possible scenario: O(N2)

This happens when the rotate is the littlest (or the biggest) component. At that point one of the parcels is unfilled, and we rehash recursively the system for N-1 components.

Best-case: O(NlogN)

The best case is the point at which the turn is the middle of the cluster, and after that the left and the correct part will have same size. There are logN parcels, and to acquire every segment we do N correlations (and not more than N/2 swaps). Thus, the unpredictability is O(NlogN)

Normal case: O(Long)

6.3.5 Graphical Representation of Big O

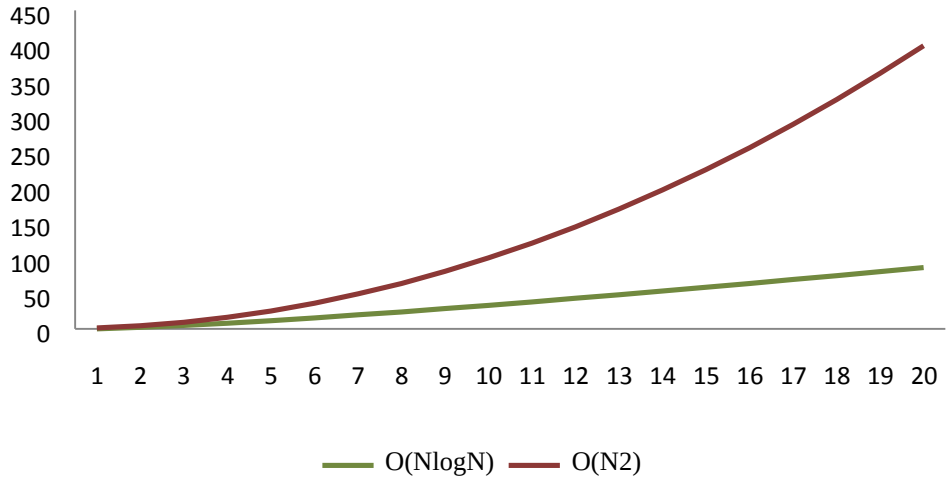


Figure. 6.4 Graphical Representation

CHAPTER 7

TESTING

7.1 Testing

Testing is a process to analyze the system whether the system completes the requirement or not. Testing is basically a process, whereby, identification for the need of rectification of errors, missing of requirements, any gaps encountered, or errors within the system are identified in contrast to the actual requirements of the system.

This depends upon the process of the system and the associated stakeholders of the project. In the larger picture, in the IT industry, large companies have teams with responsibilities held responsible to evaluate the developed software in accordance with the context of the given requirements.

Unit testing is also a method by which developers carry out testing to check out the lack of features.

In most cases, the following professionals are involved in testing a system within their respective capacities:

- Software Tester
- Software Developer
- Project Manager
- Stake holders

There are different designations of people in different companies, who were held responsible for testing the software based on the knowledge and experience they have related to the software such as Software Tester, Software Quality Assurance Engineer, QA Analyst, etc.

7.2 Type of Testing

7.2.1 Manual Testing

Manual testing is the process where the software is tested manually without using any sort of automation of tools or any script. In this type of testing, the tester takes over the role of the end-user and tests the software for the identification of any unexpected behavior or bug in the software.

There are several different stages for manual testing such as unit testing, system testing, integration testing, and user acceptance testing. Testers use test plans, test cases, or test scenarios to test a software to ensure the full completeness of the testing process. Manual testing also

includes exploratory testing where testers usually explore the software to find out and identify the errors in the software.

7.2.2 Black Box Testing

The testing process with the lack of knowledge of the inside the application the tester does not have access for the code.

7.2.3 White Box Testing

The white box testing has all access to the code or the structure of the code for the white box testing the tester must have access to manipulate the code and he must test the code to detect the bug on the application.

7.2.4 Gray Box Testing

In gray box testing the tester design and analyze the document and database. A tester with this Knowledge can make an application better by test scenarios while he is making test plans.

7.2.5 Testing Levels

In our application we are using two main levels of testing these main levels include main methodologies that can be adopted while the period of testing
The main levels are:

- Functional Testing
- Non-functional Testing

7.2.6 Functional Testing

The functional testing is the type of black box testing. Inputs were given for the testing of an application and the result were analyzed to check whether the requirement for the functionality testing completed or not.
There are five major steps for the testing of a functionality of an application

- The determination of the functionality that the intended application is meant to perform.
- The creation of test data based on the specifications of the application.
- The output based on the test data and the specifications of the application.
- The writing of test scenarios and the execution of test cases.
- The comparison of actual and expected results based on the executed test cases.

	Test Case	Pre-Condition	Test Step	Expected Result	Actual Result	Pass/Fail
User Login	Enter login ID and password	Website must be open	1. Go to Login 2. Insert Credentials	Login to Dashboard	Login Successfully	Pass
Add Student	Register a User	Website must be open and login also with admin account	1. Go to add students 2. Add Student	Student Registered	Successful	Pass
Enter course marks	Enter marks of students	Open the website login go to marks entry module then enter marks	1. Go to SIMS 2. Login 3. Click on marks entry module 4. Select course to be entered marks	Marks of students entered	Successfully	Pass
Show SIMS	Show Students all subject marks on single table	Open the website login go to Grade sheet module select batch and then show grade sheet	1. Login 2. Go to SIMS 3. Select Student 4. View marks	Showing of marks	Successfully	Pass

7.2.7 Unit Testing

In unit testing chunks of code were tested to check whether the code is performing its functionality in correct order or not. The testers use test data which is entirely different from the data of QA department.

Login Module:

Test Case	Attribute	Expected Result	Result
Login into portal with correct id and password.	loginID:rafiqtaimur@gmail.com pass:12345	Validate from database and login into academics	Pass
Login into portal with incorrect id and pass.	loginID:taha pass:655	Not validate from database	Pass
Login into portal with null id and pass.	loginID:null pass:null	Gives validation about empty values	Pass

Student Registration Form:

Test Case	Attribute	Expected Result	Result
Fill all the required fields	All the required options filled	Insert the data into database	pass
All the required fields were not filled.	All the required options were empty	No insertion of data into database	pass

7.2.8 Integration Testing

Integration testing means combining two parts of an application to check whether it is performing well there is two type of integration testing, Top-down integration testing and Bottom-up integration testing. The integration testing ends with the variety of tests of a developed application

7.2.9 Beta Testing

Beta testing followed by the alpha testing. In beta testing consumers testify the application or system. This type of testing distributed to variety of people to check the application. Following things were test by the people:

- Users will use application and give feedback.
- Flow of application was not good.
- After the feedback the developer can fix the problem which was faced by the audience.
- It will improve the quality of the product after resolving all the issue which was arrived by the side of the users
- It satisfies all the user after resolving the issues.

