FOUNDATION UNIVERSITY

ISLAMABAD

MASSIVELY OPEN ONLINE COURSE SYSTEM FOR SEERAT-UN-NABI

Submitted by

F18BCSE162 – RIMSHA JAVED
F18BCSE138– FATIMA GULL
F18BCSE156 – MUHAMMAD USMAN
F18BCSE121-RIDA FATIMA

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Project Advisor

MR. MUHAMMAD SAJID QURESHI

Project Coordinator

DR. TEHMINA KARAMAT

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DEDICATION

We dedicate our project to Allah Almighty, the most Merciful and the most Benevolent Whose continuous grace and mercy remained with us throughout our life and even more during this project.

We also dedicate our project to our parents, teachers, friends and especially Mr Muhammad Sajid Qureshi who all-together made us able to complete our task. We are thankful to all of them for being there for us to make our ways easier and smooth.

ACKNOWLEDGEMENTS

Everyone has an important role in your success, Final year project is an important milestone in bachelor's degree of any student broadening his/her vision and depicting the upcoming challenge in real world.

This is a man's world where we help, support guide, motivate to achieve each other's goals. Final year project was one of the challenging projects in BCSE degree and we cannot forget mentioning Mr. Muhammad Sajid Qureshi who has supported and helped us tirelessly to complete this project.

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Rimsha Javed

_____

Fatima Gull

_____

Muhammad Usman

_____

Rida Fatima

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CERTIFICATE OF APPROVAL

It is certified that Project titled **"Massively Open Online Course System for Seerat-un-Nabi (PBUH)",** presented on July 2022, has been duly approved by the evaluation committee.

Project Advisor: _____

Mr. Muhammad Sajid Qureshi

Project Coordinator: _____

Dr. Tehmina Karamat

Manager Graduate Off: _____

Mr. Umar Mahmud

ABSTRACT

"Massively Open Online Course System for Seerat-un-Nabi" is an ancient version of the software Muallim – A Learning and Testing System for Seerat-un-Nabi. It is a web-based application facilitating the distant learners of Seerat-Un-Nabi in learning the message of prophet (PBUH)". The software enables the learners to learn Seerat-un-Nabi in a systematic way, on their own pace, beyond the geographical boundaries.

The system follows pattern of the benchmark massively open online course systems operating in the industry. Like a MOOCS, the software directs the learner to proceed in a pre-defined learning sequence in order to complete the course in its logical order. It provides study resources in Urdu language that includes Courses, Sections, Chapters and Concepts. On completion of each Chapter, the system offers the practice and graded tests to the learner. Subject-based learning and testing service is also part of the software. Peer Review based Assignments, Learners Progress Monitoring, Learners Performance Evaluation and e-certificate based on the Learners Progress are major features of MOOCS.

The software product will significantly improve the learning process of the last testament, revealed by Allah Subhanahu-Wa-Tahala. In future, we would like to cover all chapters of Hayat-Rasool-e-Umi and enhance functionalities of the software product.

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LIST OF ABBREVIATIONS

Terms	Descriptions
SRS	Software Requirement Specification is a document that completely describes all the functions of a proposed system and the constraints under which it must operate. It is the parent document for any software project.
MOOCS	Massively Open Online Course System for Seerat-un-Nabi
Learner	The one who use the application
SI	Software Interface
FUI	Foundation University Islamabad
Functional Requirements	Define the intended behaviour of the system or the services, which the proposed system will provide to the users.
Non-Functional Requirements	Requirements that specify criteria that can be used to judge the operation of a system, rather than specific behaviours.
NFR	Non-Functional Requirements
PHP	It is a server-side scripting language designed for web Development but also used as a general-purpose programming language Personal Home Pages.
GUI	Graphical User Interface
UI	User Interface
PC	Personal Computer
UML	Unified Modelling Language

Chapter 1

INTRODUCTION

1.1 Introduction to report

This report contains a brief description of our product MOOCS (Massively Open Online Course System for SEERAT-UN-NABI (PBUH)). It covers the complete details about how the project will be completed with all the necessary diagrams. The first chapter discusses the existing system related to our project, problem definition, literature review, user needs, and context diagram. The second chapter introduces our product with the background and overview. Project scope, Project objectives, Problem Description Product or Project Features, and use case diagrams will also be discussed in the report. The third chapter describes the requirement specifications, System Sequence Diagram, Domain model, which will consist of the functional/non-functional requirements, sequence diagram and some other diagrams related to the requirement specifications.

1.2 Existing System

Quality, Proper and good education is very important for all of us. It facilitates quality learning all through life among people of any age group, caste, creed, religion, and region. It is the process of achieving knowledge, values, skills, beliefs, and moral habits. Education is the ultimate way to get victory overall personal and social problems. To live a better and peaceful life, we need to be educated. It transforms us completely from inside and outside by changing our mind and personality as well as improving our confidence level. It helps a person to get knowledge and improve confidence level all through life. It plays a great role in our career growth as well as in personal growth. It

has no limitation; people of any age group can get education anytime. It helps us to determine good and bad things. An educated person having a good education becomes a good citizen in society.

There are several problems with the traditional education system. First, you need to pay a heavy amount of money per term to attend a prestigious school, college or university. With all those budget cuts, busy classrooms, and course shortages, you will not always get the chance to study exactly what you want.

Nowadays, online learning has to be the greatest revolution in contemporary education. It made a huge change in the system and opened great opportunities for everyone who wants to learn something. Online education is a flexible instructional delivery system that encompasses any kind of learning that takes place via the Internet. Online learning allows educators to reach students who may not be able to enrol in a traditional classroom course and supports students who need to work on their own schedule and at their own pace. The quantity of distance learning and online degrees in most disciplines is large and increasing rapidly. Schools and institutions that offer online learning are also increasing rapidly. Students pursuing degrees via the online approach must be selective to ensure that their coursework is done through a respected and credentialed institution.

A lot of (MOOC) Massively Open Online Course platforms were launched in the past decades which are offering different courses. MOOC creates the opportunity for sharing ideas & knowledge and also helps to improve lifelong learning skills by providing easy access to global resources. It improves cross-cultural relationships which leads to collaboration between institution educators and learners locally and internationally.

Our application "**MOOCS – Massively Open Online Course System for SEERAT-UN-NABI (PBUH)"** is a follow-on member of the product family Muallim. This software will facilitate the learning of SEERAT-UN-NABI (PBUH) on the pattern of the well-known Massively Online Open Course (MOOC) Systems like Coursera, Edx, and Udemy. We are providing the MOOC system specifically for SEERAT-UN-NABI and approaching towards the level of international MOOC systems, our system is a combination of learning services and testing service of SEERAT-UN-NABI through MOOCs process. A learner will first have to go through the content of each chapter and the system will keep track if he has read the relevant Chapter. At the end of each chapter, the System will conduct a practice and then a graded test. The Learner must have to attempt practice test and then move to graded test. The application will provide two types of tests, interactive learning session, e-certificate in which the learner can test his knowledge by identifying the topic. So, we are providing a strong platform to the learners in which they can learn the message of SEERAT-UN-NABI and test their Knowledge about PROPHET (PBUH).

Table 1.1: Benchmarking

Features	Edx	Coursera	Our System
Computer Based Testing	✓	✓	✓
Self-Paced Learning	✓	✓	✓
Automated Comments on Performance	✓	✓	✓
Topic Oriented Testing	✓	✓	✓
Standardized & Quality Content	✓	✓	✓
Automatic Generation of Certificates	✓	✓	✓
Interactive Learning	For some Courses	For some Courses	For **ALL** Courses
Feedback	✓	✓	✓
Peer Review Assignment	✓	✓	✓

1.3 Literature Review

In [1] **Invalid source specified.**, it summarizes the development process of a MOOCS in ten simple rules. We present a brief summary of them in the following:

Rule 1: Educator Mission-Establish the purpose of developing the MOOC system.

They provide education to a multitude of people across the planet. Instead of lecturing to a class of 100 individuals, you can reach many thousands of people, often on a topic close to your heart.

Rule 2: What Is a MOOC? —Experience a MOOC Firsthand:

One simple way of exploring these online offerings is to enroll in a MOOC and do some reconnaissance. Given that all MOOCs suffer from a rapid drop-off in numbers throughout the course, you need to consider how to maintain the interest of the participants.

Rule 3: Select a MOOC Provider:

Pin yourself to an existing platform. Start by exploring and focus on what the provider offers to the MOOC developers. Once a provider is chosen, a dialogue can be started to gather details and determine whether there is an alignment between their organization and your educational vision. n. If legal agreements are needed, then an appropriate amount of time should be allocated for procuring advice and finalizing contracts.

Rule 4: Decide on Subject Matter:

MOOC can’t teach an entire degree in a matter of a few weeks, so keeping it enjoyable, punchy, and interesting is vital. The decision on the topic needs considerable thought to keep future participants engaged. Again, the educational vision needs to drive this to carefully select the material to deliver.

Rule 5: Determine Governance:

There should be a team with well-defined roles like a videographer, a video editor, a project manager, a text editor and etc. to work efficiently. Budgets and schedules must be assembled including tasks to be completed, meeting dates etc.

Rule 6: Design Your MOOC:

Depending on the MOOC provider, they are likely to have a set format for their courses. This is an advantage, as it specifies valuable guidelines on videos, quizzes, discussion boards, polls, and so forth. Each person generating the teaching material then works to a common framework. One more thing to consider is what will set your MOOC apart from the rest. What is special about your team?

Rule 7: Pilot Test Your MOOC:

The aim of pilot testing is to pick up problems before releasing the MOOC to the public. By taking a global view of a MOOC, the pilot test (preferably by lay people) can get an overall idea of the course. Not only does this pick-up inconsistencies and errors, it can also gauge the overall merit of the course.

Rule 8: Promote the MOOC:

The MOOC provider will be your partner here to promote the MOOC with an international outlook. Within your own institution, there must also be a strategy to inform people at a national level with press releases and through alumni networks.

Rule 9: Manage the MOOC:

The discussion forums will need to be moderated, and other activities will require attention. Communication channels and contact people need to be fully functional at this time. Some elements of the MOOC may require ongoing refinement.

Rule 10: MOOC Postmortem:

As the MOOC approaches the release date, the MOOC provider can continually communicate enrollment numbers. They will ultimately inform the institution about various metrics. These can be used to compare against other offerings and be discussed internally by your MOOC team. Lastly, the MOOC doesn't die there. If successful and well received, it is expected that the MOOC will be rerun periodically, which again means moderators need to be summoned. Overall, developing a MOOC is onerous; but in a team environment and with a structured framework, they provide excellent motivation for creating engaging teaching materials designed to enlighten as many as possible.

In [2] gave nine easy steps to plan and run a MOOCS. A brief description of them is following:

First step is Topic & Audience, pick an area of personal interest and expertise with appeal or demand for learning. If you are teaching any subject, then do it openly. Choose your target audience who will take the course they may be students or peers. Secondly, find out someone to teach with you, try to find a colleague from a different country, different regions, or with different views, conduct their interviews and then select skillful people. The third step is to determine content for this make use of open articles, multimedia resources (YouTube, others), video, interactive presentations, text, and simulations. Treat content as a starting point for learning conversations, not as the exclusive intent of the course. Fourthly, plan spaces where users will post their queries to get the solution of their queries may be centralized (forums, Daily email), decentralized format (blogs and social media). The fifth step is to plan interaction which may be synchronous (maintain the record of interaction so people in other time zones can view), asynchronous, trails and tags. The sixth step is to plan your continued

presence. In an open course, you are not the central node but remain an important node. Stay active in forums, twitter, email, and blogs. Seventh is learner creations and activities. The eight step is promotion and sharing. Lastly, iterate and improve the process. If you are designed your course for fluidity, you can add/change as you go. Listen to your course participants. They'll let you know what to improve.

Design and Development of MOOCs

Massive open online courses are the new additional dimensions of education that allow studying online courses from different universities that are located anywhere around the world. According to the study conducted by the MOOC class central by the end of 2017 the size of the modern "MOOC movement" reached more than 800 universities, more than 81 million students, the number of MOOC courses is more than 9,400 courses. The largest providers of online courses Coursera have expanded its audience to 30 million students. The desire of educational institutions to improve the quality of education leads to the need to increase the cost of the development and maintenance for educational services and consequently and the final cost of training increases. On an economic scale due to the MOOC, the cost of learning per student reduces.

Hew and Cheung presented a review in [3] based on MOOCs use by the students and instructors. They suggested the reasons why they need to sign up for the MOOCs:

1- The desire to learn about a new topic
2- To increase the knowledge
3- For the personal challenge
4- The desire to collect completion certificates

The development of the MOOCs begins with an introductory stage, during which it is necessary to understand the domain area, identify the target audience, determine the development tools, and calculate the project parameters (cost, capacity, quality, and

duration). At the end of this stage, a plan-project should be prepared. Then the organizational stage begins – designing the course, preparing the material, selecting trainers, solving copyright problems, preparing video materials, etc. All this is displayed in the production plan. After preparing scenarios for lessons, videos, tests, interviews, the penultimate stage of development begins – the management stage. This stage implies marketing, course assembly, approbation. The last stage of development is the launch of the course.

At the stage of introductory preparation of the MOOC it is necessary:

1- Identify the narrowed, desired learning outcomes for students.

2- Provide a strategy for evaluating students, verifying the mastery of knowledge following specified learning outcomes.

3- Develop a sequence of tasks and actions that will support the student's actions in mastering the learning objectives (knowledge, skills, activity):

   a) Availability of content that will support active learning; model of activity/skills for students.

   b) Duration of the course, the course building from basic knowledge to the higher order of skills, such as application, integration, and analysis.