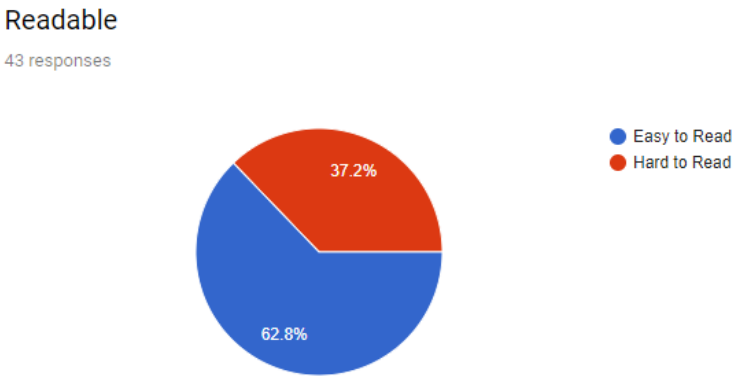


Figure 5 Beta Testing Readable

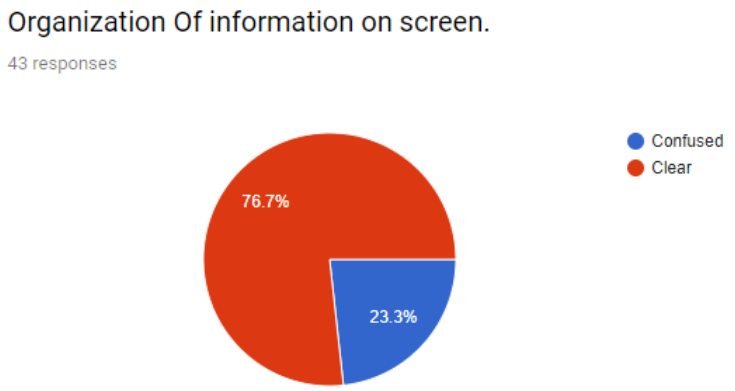


Figure 6 Beta Testing Organization of Information on Screen

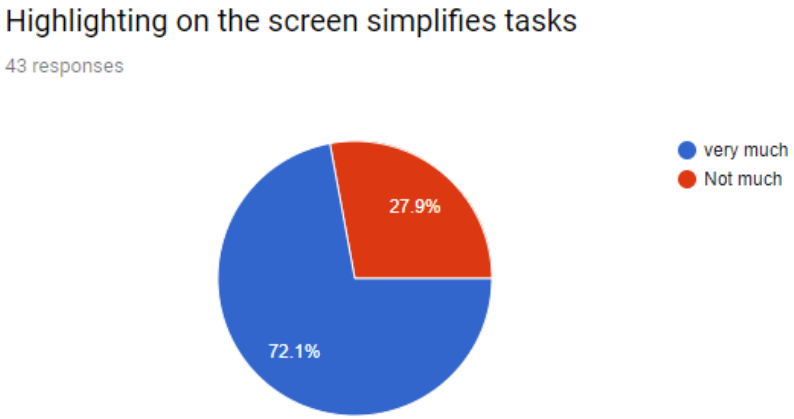


Figure 7 Beta Testing Highlighting on the Screen simples Tasks

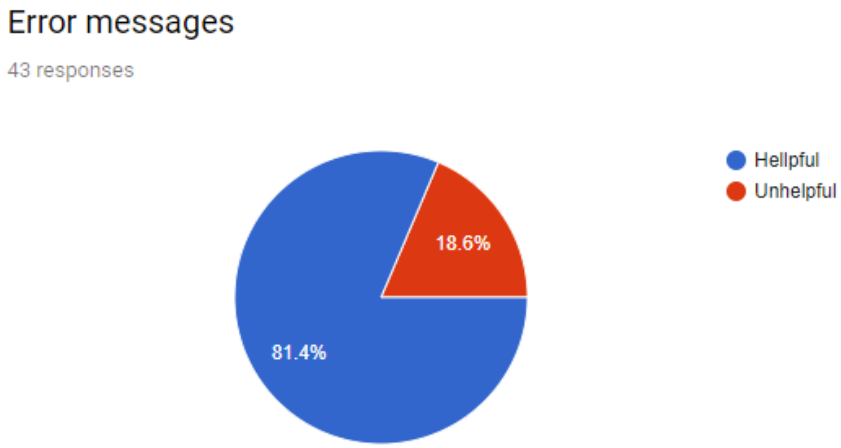


Figure 8 Error Messages

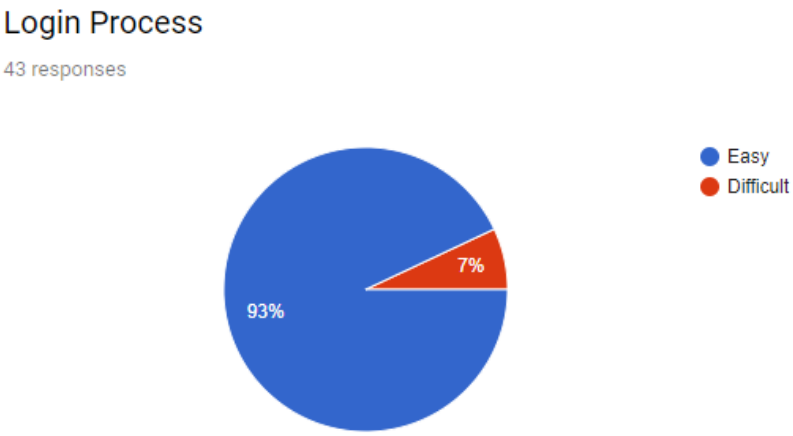


Figure 9 Login Process

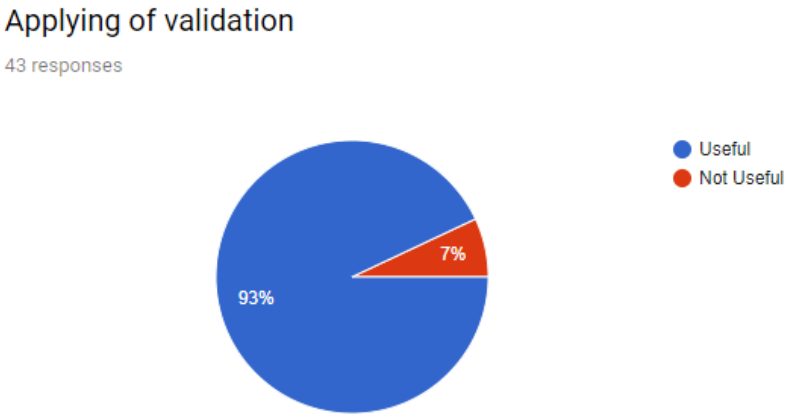


Figure 10 Applying of Validations

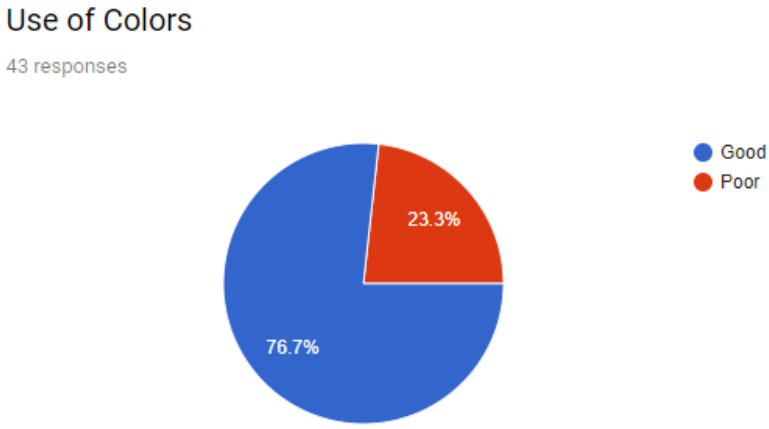


Figure 11 Use of Colors

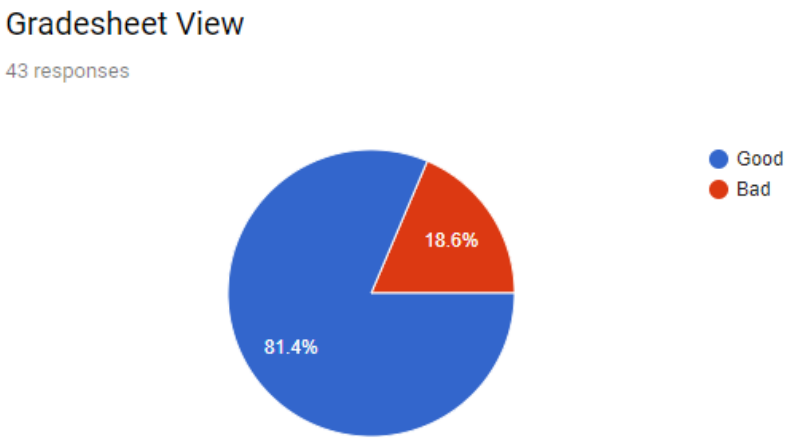


Figure 12 Grade Sheet View

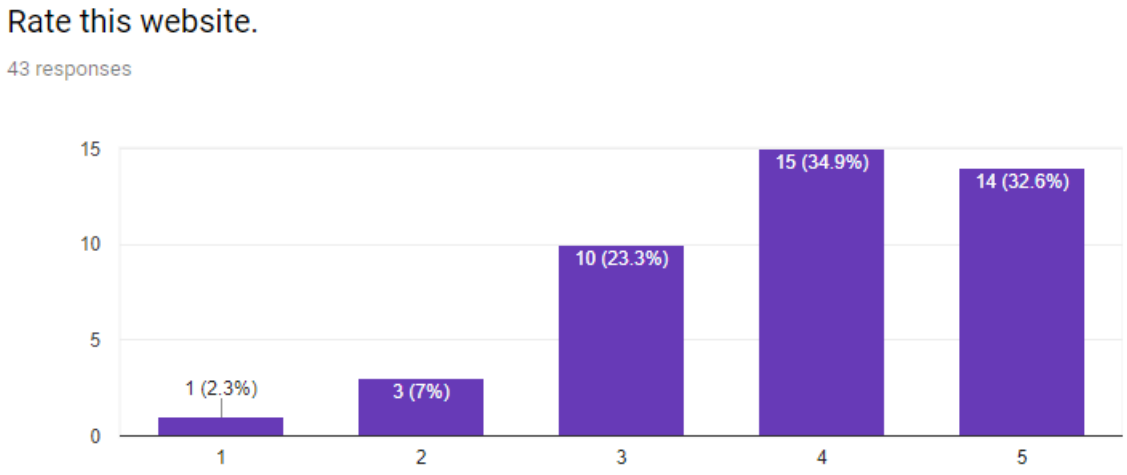


Figure 13 Rate this Website

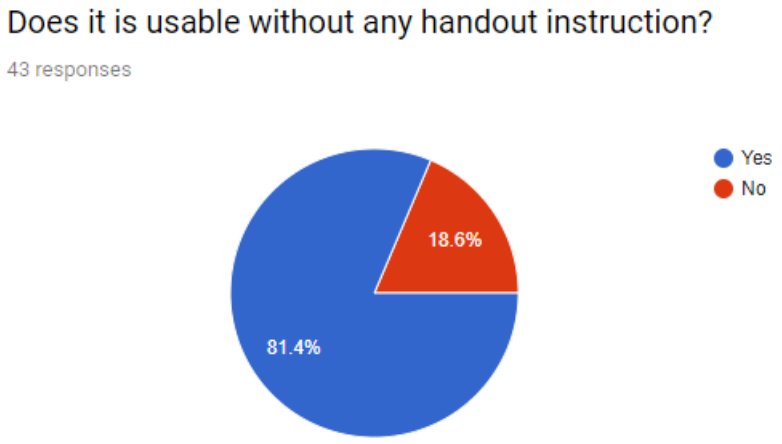


Figure 14 Usable Without any handout

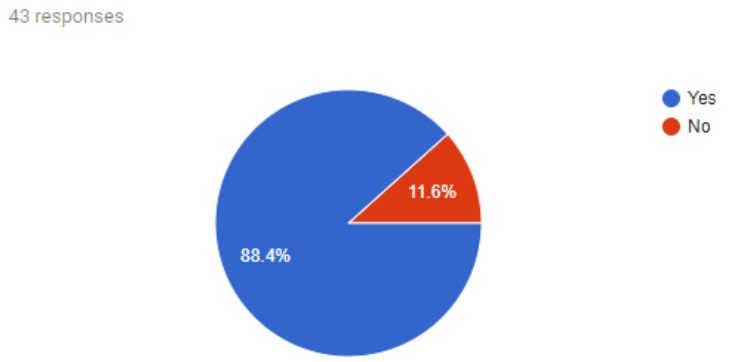


Figure 15 Automate the System

7.2.10 Non-Functional Testing

Performance, security or user interface etc. was tested in non-functional testing. It tests the application with the non-functional attributes in the application.