Ensure a balance between the presence of the teacher/instructor, social and expert cooperation, and the presence of cognitive challenges.

1.4 Problem Definition

People find it difficult to learn SEERAT-UN-NABI as the Madaris, institutions are built far away from the city. In backward areas, most people do not send their girls to the Madaris due to the parda observance. Sometimes there is no reliable source or Muallim available to get the message of prophet (PBUH). Some sources are not Authentic they don’t provide Authentic Information. Some people have a misconception about

Madaris security. Also, there is no method available through which people can test their knowledge and get the message of Seerat-Un-Nabi. There is a need for such a system that provides education at their doorstep, Quality-based content at cheaper rates, people can learn and test their knowledge about Seerat-Un-Nabi. There are few online platforms that provide Knowledge of Seerat-un-Nabi. But the main problem was that they are not integrated. Some Systems provides only Learning Resources other provides other only test your knowledge.

1.5 Context Diagram

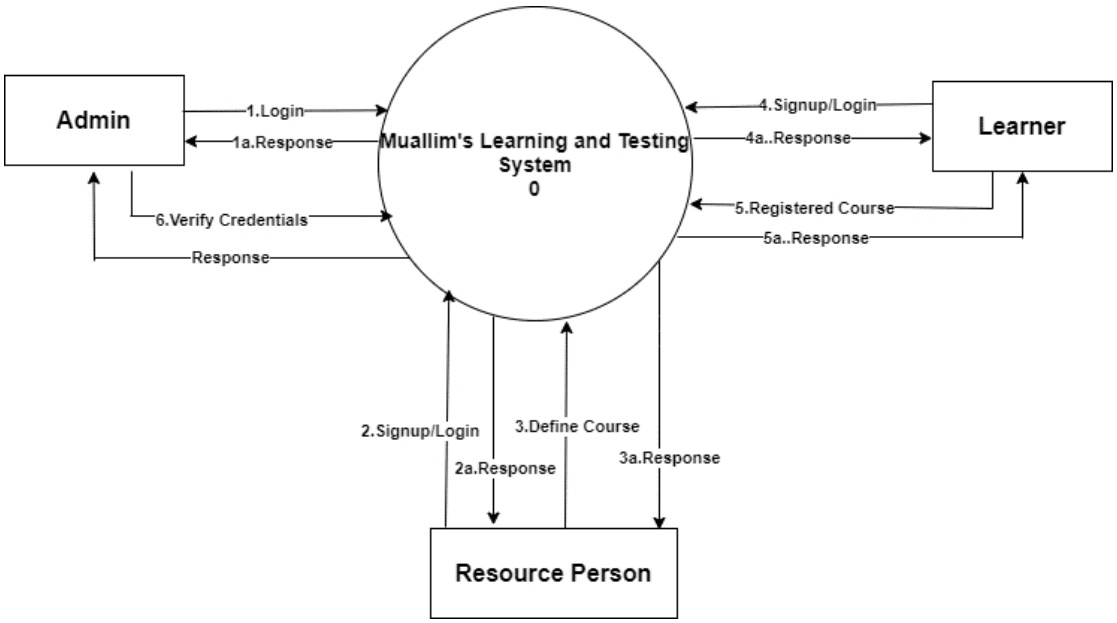

Figure 1.1: Context Diagram

1.6 User Needs

This is an era of software technology and life is so fast and no one wants to wait for anything. The world is in our hands as we can do anything by sitting home without moving outside like shopping online, ordering food, booking cabs, etc. Using the MOOCS to learn the Quran-il-Hakeem would give us a major advantage over a traditional classroom. Nevertheless, currently there exists no MOOC system for

learning and testing understanding the message of prophet (PBUH). The readers of Seerat-un-Nabi need a system that employs the power of the Internet and the World Wide Web. Learning Seerat-Un-Nabi through a MOOCS would provide them all the major services of a MOOCS including the provision of study resources in different languages. Chapter-based testing, Subject (Topic) based testing, and the Vocabulary (meaning of difficult word occurring in the Arabic text) testing. The software product would also provide them the discussion forum, automated comments on the performance of a leaner after taking the test, e-certificate, and the learner's feedback service.

Chapter 2

INTRODUCTION TO PROPOSED SYSTEM

2.1. Introduction

In this chapter, we will give a project background and an overview. Afterward, we will have the overall description of the project of what the project is about. Project objectives and scope will give a better explanation of the importance of this project and the overall scope of this project. The features list is also an important part of the product, and they will also be listed in this chapter. Lastly, the use case diagram will be there as the diagrams are a better way of explaining any concept.

2.2. Project Background or Overview

Our Project "Muallim's Learning and Testing System for Seerat-un-Nabi (PBUH)." is a web-based application that aims to provide integrated learning of for Seerat-un-Nabi (PBUH) through a proper MOOC Process. Our product will benefit keen learners around the globe by facilitating them in understanding the message of Seerat-un-Nabi (PBUH). Being a web-based system, the software enables the user to learn Seerat-un-Nabi (PBUH) at their own pace, beyond the geographical boundaries which are a very affordable and convenient way of learning. Our product also helps learners of Seerat-un-Nabi (PBUH) to test their knowledge through Testing and Evaluation (Computer-Based Testing) of their understanding through a well-defined set of questions. At times, people have questions but are not able to find appropriate answers or discuss with others therefore the discussion forum is aimed to help learners discuss different concepts with each other.

2.3. Problem Description

No MOOC based system is yet developed that provides courses related specifically to Seerat-un-Nabi (PBUH) so people find difficulties to learn Seerat-un-Nabi (PBUH) online. Therefore, people take admission in Islamic Institutions or hire Techers to learn Seerat which minimizes self-paced learning advantage. The famous MOOC Systems that already exist like Udemy, EdX, Coursera, etc. are not reliable in this regard and one can't learn and test his knowledge or discuss concepts/questions related to Seerat teachings with others on these platforms. Also, as the Seerat covers a wide variety of subjects/topics, there is no such platform available that provides Subject Based Knowledge and Testing to people who are interested in understanding the Seerat teachings about specific subjects. The MOOC System for Seerat-un-Nabi (PBUH) will give a proper environment to overcome all the problems mentioned above.

2.4. Project Objectives

The intended objectives of this product will be as follows:

- The main goal of our product is to give a platform closer to the famous MOOC systems specifically for the Seerat-un-Nabi (PBUH).
- Giving the Ummah the best tool to learn the Seerat.
- Helping users to learn Seerat-un-Nabi (PBUH).
- For a better understanding of what Islam is and how it tends to guide humans.
- Providing a platform for reflective learners who are not able to get their concepts of Seerat teachings clear to discuss and understand.
- Providing a certificate to the learners at the end of the successful completion of the course.
- Alerting the learner about their weakness by referring them to a particular section of the course at the end of a test.

- Providing facility to the learners to test their subject-based knowledge.

2.5. Project Scope

The "Massively Open Online Course System for Seerat-un-Nabi (PBUH)" is a web-based application where learners will interact with the system to learn Seerat-un-Nabi (PBUH) through a MOOC Process. The goal is to allow people to learn and understand the Holy Seerat and then test their knowledge through computer-based testing. This mode of education is more convenient, affordable, and effective because it is an online system and people can learn the Seerat without having to take admission to a formal Islamic Institution. This system is designed to facilitate the distant learners of Seerat-un-Nabi (PBUH) by providing free registration and course enrolment facility which the self-paced learning facility. The system is handling whole Seerat-un-Nabi (PBUH) and the Online Computer Based Testing will be objective-based testing with interactive learning sessions. System is not taking video and audio tests. All system information is to be maintained in a database. The intended system is generic and can be used easily by any person with basic knowledge of the computer system. It will hugely benefit those people who cannot go to Madrasahs due to problems such as the people living in non-Muslim countries where, there are no Madrasahs, can get benefit from our system.

2.6. Project Features

These are the project features of our project.

2.6.1 Authentication

A user will signup or login to use this software product.

2.6.2 Course Definition

The product allows an admin to add and define a course and its related resources. Course content includes Objective Questions, Interactive Sessions, and Tests.

2.6.3 Course Offering

After the definition of a course, the software product allows administrator(s) to offer or publish a course.

2.6.4 Course Enrolment

The learner needs to enroll in the course to gain access to the content and material related to the course.

2.6.5 Interactive Learning

Learner will first have to go through the content of each chapter and system will keep track if he has read the relevant sections. At the end of a chapter, system will conduct interactive learning sessions.

2.6.6 Practice Test and Graded Test

The course is conducted as per the MOOC Process i.e. a learner will first have to go through the content of each chapter and system will keep track if he has read the relevant sections. At the end of a chapter, system will conduct a practice test and then a graded test. Learner will not be able to give a graded test if he fails to pass the practice test and the system will not allow him to move onto the next chapter if he has not completed and passed the previous chapter.

2.6.7 Learner's Performance Evaluation

System conducts two types of evaluation:

- **Peer Review based Evaluation**
- **Testing Based Evaluation**

Learner's evaluation is done after each test and his progress is maintained along. Automated comments are generated in peer review-based evaluation.

2.6.8 Result Compilation

After successful completion of the intended course in which the learner enrolled in, system compiles the result of all graded tests during the course and generates a result based on the test performances.

2.6.9 Certificate Generation

Learner can apply for a Certificate after the successful completion of a course. System generates an e-certificate based on this performance after his result.

2.7 Use Case Diagram

A use case diagram is a graphic depiction of the interactions among the elements of a system. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements.

Figure 2.1: Use Case Diagram

Chapter 3

REQUIREMENT SPECIFICATIONS

3.1. Introduction

This chapter includes the functional requirements of the intended system, fully dressed use cases, and all the non-functional requirements. It also includes some important diagrams that define the logical and conceptual behaviour of the system like the System Sequence Diagram, Sequence Diagrams, Entity-Relationship Diagram, and Activity Diagram. User interfaces are also included in this chapter.

3.2. Functional Requirements

Table 3.1: Functional Requirements

FR No.	Function Name	Functional Requirements	Feature No.
FR001	Sign Up	The System shall allow the user to set First name for sign up.	**F001**
FR002		The System shall allow the user to set unique Username for sign up.	
FR003		The System shall allow the user to set last Name for sign up.	
FR004		The System shall allow the user to set password for sign up.	
FR005		The System shall allow the user to set email for sign up.	
FR006		The System shall allow the user to set CNIC No.	

FR007		The System shall allow the user to set Date of Birth.	
FR008		The System shall allow the user to set Gender.	
FR009	Login/Signup	The System shall allow the user to login with correct credentials.	
FR010		The System shall allow the user to set correct username and password for signup.	
FR011	Settings	The System shall allow the user to update his Password.	
FR012		The System shall allow the user to update his Username.	
FR013	Course Addition Profile	The System shall allow the user to add new Course.	**F002**
FR014		The System shall allow the user to remove Course.	
FR015		The System shall allow the user to update information in Course.	
FR016		The System shall display all Courses.	
FR017	Section Addition Profile	The System shall display all Sections in specific Course.	
FR018		The System shall allow the user to add sections in Course.	
FR019		The System shall allow the user to view sections from Courses	

FR020		The System shall allow the user to remove sections from Course.	
FR021		The System shall allow the user to update information in sections.	
FR022	Chapter Addition Profile	The System shall display all Chapters in specific Course	
FR023		The System shall allow the user to add Chapters in Courses.	
FR024		The System shall allow the user to update information in Chapters.	
FR025		The System shall allow the user to remove Chapters from Sections.	
FR026	Course content	The System shall allow the user to upload Course content	
FR027	Interactive Learning Session	The System shall allow the user to conduct Interactive learning session.	**F003**
FR028		The System shall allow the user to take Interactive learning session.	
FR029		The System shall allow the user to attempt Interactive learning session.	
FR030		The System shall allow the user to select correct option	
FR031		The System shall give hints if user selects wrong option	

FR032		The System shall automatically mark the interactive Learning Marks.	
FR033	Peer Review Management session	The System shall allow user to view his/her progress.	**F004**
FR034		The System shall allow the user to upload his/her assignment.	
FR035		The System shall allow the user to download assignment.	
FR036		The System shall allow the user to upload solution of assignment.	
FR037		The System shall allow learners to review their peer assignments.	
FR038		The System shall allow learners to mark their peer learners' assignments.	
FR039	Learner Progress Monitoring	The System shall ensure how many sections the user has completed.	**F005**
FR040		The System shall ensure how many chapters the user has completed.	
FR041		The System shall ensure how many interactive learning sessions the user has attempted.	
FR042		The System shall ensure how many Practices Test the user has completed.	
FR043		The System shall ensure how many Graded Tests the user has completed.	
FR044		The System shall conduct Practice Test.	**F006**

FR045	Test Conduction Session	The System shall conduct Graded Test.	
FR046		The System shall allow the user to attempt Graded Test.	
FR047		The System shall mark the Tests.	
FR048	Give Feedback	The System shall allow user to give feedback.	**F007**
FR049	Certificate Generation	The System shall generate certificate.	**F008**

3.3. Full-dress Use Cases

3.3.1 Signup

Table 3.2: Signup

Use Case ID	**UC1**	
Use Case Name	Signup	
Use Case Actor	Learner	
Use Case Description	Signup to create an account to get access to the system.	
Pre-Condition	Learner does not have an account. Learner wants to create an account.	
Post Condition	Learner will have an account. Learner will be able to login to use the system.	
Flow of Event	**Actor**	**System**
	1. The user will click on the Signup Button. 2. User fills the Signup Form. 3. Correct errors if they occur during registration.	4. Check for errors, if any then show error message. 5. System should store users' data in database.
Alternative Flow	1) The learner enters incomplete information. 2) The user already has an account.	

3.3.2 Login

Table 3.3: Login

Use Case ID	**UC2**	
Use Case Name	Login	
Use Case Actor	Learner, Admin	
Use Case Description	Login to use the system	
Pre-Condition	User has an account. User wants to log in. User is not already logged in.	
Post Condition	User is logged in to the system User has access to the system	
Flow of Event	**Actor**	**System**
	1. User will enter login details. 2. User will click on the login button.	3. System should check it from database and show errors if any. 4. System will give access if login info is correct.
Alternative Flow	1) The login credentials do not match. 2) The system shows error.	

3.3.3 Define Course

Table 3.4: Define Course

Use Case ID	**UC3**
Use Case Name	Define Course
Use Case Actor	Admin
Use Case Description	A new course will be added and defined.
Pre-Condition	Admin is logged in. Admin wants to create and define a new course.

Post Condition	Course is fully defined. Course is ready to be offered.	
Flow of Event	**Actor**	**System**
	1. Admin will click on add new course. 2. Admin will define title, objectives, description etc. 3. Admin will upload the relevant content and resources.	4. System will create database entries and save new course.
Alternative Flow	1) Admin is not logged in. 2) The system shows an error.	

3.3.4 Offer Course

Table 3.5: Offer Course

Use Case ID	**UC4**	
Use Case Name	Offer Course	
Use Case Actor	Admin	
Use Case Description	Defined course will be offered so learners can enrol into it.	
Pre-Condition	Admin is logged in. A course is already defined.	
Post Condition	Course is Published and Offered Successfully. Course is available for learners to enrol in.	
Flow of Event	**Actor**	**System**
	1. Admin will set terms and conditions. 2. Admin will set schedule. 3. Admin will click the Offer Button.	4. System will public the course and allow learners to enrol in.
Alternative Flow	1) Admin is not logged. 2) The system shows a database connection error. 3) The course is not already defined.	

3.3.5 Learners Registration

Table 3.6: Learners Registration

Use Case ID	**UC5**	
Use Case Name	Learners Registration	
Use Case Actor	Learner	
Use Case Description	Learner's registration into a course for learning.	
Pre-Condition	Learner is logged in. Course is offered. Learner wants to register into a course.	
Post Condition	Learner has enrolled into the course. Learner has the access of course content.	
Flow of Event	**Actor**	**System**
	1. Learner will select a course. 2. Learner will click register button.	3. System will register the learner into the course and give him access to the content.
Alternative Flow	1) The course is not defined or offered.	

3.3.6 Join Course

Table 3.7: Join Course

Use Case ID	**UC6**
Use Case Name	Course Joining
Use Case Actor	Learner
Use Case Description	Learner is joining the course.
Pre-Condition	Learner is logged in. Learner is registered. Course is offered. Learner wants to join the course.
Post Condition	Learner has joined the course. Learner has the access of course content.

Flow of Event	**Actor**	**System**
	1. Learner will select a course. 2. Learner will click join course button.	3. System will let learner to join the course and give access to the content.
Alternative Flow	1) The course is not defined or offered.	

3.3.7 Study Resource Allocation

Table 3.8: Study Resource Allocation

Use Case ID	**UC7**	
Use Case Name	Study Resource Allocation	
Use Case Actor	Learner	
Use Case Description	System will allocate the study resources to the user	
Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course.	
Post Condition	Learner has successfully completed the course. Learner is able to participate in graded tests.	
Flow of Event	**Actor**	**System**
	1. Learner learns course resources. 2. Learner will complete the course.	3. System will share course resources.
Alternative Flow	N/A	

3.3.8 Interactive Learning

Table 3.9: Interactive Learning

Use Case ID	**UC8**
Use Case Name	Interactive Learning
Use Case Actor	Learner

Use Case Description	Learning from the content of the course.	
Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course.	
Post Condition	Learner has successfully completed the course. Learner is able to participate in graded tests	
Flow of Event	**Actor**	**System**
	1. Learner learns course resources. 2. Learner will complete the course.	3. System will share course resources.
Alternative Flow	N/A	

3.3.9 Learners Progress Monitoring

Table 3.10: Learners Progress Monitoring

Use Case ID	**UC9**	
Use Case Name	Learners Progress Monitoring	
Use Case Actor	Learner, Admin	
Use Case Description	Learner's progress during the completion of course is monitored.	
Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course. Learner has done interactive learning. Learner has attempted practice and graded test. Learner has reviewed peer assignments.	
Post Condition	Learner's progress is monitored. Learner can give feedback.	
Flow of Event	**Actor**	**System**
		System will do analysis on learner's progress.
Alternative Flow	N/A	

3.3.10 Attempts Practice Test

Table 3.11: Attempt Practice Test

Use Case ID	**UC10**	
Use Case Name	Attempts Practice Test	
Use Case Actor	Learner	
Use Case Description	Learner attempts practice test from the content provided.	
Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course. Learner has done interactive learning.	
Post Condition	Learner has successfully completed the practice test Learner is able to participate in graded test.	
Flow of Event	**Actor**	**System**
	1. Learner learns course resources. 2. Learner will click on the practice test.	3. System will provide practise test. 4. System will check if the learner has attempted practice test and will allow to give graded test.
Alternative Flow	1) The internet connection may not be stable. 2) The learner did not read the relevant sections.	

3.3.11 Attempt Graded Test

Table 3.12: Attempt Graded Test

Use Case ID	**UC11**
Use Case Name	Attempts Graded Test
Use Case Actor	Learner
Use Case Description	Learner attempts graded test from the content provided.
Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course. Learner has done interactive learning

Post Condition	Learner has successfully completed the graded test Learner is able to participate in peer review assignments.	
Flow of Event	**Actor**	**System**
	1. Learner learns course resources. 2. Learner will click on the graded test.	3. System will provide graded test.
Alternative Flow	1) The internet connection may not be stable. 2) The learner did not read the relevant sections.	

3.3.12 Peer Review Assignment

Table 3.13: Peer Review Assignment

Use Case ID	**UC12**	
Use Case Name	Peer Review Assignments	
Use Case Actor	Learner	
Use Case Description	Learner will review assignments of peers.	
Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course. Learner has done interactive learning. Learner has attempted practice and graded test.	
Post Condition	Learner has participated in reviewing peer assignments. Learner can give feedback.	
Flow of Event	**Actor**	**System**
	1. Learner will review peer assignments.	2. System will provide assignments of peer.
Alternative Flow	N/A	

3.3.13 Learner Performance Evaluation

Table 3.14: Learner Performance Evaluation

Use Case ID	**UC13**	
Use Case Name	Learner Performance Evaluation	
Use Case Actor	Learner / Admin	
Use Case Description	System will calculate the Learner's Performance	
Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course. Learner has done interactive learning. Learner has attempted practice and graded test. Learner has reviewed peer assignments. Learner's progress is monitored.	
Post Condition	Generate Certificate, Result compilation	
Flow of Event	**Actor**	**System**
	1. Learner will check its performance.	2. System will check learner performance after every test/assignment.
Alternative Flow	N/A	

3.3.14 Feedback

Table 3.15: Feedback

Use Case ID	**UC14**
Use Case Name	Feedback
Use Case Actor	Learner
Use Case Description	Learner will give the feedback about the course.

Pre-Condition	Learner is logged in. Course is offered. Learner is registered into a course. Learner has done interactive learning. Learner has attempted practice and graded test. Learner has reviewed peer assignments. Learner's progress is monitored.	
Post Condition	Generate Certificate, Result compilation.	
Flow of Event	**Actor**	**System**
	1. Learner will click on feedback button.	2. System will check if learner has completed feedback form.
Alternative Flow	N/A	

3.3.15 Certificate Generation

Table 3.16: Certificate Generation

Use Case ID	**UC15**	
Use Case Name	Certificate Generation	
Use Case Actor	Admin / learner	
Use Case Description	system compiles and verifies the result of a learner and generate certificate.	
Pre-Condition	Admin is logged in. Learner has completed the course successfully. Learner wants a Certificate.	
Post Condition	Learner's result is compiled.	
Flow of Event	**Actor**	**System**
	1. Admin will get the list of pending results. 2. Admin will check the result and approve it.	3. System will display the pending results to admin. 4. System will approve the result and will publish a certificate.
Alternative Flow	1) Certificate Generation.	

3.3.16 Result Compilation

Table 3.17: Result Compilation

Use Case ID	**UC16**	
Use Case Name	Result Compilation	
Use Case Actor	Admin	
Use Case Description	Admin compiles and verifies the result of a learner.	
Pre-Condition	Admin is logged in. Learner has completed the course successfully. Learner wants a Certificate.	
Post Condition	Learner's result is compiled.	
Flow of Event	**Actor**	**System**
	1. Admin will get the list of pending results. 2. Admin will check the result and approve it.	3. System will display the pending results to admin. 4. System will approve the result and will publish a certificate.
Alternative Flow	1) Certificate Generation	