7.2.11 Performance Testing

Not all software systems have specifications on performance explicitly. But every system will have implicit performance requirements [25]. It resolves the performance issues in the application instead of resolving bug. There are many things that can make the performance low:

- Internet
- Transaction of data fields
- Load In server
- Data rendering

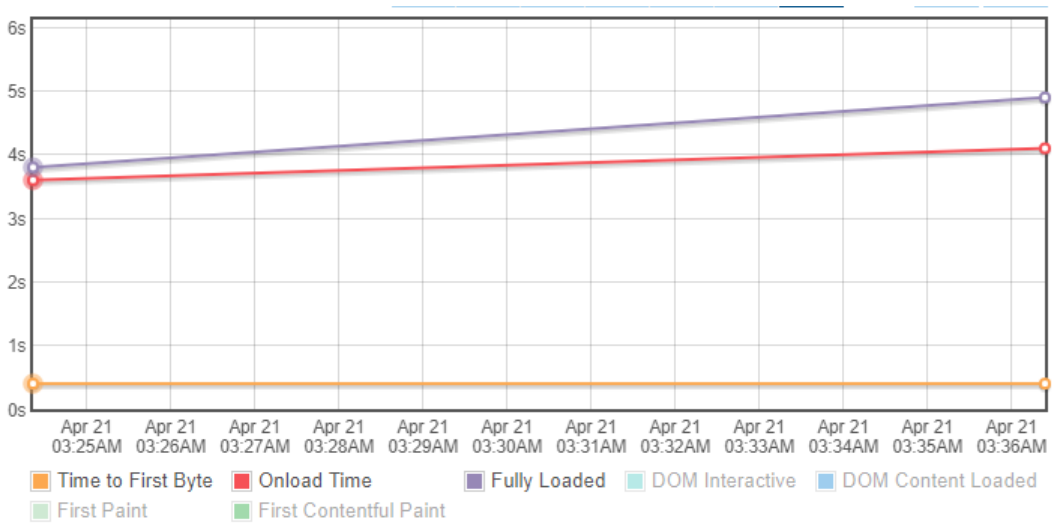


Figure 16 Performance Test

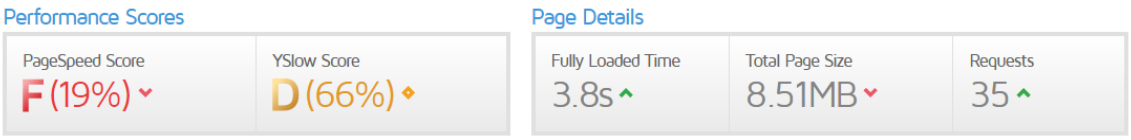


Figure 17 Performance Test 2

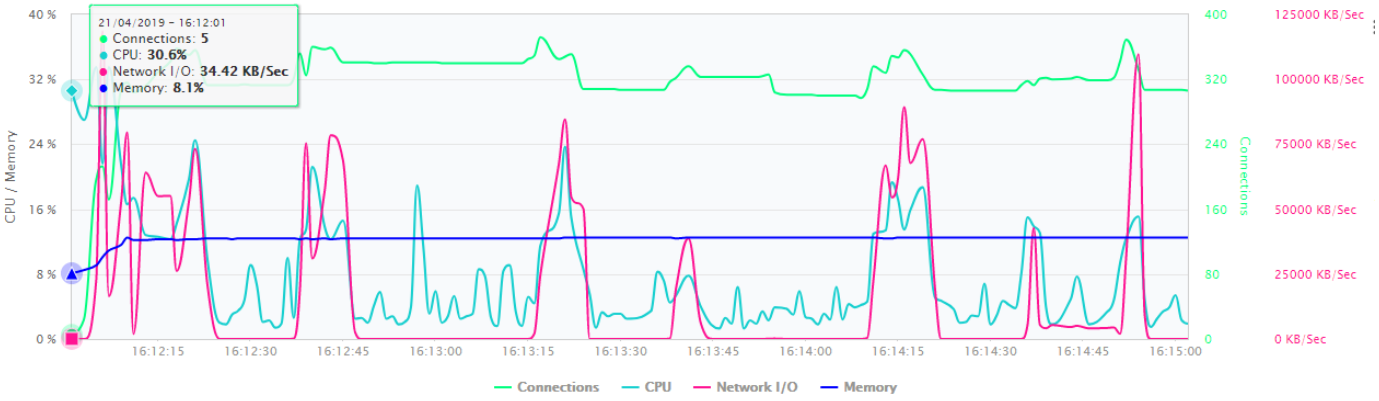


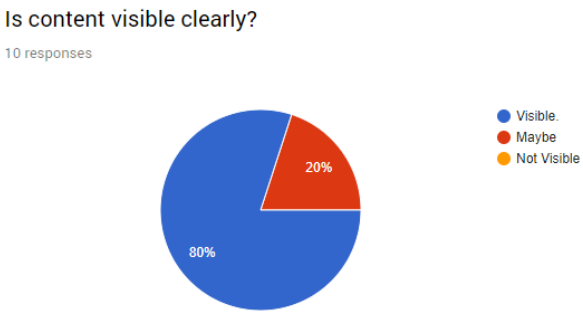
Figure 18 Performance Report

Figure 20 Performance Report

7.2.12 Usability Testing

Usability testing is a dynamic process that can be used throughout the process of developing interactive multimedia software. This type of testing is a black-box technique and is

used for the identification of errors and areas of improvement within the software by observing the users through their usage and operation.