3.4. System Sequence Diagram

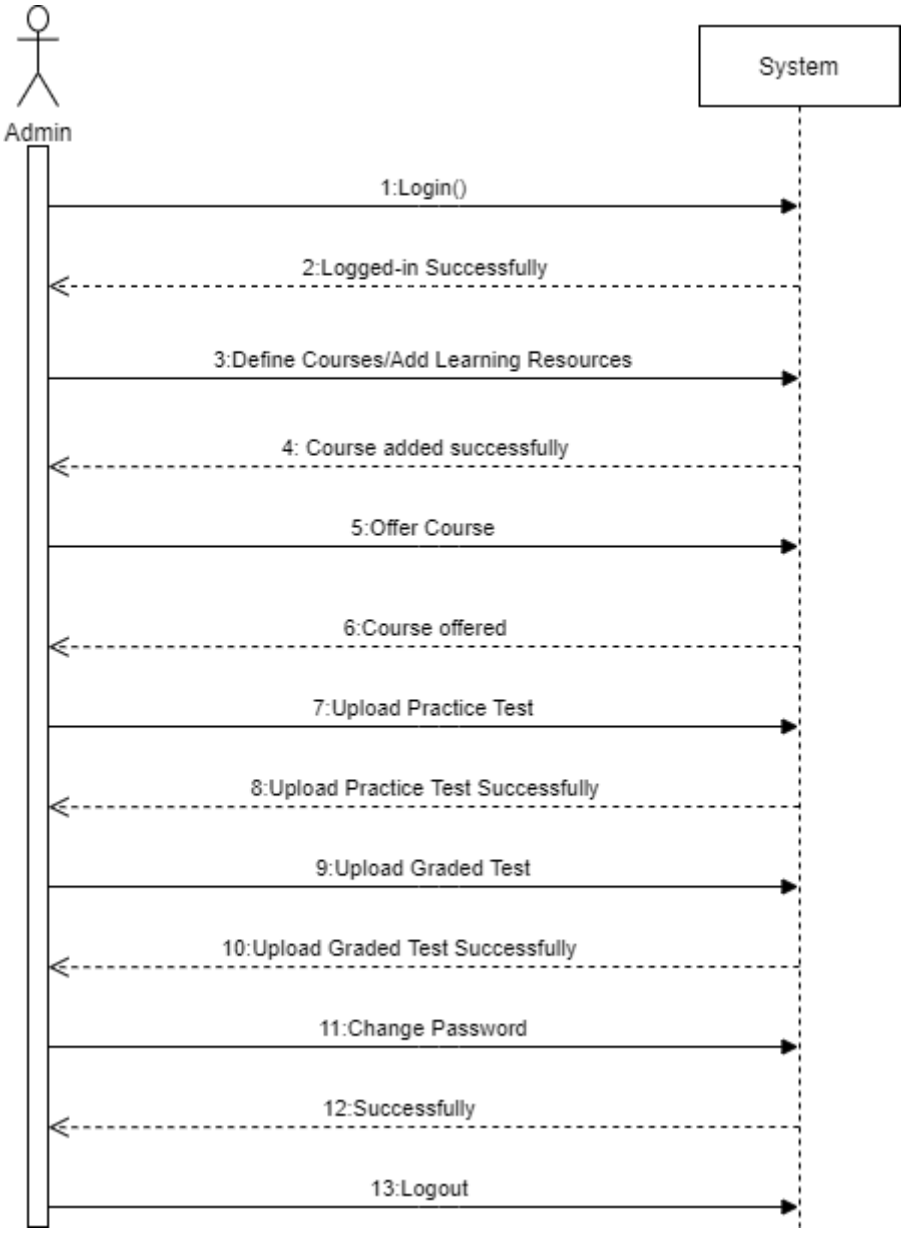

Figure 3.1: System Sequence Diagram- Admin

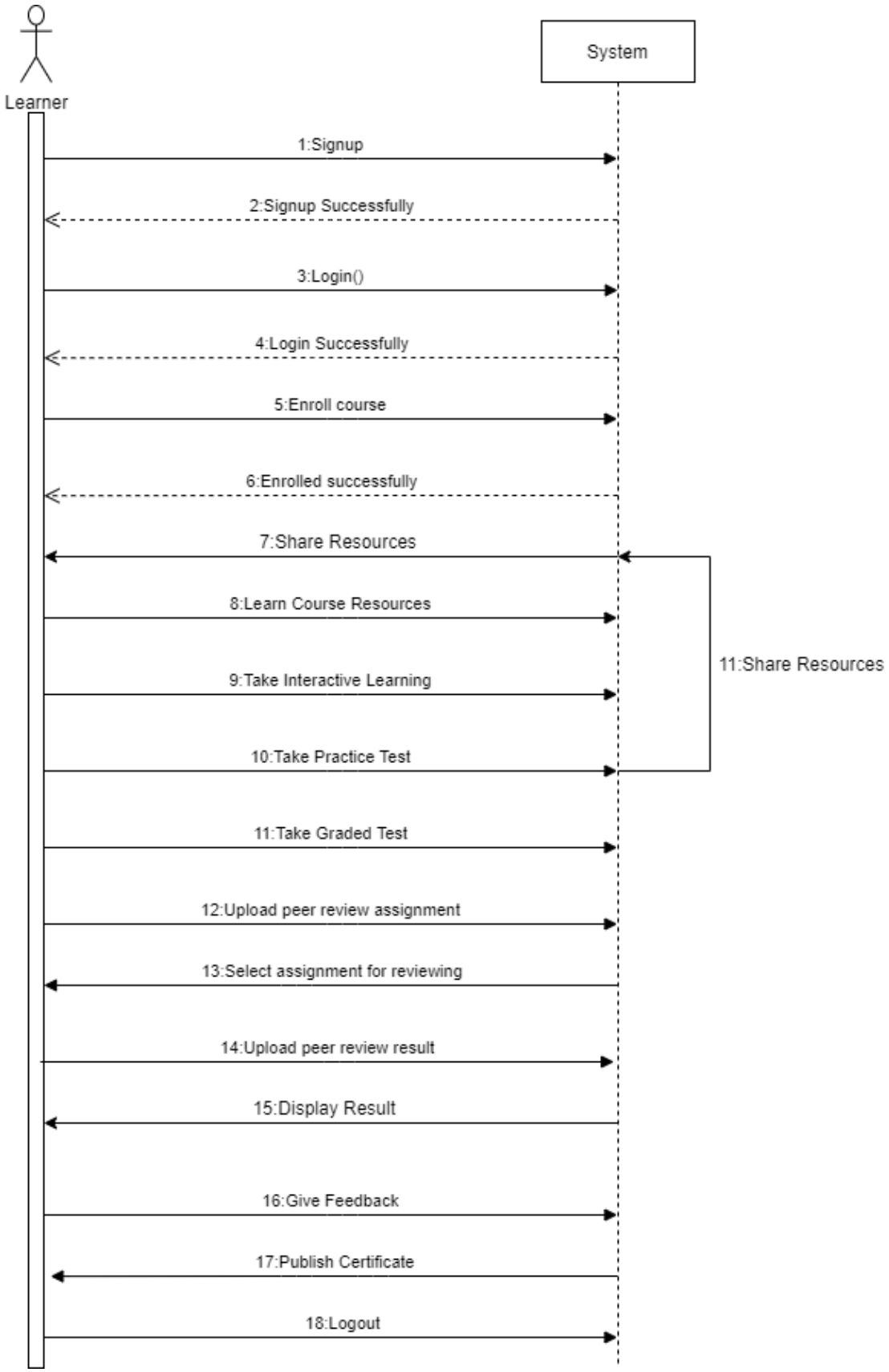

Figure 3.2: System Sequence Diagram- Learner

3.5. Graphical User Interface

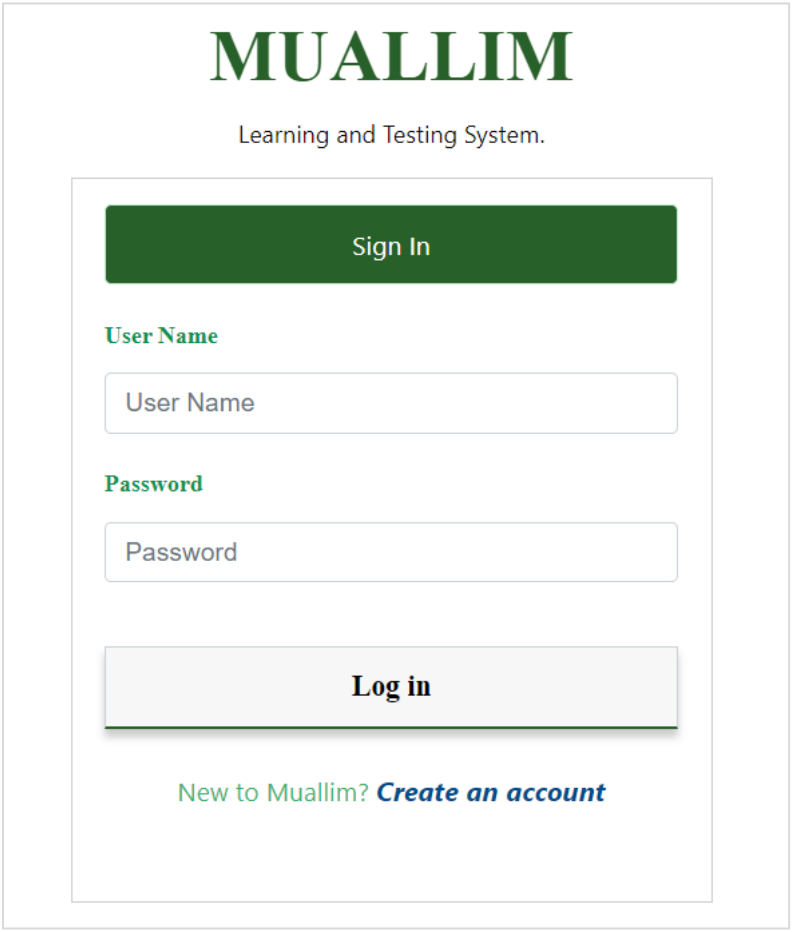

Figure 3.3: Log In

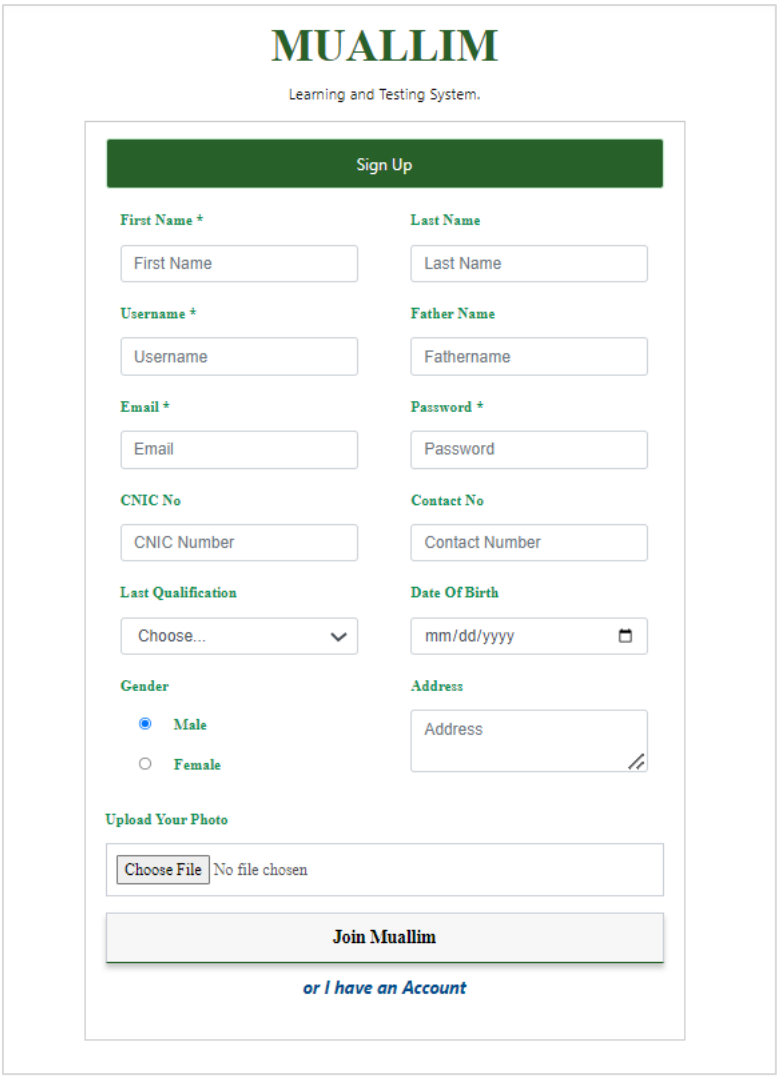

Figure 3.4: Sign up

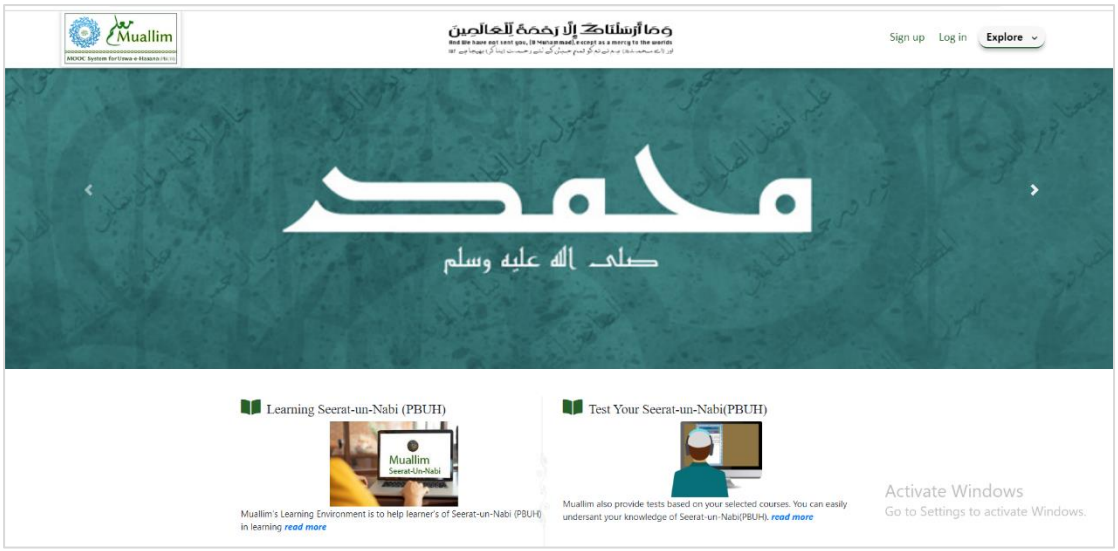

Figure 3.5: Home

3.6. Activity Diagram

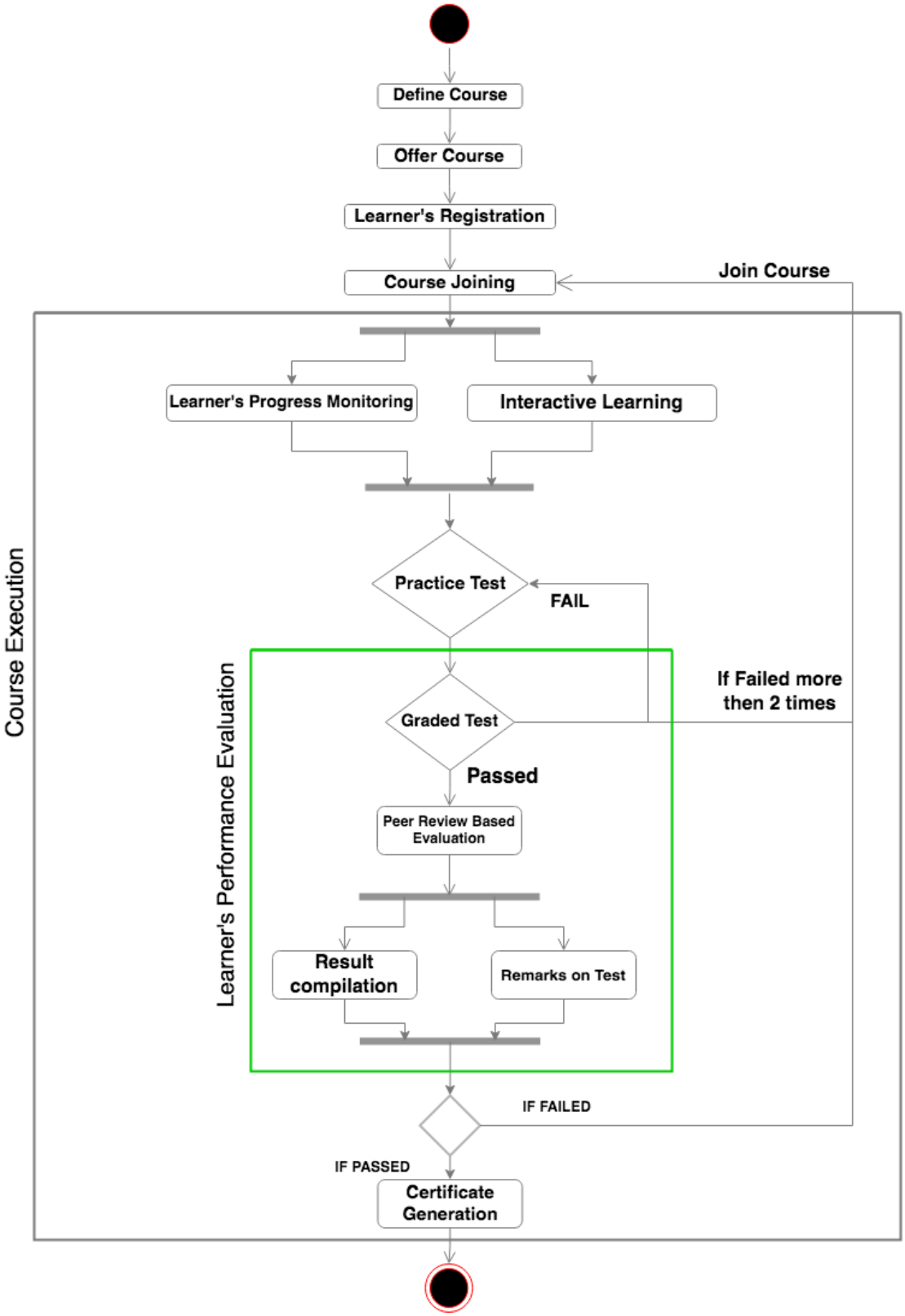

Figure 3.6: Activity Diagram

3.7. DFD

3.7.1 DFD Level 1

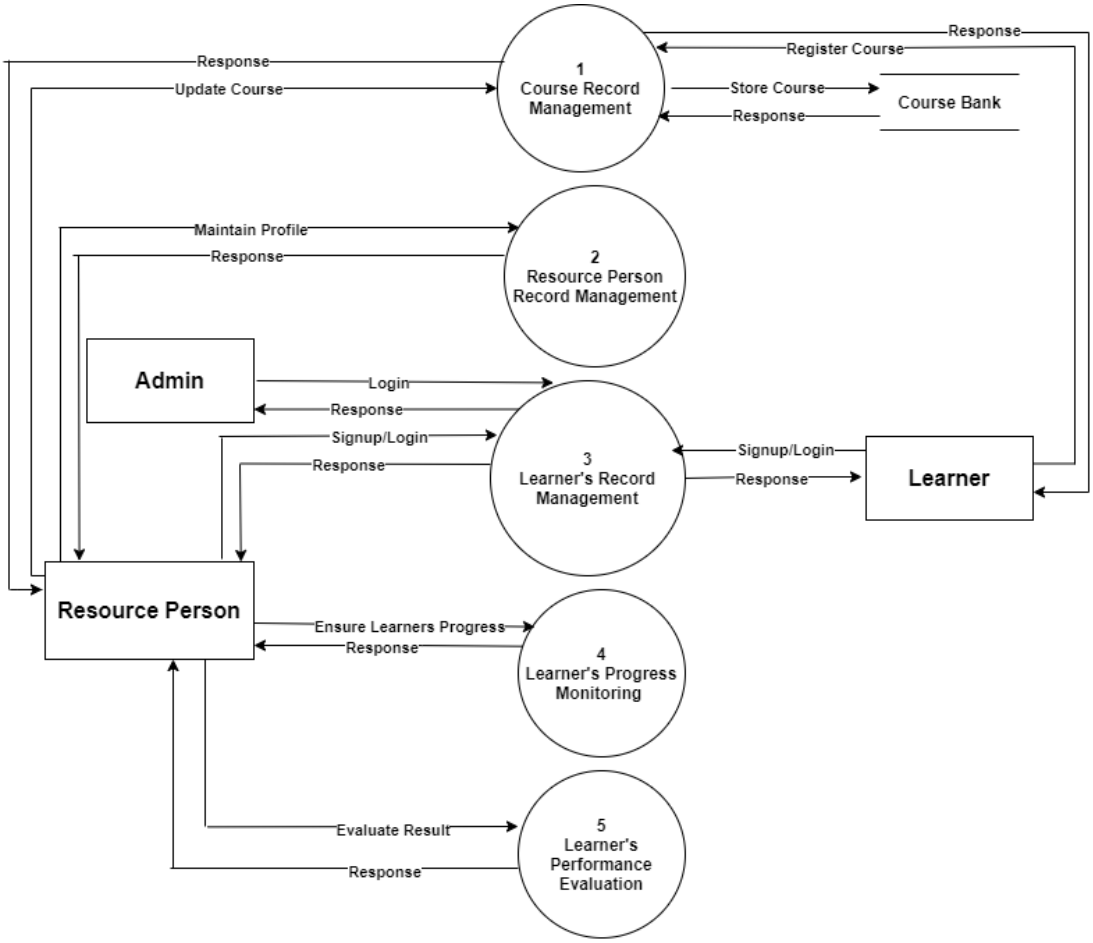

Figure 3.7: DFD Level 1

3.7.2 DFD Level 2

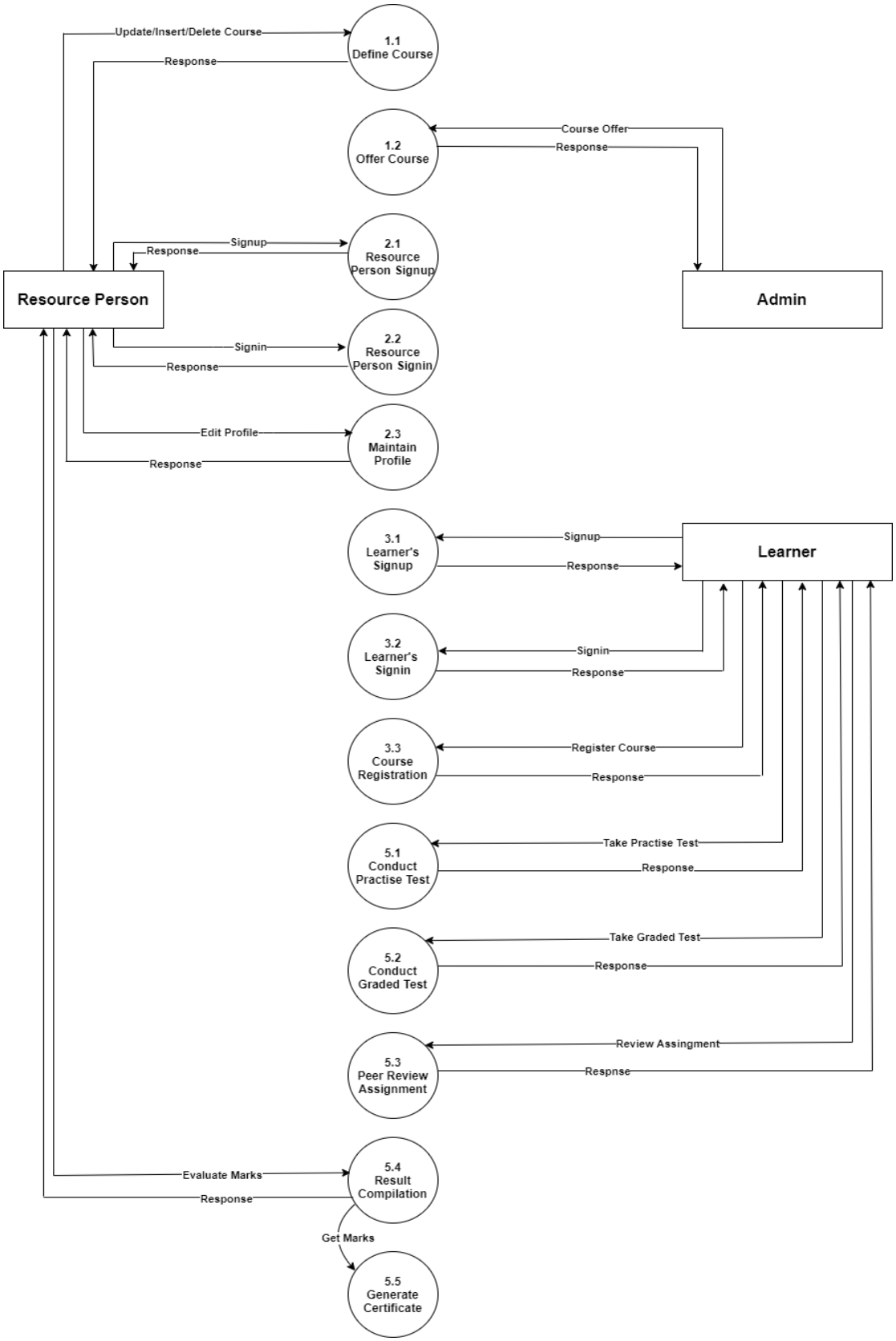

Figure 3.8: DFD Level 2

3.8. NON-FUNCTIONAL REQUIREMENTS

Table 3.18: Non-Functional Requirements

S.N.	Names	Non-functional Requirements
NFR001	Response Time	Response time in the context of computer technology is the elapsed time between an inquiry on a system and the response to that inquiry. Used as a measurement of system performance. For the Proposed system, all content of a webpage will load approx. in 3 seconds.
NFR002	Consistency	The tools and widgets used in interface will be consistent.
NFR003	Graphical User Interface	A GUI (graphical user interface) is interactive component such as icons and other graphical objects for example images and logo that help a user interaction with computer software. The system will provide a uniform look and feels between all the webpages.
NFR004	User Friendliness	The interfaces of website will be attractive and user friendly
NFR005	Quality of code	Quality of code is standardized.
NFR006	Usability	System will be convenient to use. Novice Users will be able to perform task in 30 minutes
NFR007	Testability	All web pages and features will be testable after their development.
NFR008	Compatibility	System will be compatible on chrome 96.0.4664.110
NFR009	Supportability	The code and the supporting modules of the system shall be well documented.
NFR010	Scalability	System shall work fine even in case of excessive amount of network traffic.
NFR011	Availability	The system shall be always available with WIFI connectivity, means the user can access it only with WIFI connectivity, only restricted by the WIFI connection. A user-friendly system which is more than people around the world shall work 24 hours.
NFR012	Data Protection	System will protect learners' personal information.
NFR013	Privacy	System will protect users account passwords. Passwords will be secured using HASHBYTES sha1 password encoder in PHP.
NFR014	Security	System will be able to protect data against unauthorized access and to withstand malicious interference with its operation

Chapter 4

DESIGN SPECIFICATIONS

4.1. Introduction

This chapter of the report includes the architecture, design, and implementation of the system. A design specification provides explicit information about the requirements for a product and how the product is to be put together. Its use is called for where a product has to be specially made to meet a unique need. It will contain system architecture, design methodology, high-level design of the system, data design, sequence diagrams, and entity-relationship diagram at the end.

4.2. System Architecture

A system architecture is a conceptual model that defines the structure, behaviour, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviours of the system. A system architecture can consist of system components and the sub-systems developed, that will work together to implement the overall system. There have been efforts to formalize languages to describe system architecture, collectively these are called Architecture Description Languages.

The architecture of our system has been divided into modules which are interlinked with each other. Muallim will run on web which allows the learner to learn the Seerat-un-Nabi (PBUH). It has two panels one is for learner and the second is for admin. The system allows the learner to Register, enrol in a course, learn the course material by provided authentic resources, and evaluating the learner through graded test and peer

review-based assignment. In the end, the system generates a certificate on the bases of the learner's overall result.

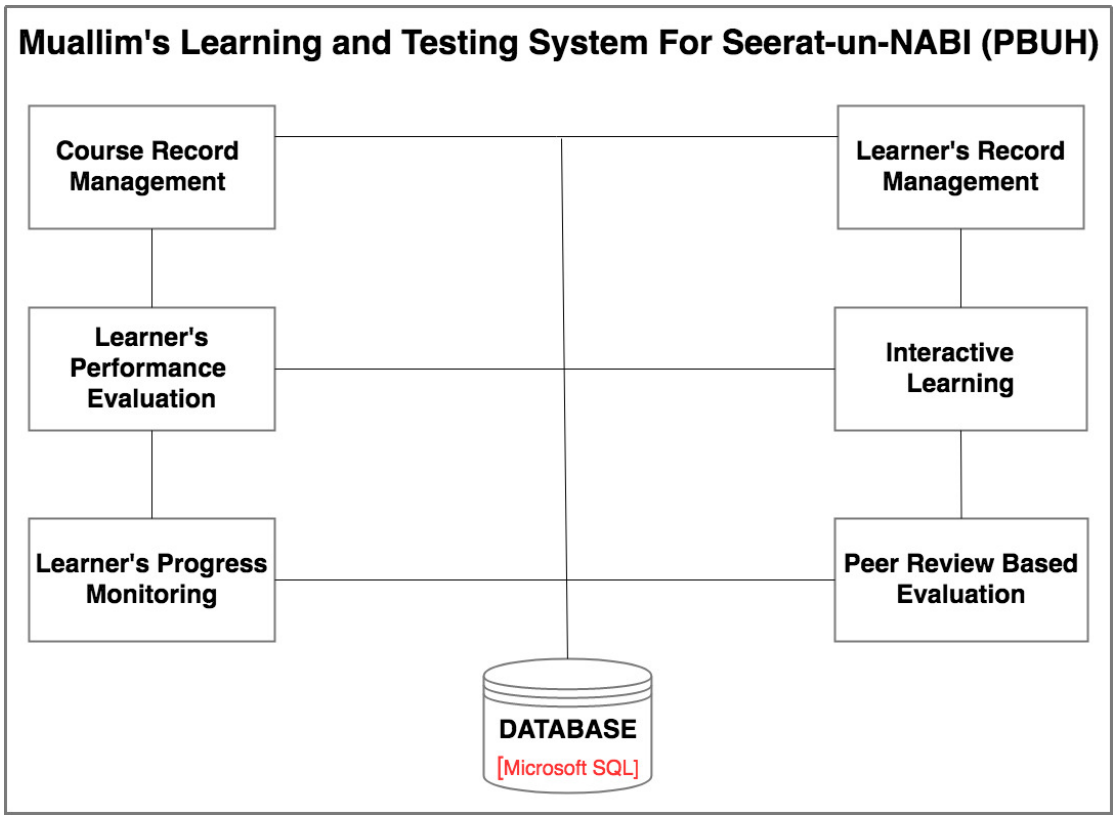

Figure 4.1: Block Diagram

4.3. Design Methodology

We have designed our system in the Structured Paradigm. There are Global functions in our system that update, delete, store, and read data. We are using functional and database query calls, which work efficiently. There are various functions responsible for interacting with the user and providing them with an outlook.

4.4. High-Level Design

High-Level Design provides a complete overview of the whole system design. It is covering the architecture of the system and explains how the system and the related modules work. It is helpful for both the client and the developer for understanding the

functionalities of the system. It also explains how the end-user interacts with the system and what the flow of action is.