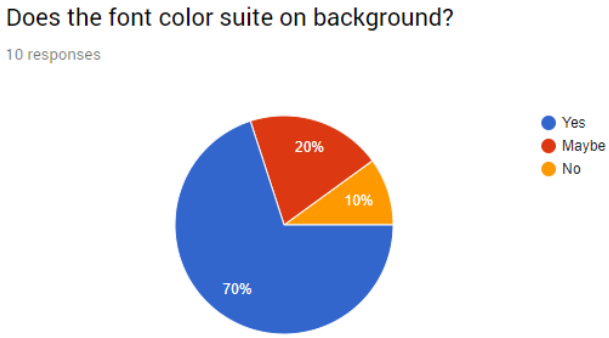


Figure 21 Usability

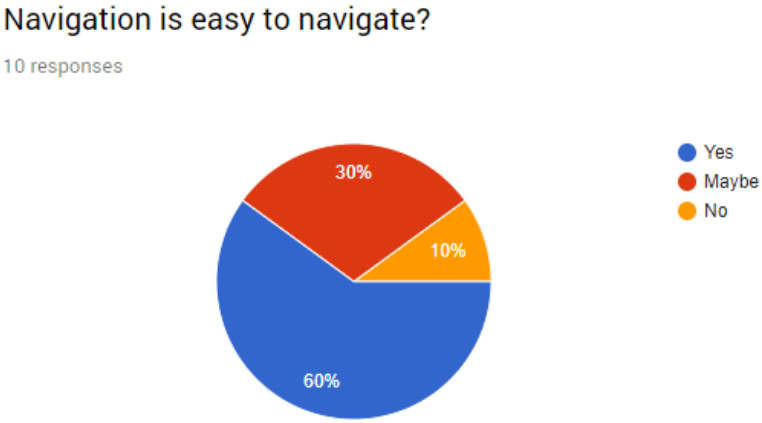


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Figure 23 Usability Testing

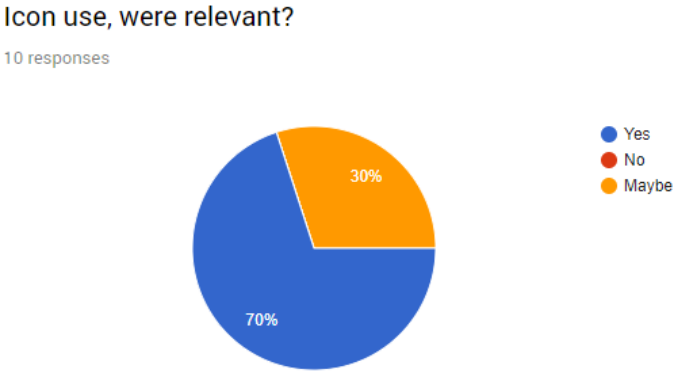

Figure 24 Usability Testing

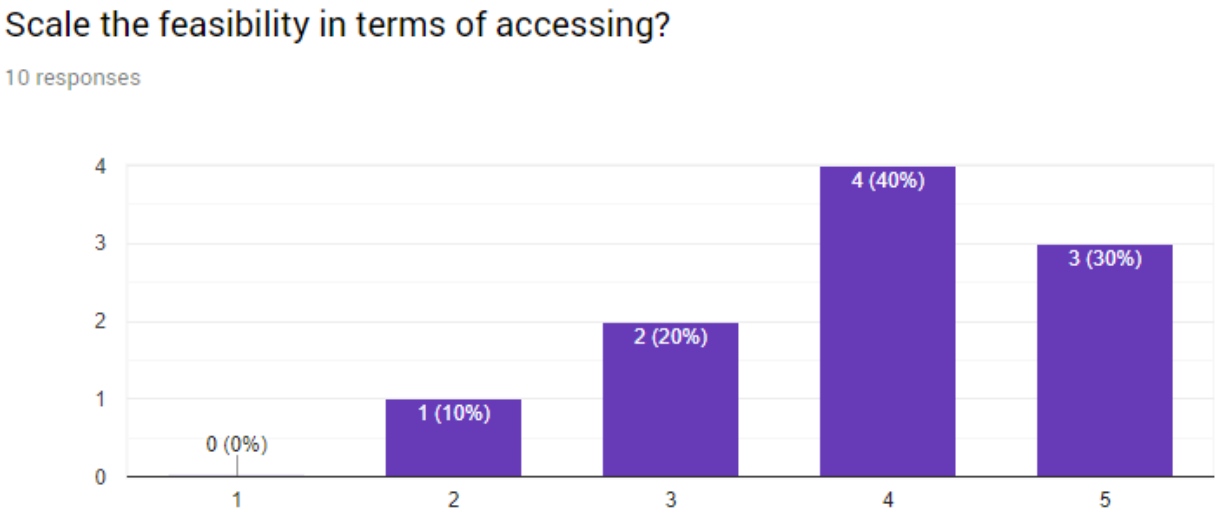

Figure 24 Usability Testing

7.2.13 User Interface Testing

In this type of testing, the Graphical User Interface (GUI) of the software is tested. UI testing ensures the proper functioning of the software according to the requirements, regarding the size, color, alignment, and other properties of the software.

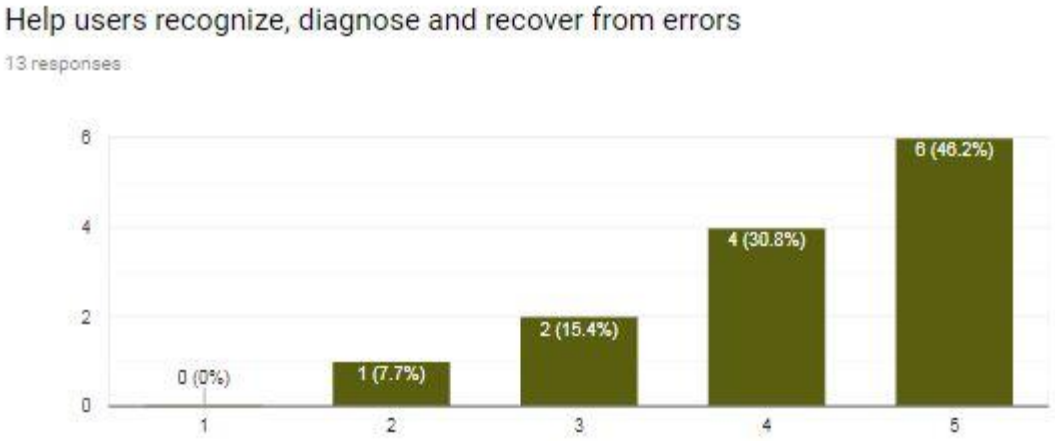

Figure 25 UI Testing

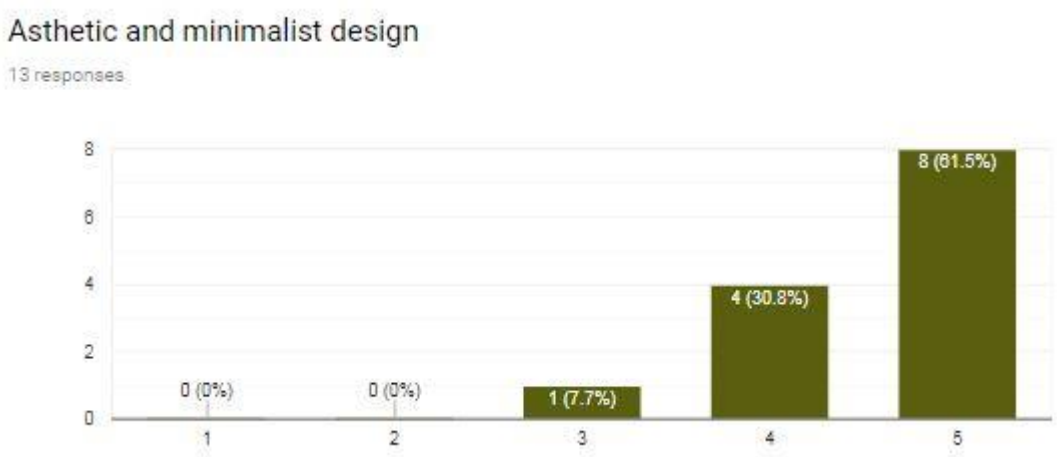

Figure 26 UI Testing

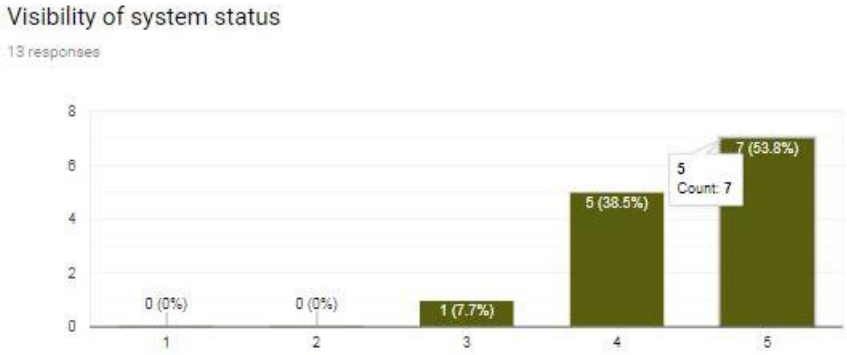

Figure 27 UI Testing

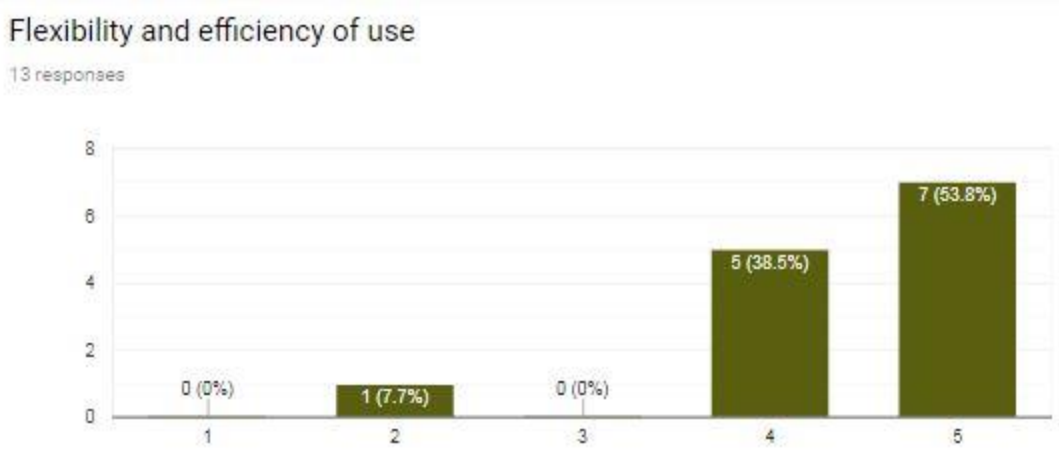

Figure 28 UI Testing

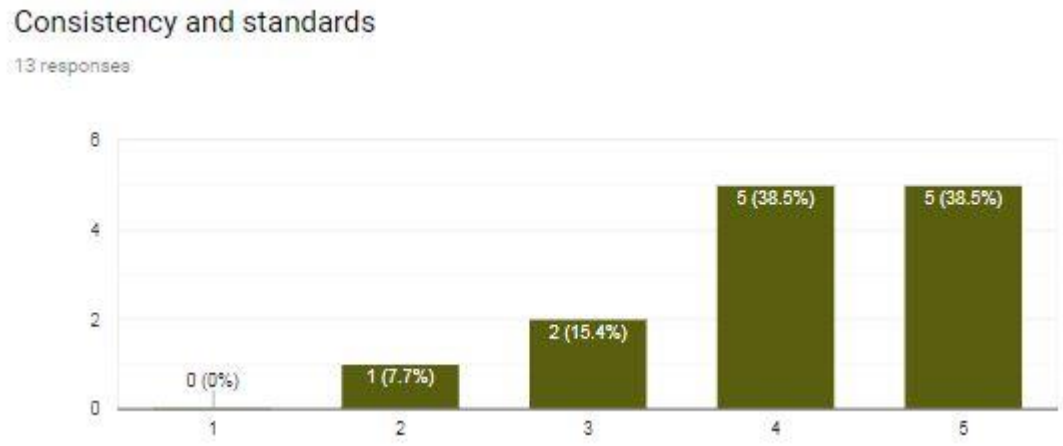

Figure 29 UI Testing

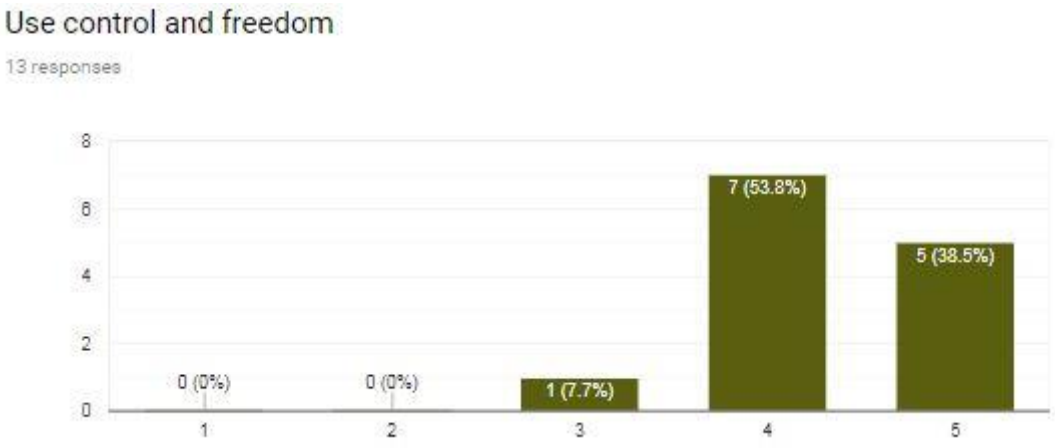

Figure 30 UI Testing

CHAPTER 8

CONCLUSION

8.1 CONCLUSION:

Our project is a PHP based Web Portal which facilitates the academic system of Hidaya Academy. This automation system has helped in bringing the entire data which was previously stored in the form of paperwork, to a web-based application. It caters the problem which was faced by the Administration of Academy, who had to dive into the previous records for extracting a particular record which was time consuming.

There are two main domains of this Web Portal for Hidaya Academy, Virtual Class and Academic System. The academic system is resolving all sorts of academic issues, such as the course offered to a teacher to the student and the course offered to the student by the teacher. The student can also look up to his/her progress over the academic system, can view their attendance details, their events and notifications.

The Virtual Class of Hidaya Academy, an online class where student and teacher can communicate. This is used to know that which students are present and which are absent.

The goals are targets set were almost able to be achieved by us. Testing chapter is included for the verification of the design and validation of the need to meet the desired documents. This Web Portal will solve the needs of the developer will help in solving their problems.

This application greatly reduces the time taken for the production of a GUI, when compared to manual coding and designing of the GUI. The project goals are almost fulfilled. There is however, an effort being needed to make the application more user friendly and successful. However, targets have been met and most of the goals have been accomplished and implemented.

The tolerance capacity of this software was reliable. In most of the test runs, the breakdown during the normal operation as proper hardware and software protections were in place stabilized power supply, level surface and control of extreme temperatures as well as protection of the application.

The application was reliable as most of the features worked.

CHAPTER 9

FURTHUR ENHANCEMENT

9.1 ENHANCEMENT:

Our aim is to construct a bridge between the technology and the academy system. As we have accomplished many areas and our idea but as the technology is improving day by day our project would also need some enhancement. Some area could be future enhancement endless, but some of them can be enhanced by the upgrading technology as we only highlighted the areas where some extra work can be beneficial for the project. The areas where some further enhancement and modification is needed are as follow:

- GUI
- Cloud
- Fully informative web
- Faster data entry
- Stability of academic process
- Processing loading speed
- Web security

Now a day every organization should also avoid paper work and adopt latest technology, so human error can be removed and word load also be compressed by our application.