4.5. Data Design

Data design is the first design activity, which results in a less complex, modular and efficient program structure. During the data design process, data types are specified along with the integrity rules required for the data. The data objects, attributes, and relationships depicted in Entity-Relationship Diagrams (ERDs) and the information stored in the data dictionary provide a base for data design activity.

4.6. Detail Design or Interaction Diagram

In detailed design, we define our system and its design in more detail. Previously we described the overview design of our system. Now here we describe everything in detail. It includes several UML diagrams to make us understand the system more efficiently. The following are some diagrams that will help you understand the detailed design of our system.

4.6.1 Entity-Relationship Diagram

An entity-relationship diagram (ERD) is a data modelling technique that graphically illustrates an information system's entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure.

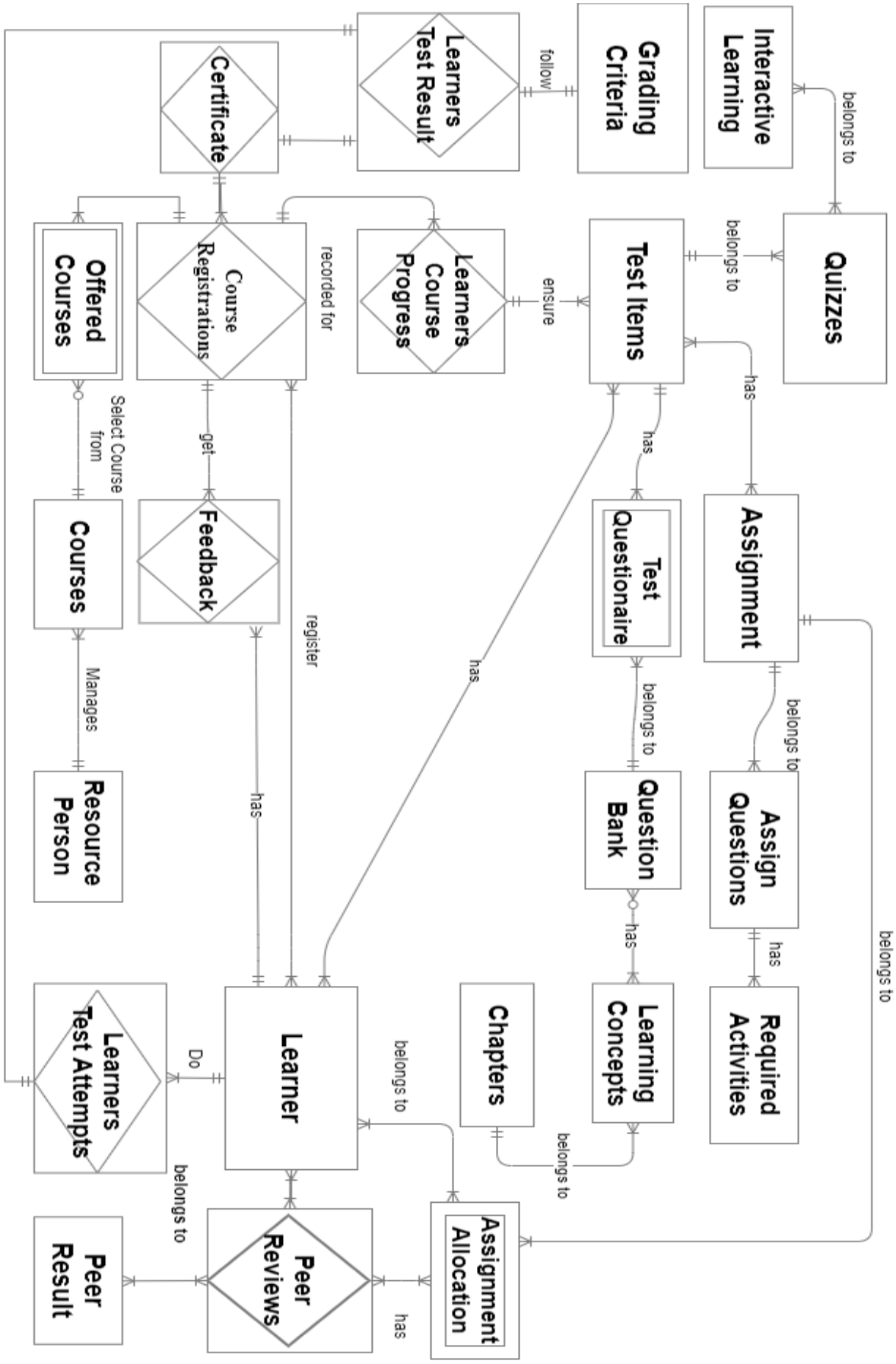

Figure 4.2: ERD Diagram

4.6.2 Sequence Diagram

In the above chapter, we showed a system sequence diagram, in which the overall interaction of the user with the system was shown and included main functionalities. But in this chapter, we have explained in more detail in the sequence diagram and broken our system into classes in which sequence of messages exchanged between the classes to carry the functionality of the system.

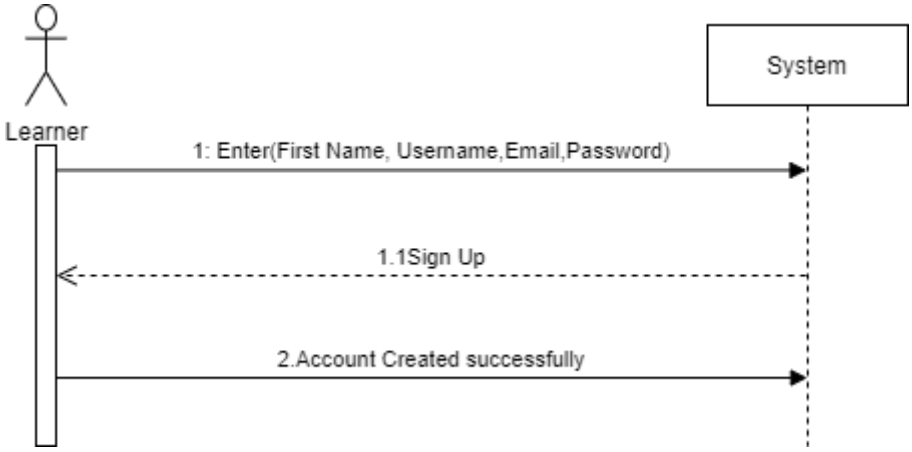

Figure 4.3: Sequence Diagram-Signup

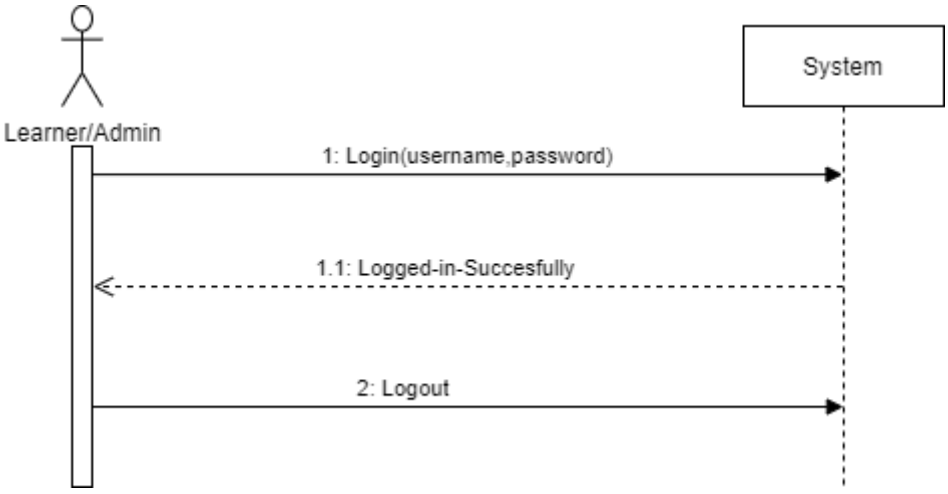

Figure 4.4: Sequence Diagram-Login

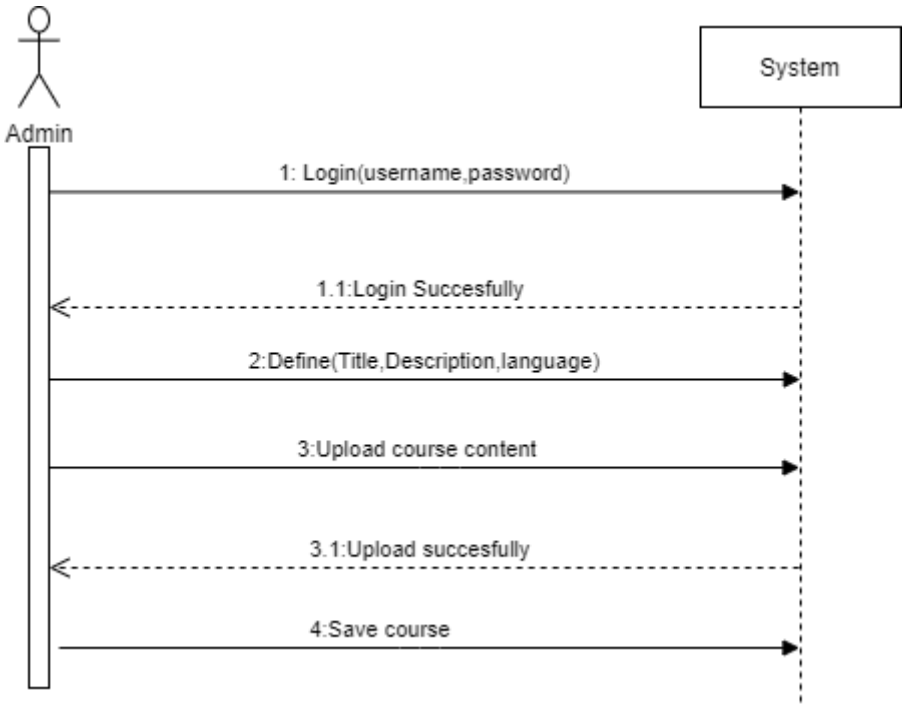

Figure 4.5: Sequence Diagram-Define Course

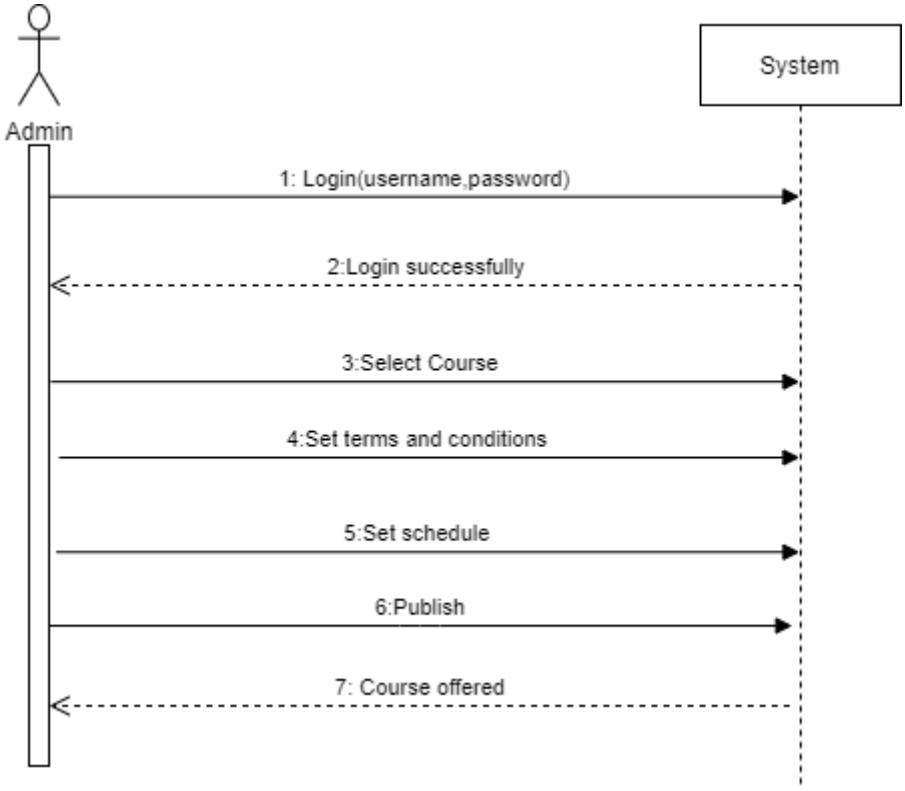

Figure 4.6: Sequence Diagram-Offer Course

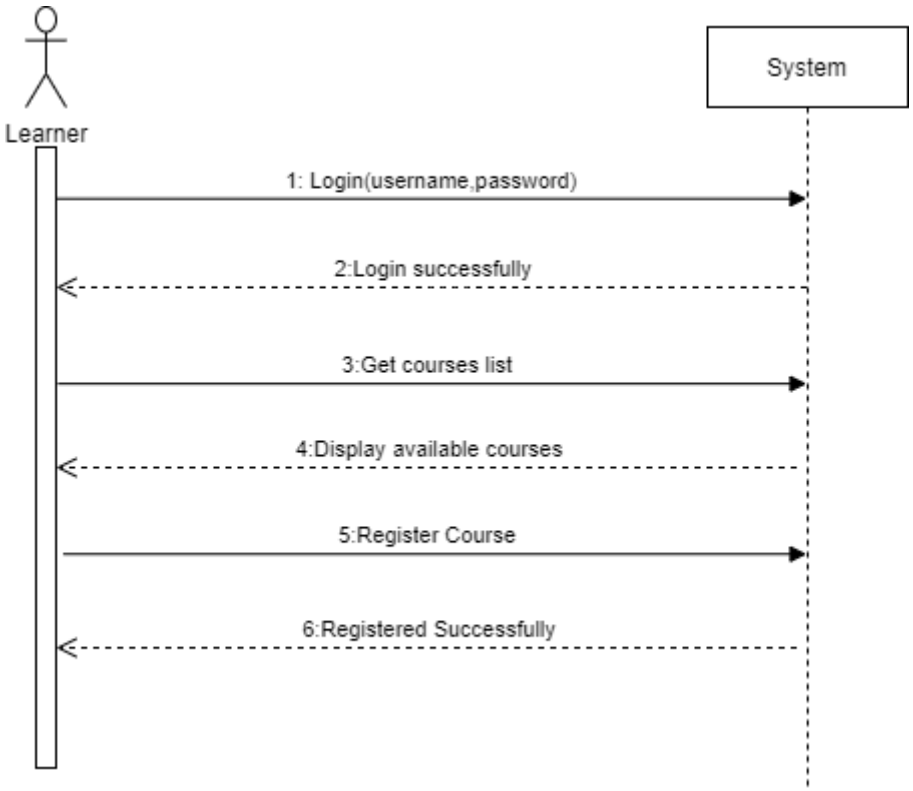

Figure 4.7: Sequence Diagram-Enroll Course

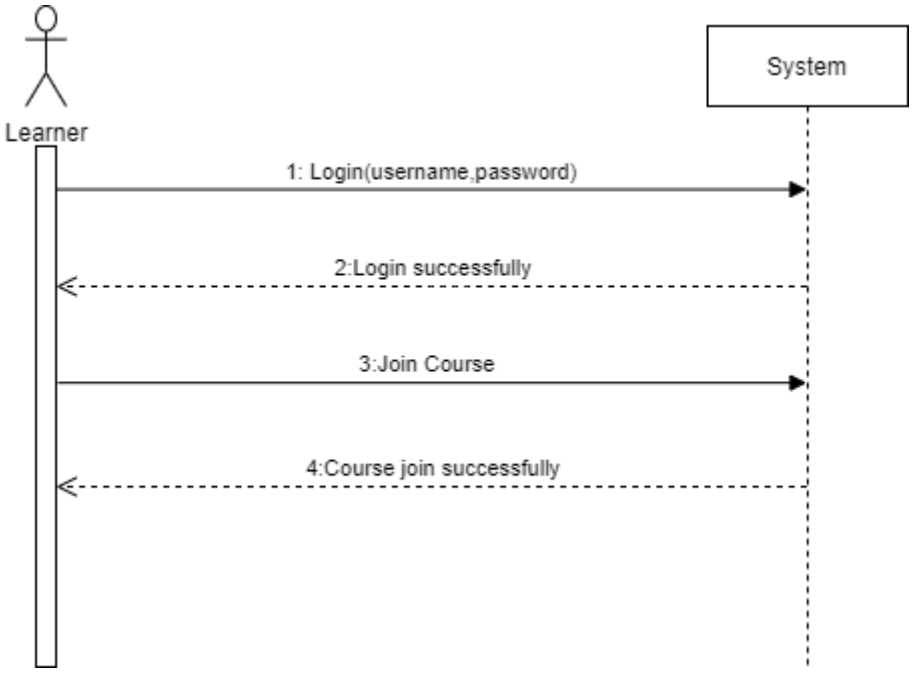

Figure 4.8: Sequence Diagram-Join Course

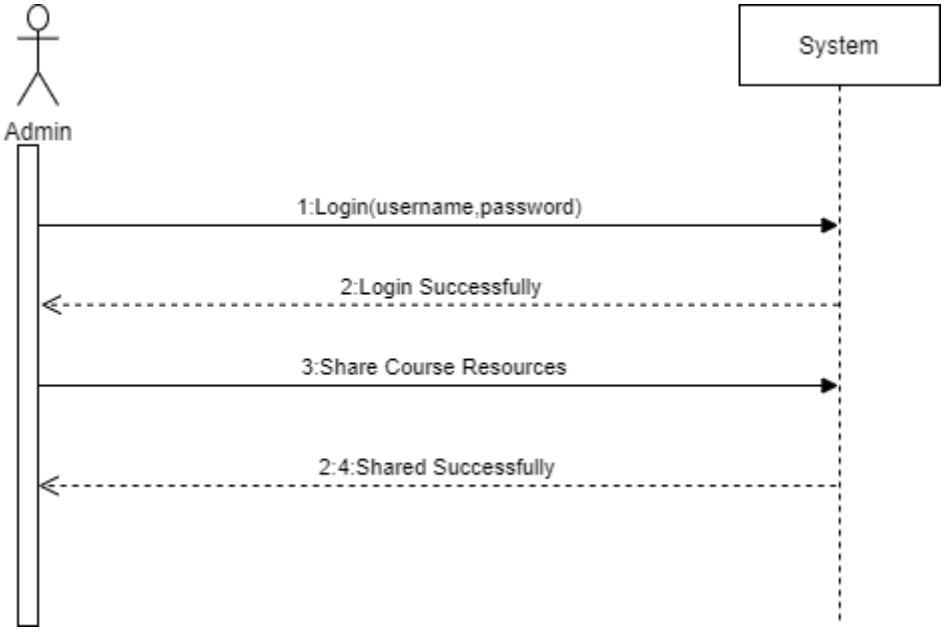

Figure 4.9: Sequence Diagram-Study Resource Allocation

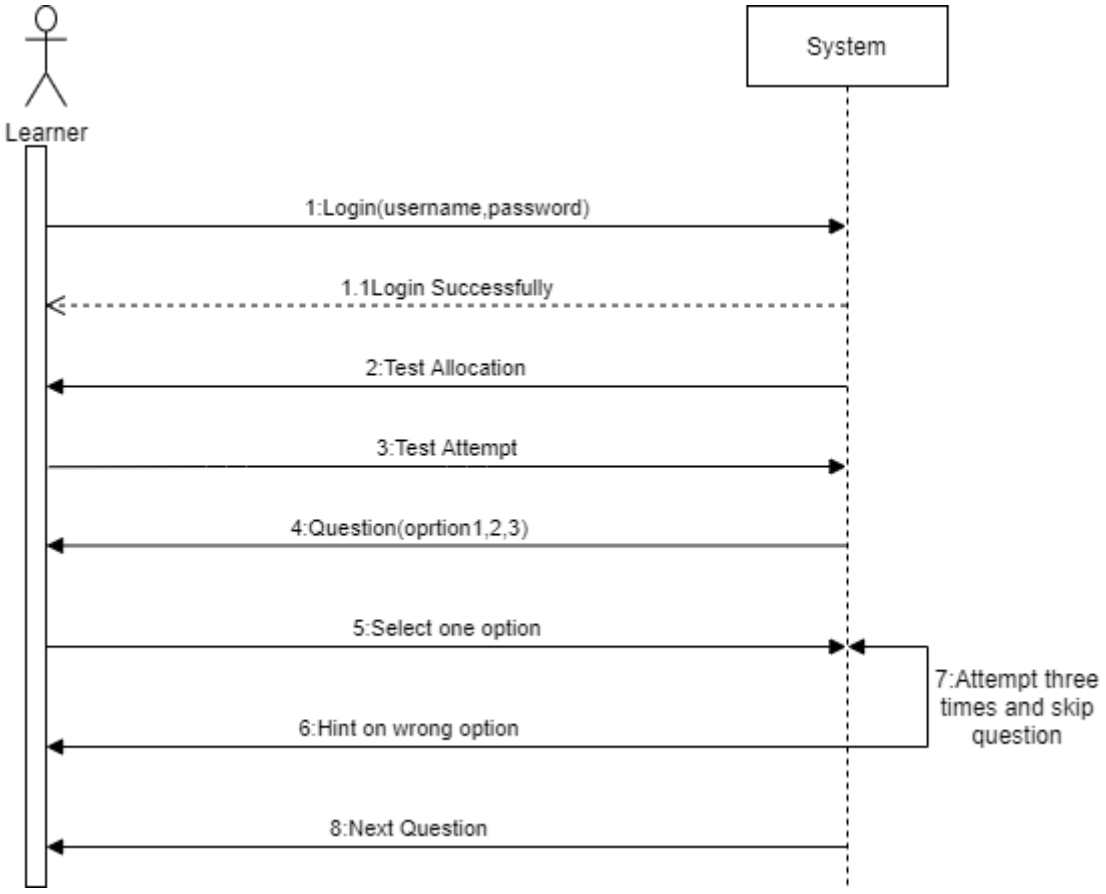

Figure 4.10: Sequence Diagram-Interactive Learning

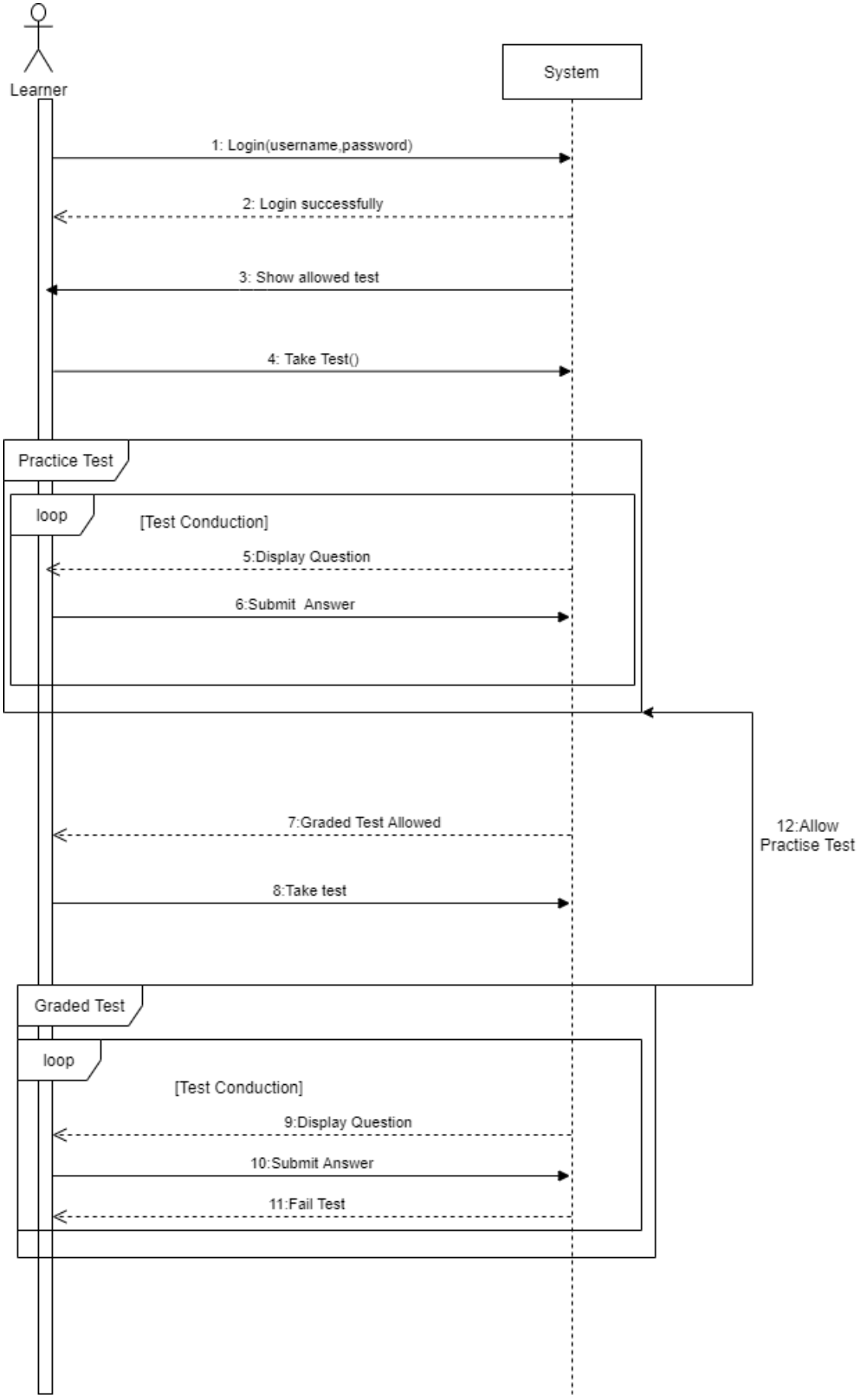

Figure 4.11: Sequence Diagram-Take Test

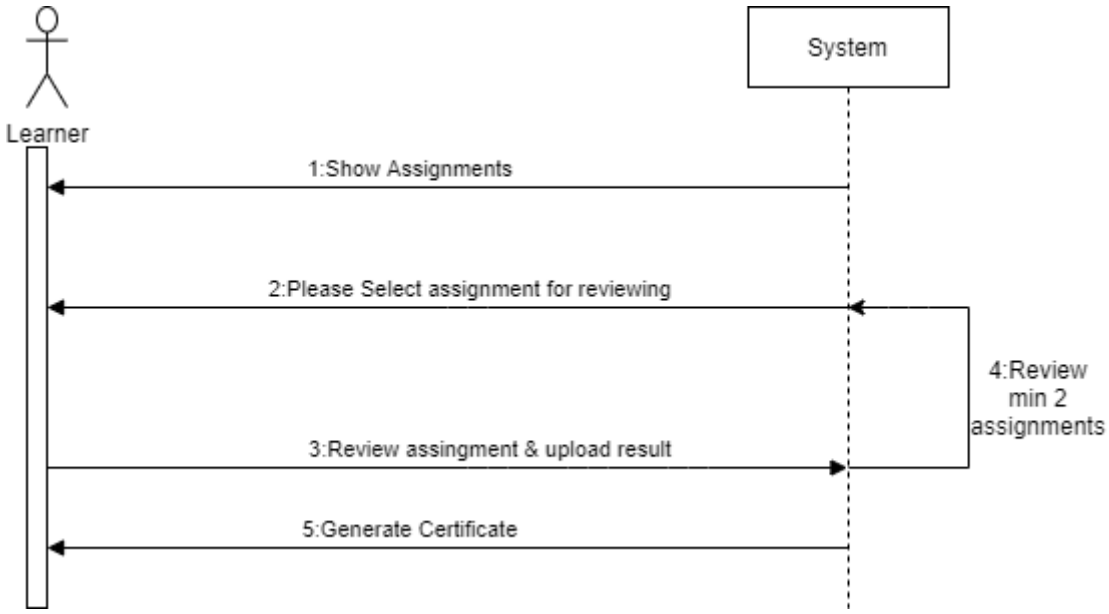

Figure 4.12: Sequence Diagram-Peer Review

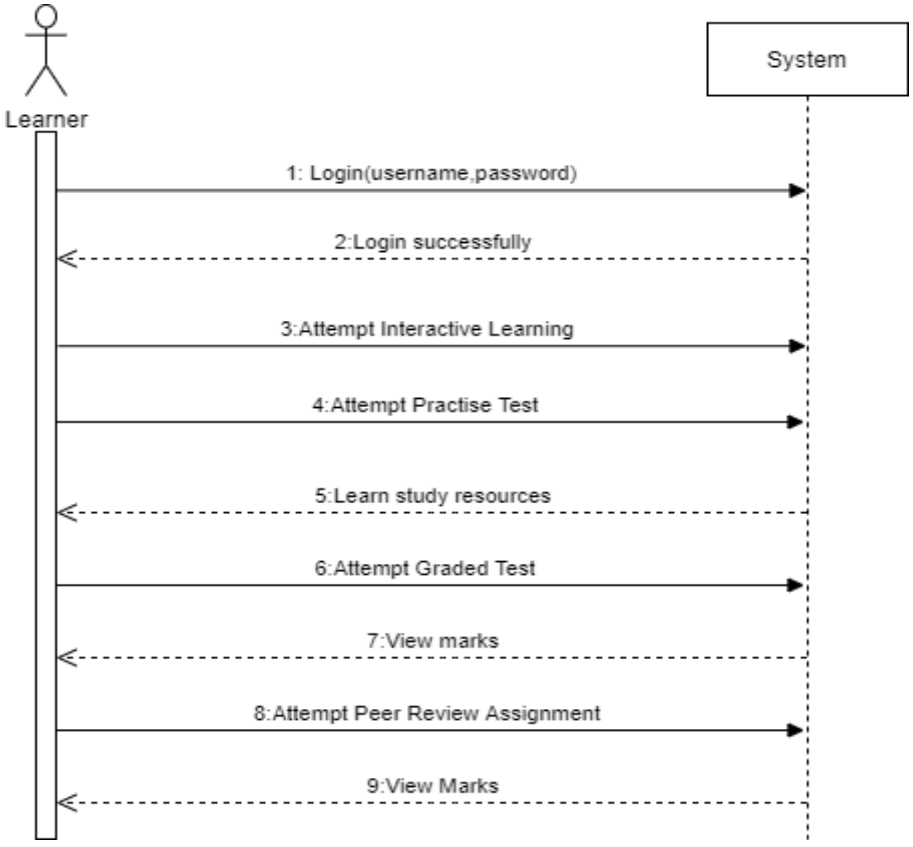

Figure 4.13: Sequence Diagram-Learners Performance Evaluation

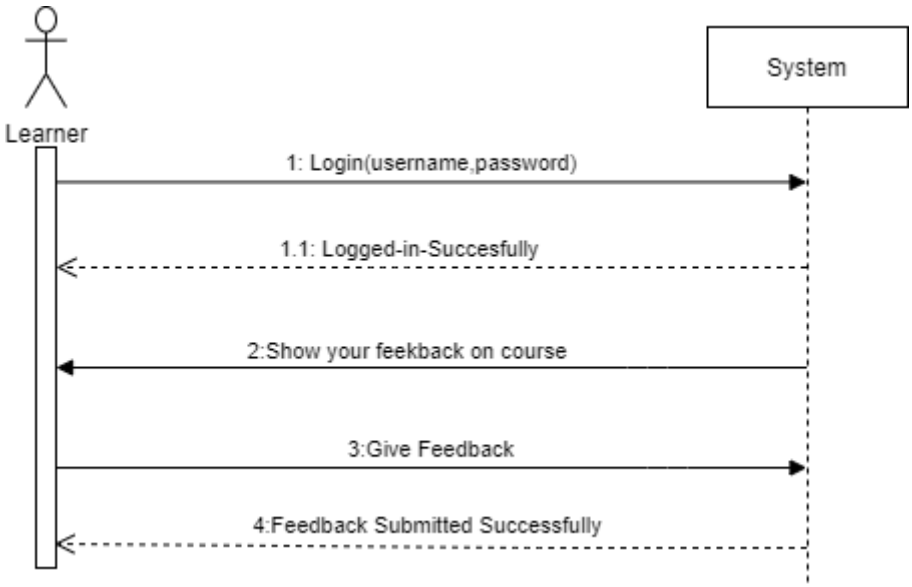

Figure 4.14: Sequence Diagram-Feedback

Chapter 5

TEST SPECIFICATIONS

5.1. Introduction

This chapter provides an overview of the different testing performed on the system. It includes white box testing using PHP in visual studio tool for web platform and Microsoft SQL server database, black box testing, interface testing, NFR testing, etc.

5.2 Test Design

Test design is an act of creating and writing the test suits for testing the software. It requires a detailed analysis and understanding of the requirements. Designing can start once the test conditions are identified with sufficient data to produce a high level or low-level test cases.

5.2.1 White Box Testing

White box testing is a technique to test internal functionality and whole code thoroughly. This testing is performed to find all logical errors, bugs, or any loopholes in the system. The primary focus in white box testing was to verify the flow of inputs and outputs. This testing technique also helped us improve designs and strengthen security.

5.2.2 Black Box Test Cases

Black box testing is a technique that is used to test the system without knowing its internal functionality, code structure, or the implementation details. The black box testing test how the system works for an end-user. The following are the test designs for black-box test cases, created as per the use case diagram of the system.

Table 5.1: Learner Register

TC-ID	TC:1.0
TC-Name	Registration
Purpose	To Check the functionality of signup with already registered username and password.
Actor	Learner
User-Input	Learner enters already registered email.
System-Output	The system gives an error that the email already exists.
Expected Result	The system gives an error that the email already exists.
Created By	Rimsha Javed
Executed By	Rimsha Javed
Date	26th March 2022

Table 5.2: Login

TC-ID	TC:1.1
TC-Name	Log In
Purpose	To Check the functionality of Log In.
Actor	System admin
User-Input	Invalid Username and Password.
System-Output	The system gives an error that the login credentials do not match.
Expected Result	The system gives an error that the login credentials do not match.
Created By	Rimsha Javed
Executed By	Rimsha Javed
Date	26th March 2022

Table 5.3: Add New Course

TC-ID	TC:1.2
TC-Name	Add new Course
Purpose	To Check the functionality of Add course.
Actor	System Admin
User-Input	Admin enters information which is necessary to define a new course.
System-Output	The course has been added successfully.
Expected Result	The course has been added successfully.
Created By	Fatima Gull
Executed By	Fatima Gull
Date	26th March 2022

Table 5.4: Add Chapter

TC-ID	TC:1.3
TC-Name	Add Chapter
Purpose	To Check the functionality of add chapter.
Actor	System Admin
User-Input	Admin enters information that is necessary to add a new chapter.
System-Output	The chapter has been added successfully.
Expected Result	The chapter has been added successfully.
Created By	Fatima Gull
Executed By	Fatima Gull
Date	26th March 2022

Table 5.5: Add Concept

TC-ID	TC:1.4
TC-Name	Add Concept
Purpose	To Check the functionality of add concept.
Actor	System Admin
User-Input	Admin enters information that is necessary to add a new concept.
System-Output	The concept has been added successfully.
Expected Result	The concept has been added successfully.
Created By	Fatima Gull
Executed By	Fatima Gull
Date	26th March 2022

Table 5.6: Add Questions

TC-ID	TC:1.5
TC-Name	Add Question
Purpose	To Check the functionality of Add Question.
Actor	System Admin
User-Input	Admin enters information which is necessary to add question.
System-Output	The system displays all the available concepts.
Expected Result	The system displays all the available concepts.
Created By	Muhammad Usman
Executed By	Muhammad Usman
Date	26th March 2022

Table 5.7: View Courses

TC-ID	TC:1.6
TC-Name	View Courses
Purpose	To Check the functionality of view courses.
Actor	System Admin
User-Input	Admin request
System-Output	System displays all the defined courses.