CHAPTER 10

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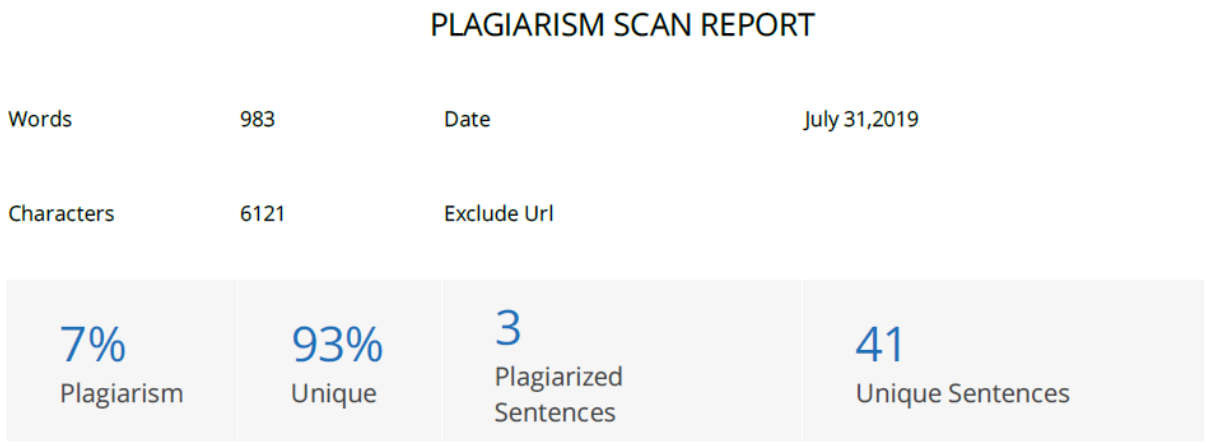
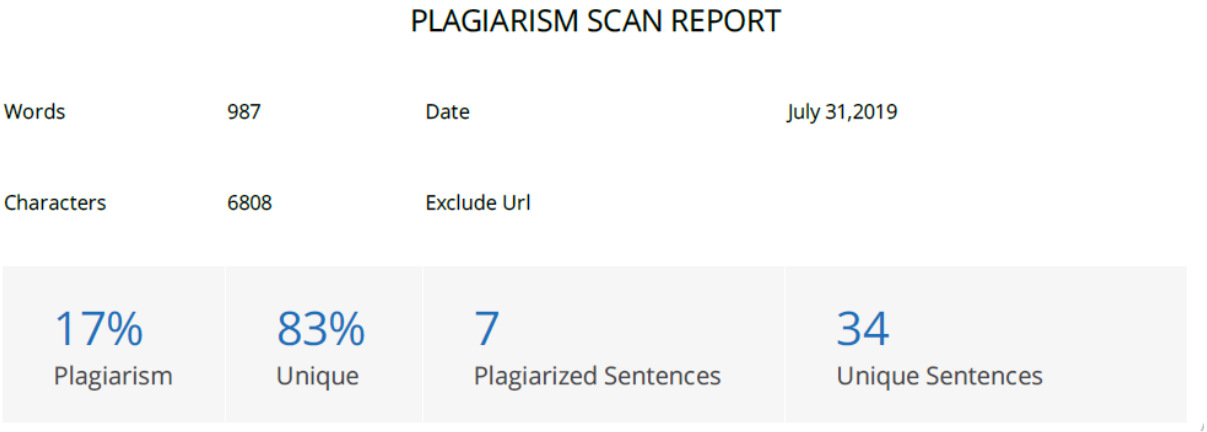
CHAPTER 11

PLAGIRISM REPORT

11.1 Chap 01



11.2 Chap 02



11.3 Chap 03

PLAGIARISM SCAN REPORT

Words	321	Date	July 31,2019
Characters	1942	Exclude Url	

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Plagiarism	Unique	Plagiarized Sentences	Unique Sentences

11.4 Chap 04

PLAGIARISM SCAN REPORT

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Characters	5935	Exclude Url	

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Plagiarism	Unique	Plagiarized Sentences	Unique Sentences

11.5 Chap 05

PLAGIARISM SCAN REPORT

Words	473	Date	July 31,2019
Characters	2895	Exclude Url	

10% Plagiarism	90% Unique	2 Plagiarized Sentences	19 Unique Sentences

11.6 Chap 06

PLAGIARISM SCAN REPORT

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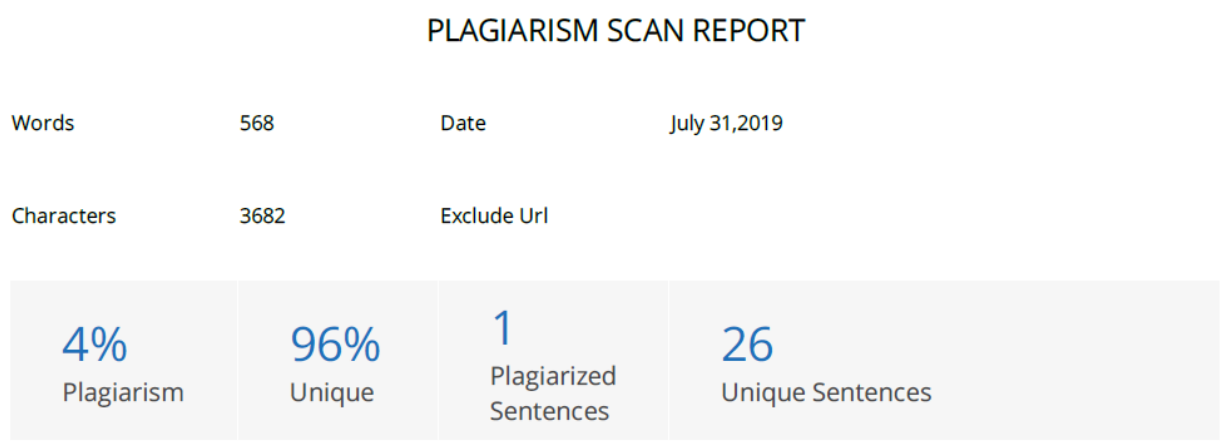
5% Plagiarism	95% Unique	1 Plagiarized Sentences	21 Unique Sentences

11.7 Chap 07



11.8 Chap 08

11.9 Chap 09

PLAGIARISM SCAN REPORT

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Plagiarism	Unique	Plagiarized Sentences	Unique Sentences

CHAPTER 12

ANNEXURES

12.1.1 Project executive summary

This project is providing the solution for “Hidaya Academy” so, they can conduct classes online in effective manner.

In teacher side panel teacher can conduct the class for those student who will enroll in that particular course, teacher can also record the lecture of that particular.

In Student side panel student can enroll in course by using sign up and after admission formalities student can enroll in the course namely “Darse Nizami”.

12.1.2 Project overview

The project is approaching to the solution of a basic problem of online classes in an effective manner. It will build a platform through which teacher of an institute and student can easily communicate and will be conducted in more professional manner.

We are making the web portal for a reputed institute of Karachi located in Defence Housing Authority Phase – VII Named as “Hidaya Academy”. The institute is giving free online classes for different Islamic courses and mainly for “Darse Nizami” (8^{th} Year Aalim e Deen Course).The institute prefer the software “skype” for their online classes but they are facing so many problems and limitations now so they are looking for an online web based portal for their institute that will make ensure there will be no any kind of problems that were faced by the students and faculty during their classes.

12.2 Project objectives

- Developing a platform for communication between student and teachers.
- Make it convenient for online classes.
- Student can able to see their subjects, class timing and upcoming events.
- This is a very cost-effective method because student can take class from their respective homes. This reduces the cost of transportation.
- Student can give exam from their home by taking their answer script pictures.

- It is very convenient for the overseas Muslims living in the Europe having no reputed Islamic Institute in their countries are able to conduct online classes through this web portal with Hidaya Academy.

12.3 Project scope

We are working on a platform through which teacher of an institute and student can easily communicate and will be conducted in more professional manner.

12.4.1 Academic Module:

The academic module can monitor and manage the activities of the student and the teacher. Academic have the rights to make changes in the course outline, class schedule and paper timing, academic can add the upcoming workshop and seminar.

12.4.2 Login: The academics account having login credentials can able to use and manage the rights. If academic forgot the password they can change their password.

12.4.3 Forget your password: Academic can change their password through email that provided at the time of assigning. Through that password can be change or update. A window will appear on web browser that takes admin new password.

12.4.4 Profile: In this section, Academic can manage or update the information and password, or can add/remove the upcoming seminars and workshops.

12.4.5 Teachers: In this section, Academic can add the teacher, can remove the teacher, or can change the time schedule of the teacher from the database.

12.4.6 Courses: In this section, Academic can manage course list and can add or remove courses as per the instruction from board (wifaq ul madaris).

12.4.7 Students: In this section, Academic can add the student, can remove the student, or can change the class of the student from the database.

12.4.8 Evaluation: In this section, Academic can make the evaluation form, view, edit or delete the questions before making it live, academic can make the link of evaluation form live for the student to fill the form.

12.5 Student Module:

Student is the one who can generate request to the academics through application form for admission. It contains a whole process which can initiate with the registration process. Following are the function of student module which is listed below:

12.5.1 Login: If Student has already registered in application so they can able to attend classes. If not, they have to sign up. If student forgot the password they can change their password.

12.5.2 **Forget your password:** Students can change their password through email that provided at the time of assigning. Through that password can be change or update. A window will appear on web browser that takes students new password.

12.5.3 **Sign Up:** By clicking this button student can switch from main screen to registration screen.

12.5.4 **Registration:** In this activity a form is shown having some required field which should be filled such as name, email address, password, date of birth and qualification etc. After completing the required field's student can go proceed toward the verification phase.

12.5.5 **Verification:** In this activity student is required a code that will be generated by application and that code will be send to their student with the provided verification process (Email Verification). Student can enter the provided code in order to complete the process. After that academics will enter their record to database then assign their login credentials then they will able to conduct classes.

12.5.6 **Chat:** Chat module will help the student to send a message to teacher during the classes. They are allowed to ask the questions to the teachers.

12.5.7 **Courses:** Student can view courses from list which are assigned by academics.

12.5.8 **Evaluation:** Student are allowed to do the evaluation during the evaluation week and when the evaluation link open by the academics.

12.5.9 Watch Lectures: Students can watch the previous lectures which was record by teacher.

12.5.10 Settings: Student can maintain their personal information. Such as updating their profile and password.

12.6 Teacher Module:

Teachers is the one who will conduct classes on a particular times schedule by the academics. Following are the function of teacher module which is listed below.

12.6.1 Login: If teachers has already registered in application so they can able to attend classes. If not, they have to sign up. If student forgot the password they can change their password.

12.6.2 Forget your password: Teachers can change their password through email that provided at the time of assigning. Through that password can be change or update. A window will appear on web browser that takes students new password.

12.6.3 Sign Up: By clicking this button teacher can switch from main screen to registration screen

12.6.4 Registration: In this activity a form is shown having some required field which should be filed be filled such as name, email address, password, date of birth and qualification etc. After completing the required field's tutor can go proceed toward the verification phase.

12.6.5 **Verification:** In this activity Teacher is required a code that will be generated by application and that code will be send to the teacher with the

provided verification process (Email Verification). Teacher can enter the provided code in order to complete the process. After that academics will enter their record to database then assign their login credentials then they will able to conduct classes.

12.6.6 **Chat:** Chat module will help the teacher to reply the message of student.

12.6.7 **Courses:** Teacher can view their courses, which were assign by academics.

12.6.8 **Video Record:** Teacher will record the lecture so student can view it for revision.

12.6.9 **Settings:** Teacher can maintain their personal information. Such as update their profile or qualification and password.

12.6.10 **Video Conference:** This is the section where teacher can conduct class by using video conferencing function and there will be a particular area where teacher can give example related to the topic.

12.7 Out of scope:

- As Hidaya Academy is providing their service free of cost so there is no finance details.

12.8 Deliverables produced

Following are the deliverables of our project according to Milestone

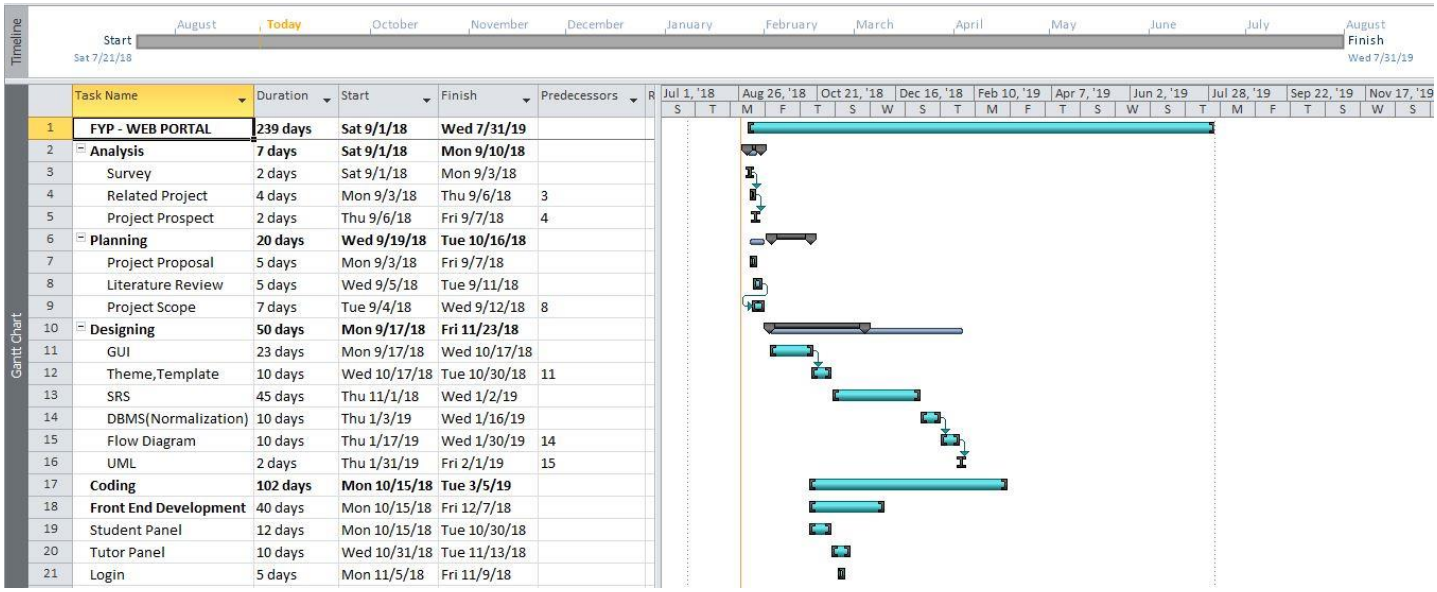
- **Project Deliverable 1:**
  - ✓ Project Proposal & SRS.
  - ✓ Gantt Chart & Project Charter.
  - ✓ Brief analysis of FYP outcomes.
  - ✓ Software / Hardware Requirements.

- ✓ GUI (Screen Shorts) - Tentative
- ✓ General Features of Software and linking with GUI - (Flow Diagram).
- ✓ List of Previous Softwares.
- ✓ Features which are different in the above list and FYP.
- ✓ Chapter 1, 2 and 3.

- **Project Deliverable 2:**
  - ✓ Use Cases.
  - ✓ Process Flow Diagrams.
  - ✓ Class Diagrams.
  - ✓ Complete GUI
  - ✓ Complete normalized ER database design.
  - ✓ DFD, Queries result w.r.t. GUI reports
  - ✓ Main functional Classes and Modules.
  - ✓ Chapter 4, 5, 6
- **Midyear Presentation:**
  - ✓ Working Software/Project.
  - ✓ Working GUI.
  - ✓ DB Connectivity with real dataset.
  - ✓ Complete project code in working condition with project presentation.
- **Project Deliverable 3:**
  - ✓ Load Testing.
  - ✓ Performance Testing.
  - ✓ Unit Testing.
  - ✓ Integration Testing.
  - ✓ Functional Testing.
  - ✓ Chapter 7, 8, and 9 submission and presentation. For the project, 10 tests are required out of 30 tests.
- **Project Deliverable 4:**
  - ✓ Complete Project in true running condition as stated in project scope document, with test results, setup and project deployment kit (in DVD).

- ✓ Chapter 9, 10, and Referencing (Chapter 11) with Plagiarism Report (Chapter 12)

12.9 GANTT chart:



	Task Name	Duration	Start	Finish	Predecessors
1	**FYP - WEB PORTAL**	**239 days**	**Sat 9/1/18**	**Wed 7/31/19**	
2	**Analysis**	**7 days**	**Sat 9/1/18**	**Mon 9/10/18**	
3	Survey	2 days	Sat 9/1/18	Mon 9/3/18	
4	Related Project	4 days	Mon 9/3/18	Thu 9/6/18	3
5	Project Prospect	2 days	Thu 9/6/18	Fri 9/7/18	4
6	**Planning**	**20 days**	**Wed 9/19/18**	**Tue 10/16/18**	
7	Project Proposal	5 days	Mon 9/3/18	Fri 9/7/18	
8	Literature Review	5 days	Wed 9/5/18	Tue 9/11/18	
9	Project Scope	7 days	Tue 9/4/18	Wed 9/12/18	8
10	**Designing**	**50 days**	**Mon 9/17/18**	**Fri 11/23/18**	
11	GUI	23 days	Mon 9/17/18	Wed 10/17/18	
12	Theme,Template	10 days	Wed 10/17/18	Tue 10/30/18	11
13	SRS	45 days	Thu 11/1/18	Wed 1/2/19	
14	DBMS(Normalization)	10 days	Thu 1/3/19	Wed 1/16/19	
15	Flow Diagram	10 days	Thu 1/17/19	Wed 1/30/19	14
16	UML	2 days	Thu 1/31/19	Fri 2/1/19	15
17	**Coding**	**102 days**	**Mon 10/15/18**	**Tue 3/5/19**	
18	**Front End Development**	40 days	Mon 10/15/18	Fri 12/7/18	
19	Student Panel	12 days	Mon 10/15/18	Tue 10/30/18	
20	Tutor Panel	10 days	Wed 10/31/18	Tue 11/13/18	
21	Login	5 days	Mon 11/5/18	Fri 11/9/18	
22	SignIn	5 days	Sat 11/10/18	Thu 11/15/18	
23	SignUp	5 days	Fri 11/16/18	Thu 11/22/18	
24	Request Response	5 days	Mon 11/26/18	Fri 11/30/18	
25	Chat	5 days	Mon 12/3/18	Fri 12/7/18	
26	**Back End Development**	62 days	Mon 12/10/18	Tue 3/5/19	
27	Connectivity with DB	15 days	Tue 12/11/18	Mon 12/31/18	
28	Dashboard	6 days	Mon 12/31/18	Mon 1/7/19	
29	Accept Request	3 days	Mon 1/7/19	Wed 1/9/19	
30	Course List	4 days	Thu 1/10/19	Tue 1/15/19	
31	Feedback/Reviews	5 days	Thu 1/10/19	Wed 1/16/19	
32	Settings	3 days	Wed 1/16/19	Fri 1/18/19	
33	Student Panel	12 days	Fri 1/18/19	Mon 2/4/19	
34	Teachers Panel	12 days	Fri 2/1/19	Mon 2/18/19	
35	Admin Panel	12 days	Fri 2/15/19	Mon 3/4/19	
36	**Testing**	50 days	Tue 3/5/19	Mon 5/13/19	
37	Checking	15 days	Mon 3/11/19	Fri 3/29/19	
38	Compatibility	5 days	Mon 3/18/19	Fri 3/22/19	
39	Testing Results	10 days	Mon 3/25/19	Fri 4/5/19	
40	**Book Documentation**	175 days	Mon 10/1/18	Fri 5/31/19	
41	Chapters	175 days	Mon 10/1/18	Fri 5/31/19	

12.10 Estimated duration:

Milestone	***Date completed***	***Deliverable(s) completed***
Milestone 1	10/26/2018	Project Initiation Phase 50% working
Milestone 2	01/04/2019	Project Execution & Control Phase 100% working
Midyear project presentation	03/08/2019	Project Code Completion
Milestone 3	04/05/2019	Testing & Evaluation Phase
Milestone 4	06/28/2019	Project Closing
Project conclusion	07/ 2019	Poster Session

12.11 Project assumptions

In order to identify and estimate the required tasks and timing for the project, certain assumptions and premises need to be made. Based on the current knowledge today, the project assumptions are listed below. If an assumption is invalidated at a later date, then the activities and estimates in the project plan should be adjusted accordingly.

- Assumption #1: Availability of PC/Laptop.
- Assumption #2: Availability of Internet.
- Assumption #3: Availability of browser.
- Assumption #4: Availability of Email Address.

12.12 Project risks

Risk Area	Level (H/M/L)	Risk Plan
1. Server Down	M	Backup Server
2. Security	M	It is necessary to improve security

12.13 Tools and technologies

Operating System: Windows 7, 8 or 10.

IDE: Visual Studio.

Code Editor: Bracket

Software: XAMPP

Language: CSS, HTML, JavaScript, XML, JQuery, Php.

Database: My Sql.

12.14 PROJECT CHARTER

1. General Project Information	
Project Name:	**Web Portal for Hidaya Academy.**
Project Defense Date:	**12/Nov/2018**
Company Sponsor:	**MATZ Solutions Pvt. Ltd.**
Impact of project:	**Speed up the selection process of domain ontologies**

2. Project Team				
	Name	Department/ Company	Telephone	E-mail
Team Member (G.L)	Taha Tauqeer	Computer Science	03362369899	tahauit@gmail.com
Team Member	Taimur Rafiq	Computer Science	03248274462	rafiqtaimur@gmail.com
Team Member	Muhammad Tufail Ahmed Khan	Computer Science	03423391382	Khantufail425@gmail.com

Supervisor	Dr. Muhammad Waseem			
Co-Supervisor				
External Supervisor	Dr. Zubair Ahmed Sheikh			
In-charge - FYP				

3. Stakeholders

Hidaya Academy's faculty and their students, Application Developers, University Computer Science Department .

4. Project Scope Statement

Project Purpose / Business Justification

This project will give the preview of a search engine that is used for extracting information from the semantic web by using certain domain ontology.

In scope:

- Virtual Classroom for student and teacher's interaction.
- Accuracy can also be measure of the proposed system.
- This system can be useful for teacher for online teaching.
- This system will give accuracy, time management.

Out of scope:

- As Hidaya Academy is providing their service free of cost so there is no finance details.

Objectives (in business terms)

Our objective is providing the solution for "Hidaya Academy" so, they can conduct classes online in effective manner.

- Developing a platform for communication between student and teachers.
- Make it convenient for online classes.
- Student can able to see their subjects, class timing and upcoming events.
- This is a very cost-effective method because student can take class from their respective homes. This reduces the cost of transportation.
- Student can give exam from their home by taking their answer script pictures.
- It is very convenient for the overseas Muslims living in the Europe having no reputed Islamic Institute in their countries are able to conduct online classes through this web portal with Hidaya Academy.

Deliverables

- Scope of Work.
- Web Application.
- Source Code.

Scope

- Extracting information available on the web to find appropriate ontologies using natural language processing. a semi-automatic frame work for selecting appropriate ontologies for particular task on semantic web.it will be a tool for selecting appropriate ontologie.

Project Milestones

Milestone	Deliverables	Dates
1st Milestone (Project Initiation)	SRS, Project charter ,Flow diagram, Gantt Chart, GUI (tentative), list of previous softwares.	12-Nov-2018
2nd Milestone (Process & Planning	GUI and UML Diagrams.	18-Jan-2019
3rd Milestone (Execution & Testing)	Impelementation and Testing.	12-Apr-2019
4th Milestone (Project Closing & Deliverables)	Testing results.	10-July-2019

Major Known Risks (including significant Assumptions)

Risk	Risk Rating (Hi, Med, Low)
Unexpected situations.	Low
Learning new tool may cause delay.	High
Internet connection loss/server may down.	High
Getting behind the schedule.	Medium

Constraints

Our group has identified a number of constraints in this project. Specifically, the constraints are as follows:

- Our group has a limited amount of time to deliver a working product. Specifically, the project must be finished by June 2017.
- A number of team members in the group are currently working and therefore we will have scheduling conflicts occasionally.

External Dependencies

Nil.

5. Communication Strategy

Will have to communicate effectively. Therefore, we have agreed to a few communication policies as a group to facilitate effective communication.To facilitate internal communication, we have agreed to meet twice a week or more depending on the work load. This will allow us to share our progress and research with group members. We will use email when the project plan is not specific enough to keep all group members up-to-date. The group will split the work to be done on

reports, presentations, and other work based on the strengths of each group member as well as fairness to the rest of the group members. We meet our supervisor four to five time in a month.

6. Sign-off

	Name	Signature	Date (MM/DD/YYYY)
Team Member (G.L)			
Team Member			
Supervisor			
Co-Supervisor			
External Supervisor			

7. Notes