Expected Result	System displays all the defined courses.
Created By	Rimsha Javed
Executed By	Rimsha Javed
Date	26th March 2022

Table 5.8: Publish Course

TC-ID	TC:1.7
TC-Name	Publish Course
Purpose	Check the functionality to Publish a course.
Actor	Admin
User-Input	Admin click on the offered course button to publish a course.
System-Output	The course has been published successfully.
Expected Result	The course has been published successfully.
Created By	Fatima Gull
Executed By	Fatima Gull
Date	26th March 2022

Table 5.9: Course Enrolment

TC-ID	TC:1.8
TC-Name	Course Enrolment
Purpose	Check the functionality of course enrolment.
Actor	Learner
User-Input	Learner sent a request to enrol in the course.
System-Output	The course successfully enrolled by the learner.
Expected Result	The course has been successfully enrolled.
Created By	Rimsha Javed
Executed By	Rimsha Javed
Date	26th March 2022

Table 5.10: Verify Result

TC-ID	TC:1.9
TC-Name	Verify Result
Purpose	To Check the functionality of Verify Result.
Actor	System Admin
User-Input	Admin request
System-Output	The Result has been verified.
Expected Result	The Result has been verified.
Created By	Fatima Gull
Executed By	Fatima Gull
Date	26th March 2022

Table 5.11: Practice Test

TC-ID	TC:1.10
TC-Name	Practice Test
Purpose	To Check the functionality of successfully submission of practice Test.
Actor	Learner
User-Input	Learner request
System-Output	The system returns a panel containing remarks, status percentage of test.
Expected Result	The system will return a panel containing remarks, status, percentage of test.
Created By	Rida Fatima
Executed By	Rida Fatima
Date	26th March 2022

Table 5.12: Graded Test

TC-ID	TC:1.11
TC-Name	Graded Test
Purpose	To Check the functionality of successfully submission of practice Test.
Actor	Learner
User-Input	Learner request
System-Output	The system returns a panel containing remarks, status percentage of test.
Expected Result	The system will return a panel containing remarks, status, percentage of test.
Created By	Rida Fatima
Executed By	Rida Fatima
Date	14th April 2022

5.2.3 GUI Test Cases

GUI test cases are done with some changes in the GUI and check the result for any inconsistency in the GUI when changed.

Table 5.13: Register Learner

Test	Description	Comment	Decision
Test description	Register Learner	To ensure that the code responsible for registering new Learner.	OK
Initial conditions	Platform available to run the function codes.	Ensure everything Works fine.	OK
Tests inputs	The Learner enters credentials for signup.	All details are as expected.	OK
Expected results and criteria	Learner can sign up successfully.	Recommended action is performed, and learner has successfully registered.	OK
Tests outputs	Learner is registered.	Learner can now log in and use the system.	OK

Table 5.14: Verify Result

Test	Description	Comment	Decision
Test description	Verify Result	To ensure that the code responsible for verifying the results.	OK
Initial conditions	Admin signed in.	Ensure everything works fine.	OK
Tests inputs	Admin clicks on verify the result.	Nil	OK
Expected results and criteria	The Admin successfully verified the result.	Nil	OK
Tests outputs	Result verified by the Admin.	Nil	OK

Table 5.15: Admin Login

Test	Description	Comment	Decision
Test description	Admin Log In	To ensure that the code responsible for signing in the registered Admin.	OK
Initial conditions	Admin must have the server installed and running.	Ensure everything works fine.	OK
Tests inputs	Admin enters email and password.	Nil	OK
Expected results and criteria	The system successfully logged in to the Admin.	Admin has successfully logged into the system.	OK
Tests outputs	System successfully has logged in the Admin.	Admin logged in.	OK

Table 5.16: Learner Login

Test	Description	Comment	Decision
Test description	Learner Log In	To ensure that the code responsible for signing in the registered Learner.	OK
Initial conditions	A learner must have the server installed and running.	Ensure everything works fine.	OK
Tests inputs	Learner enters email and Password	Nil	OK
Expected results and criteria	The system successfully has logged in to the Learner.	Learner has successfully logged into the system.	OK

Tests outputs	The system successfully has logged in the Learner.	Learner logged in.	OK

Table 5.17: View Result

Test	Description	Comment	Decision
Test description	View Result	To ensure that the code responsible for viewing the results.	OK
Initial conditions	Admin signed in.	Ensure everything Works fine.	OK
Tests inputs	Admin clicks on view result.	Nil	OK
Expected results and criteria	The admin can view the Result.	The admin successfully viewed the Result.	OK
Tests outputs	Result viewed by the Admin.	Admin Viewed the result.	OK

5.2.4 Other NFR Test Cases

Following are some non-functional testing of the system:

5.2.5 Usability testing

Usability testing is the next step after implementation. User interfaces were tested multiple times to check whether the interfaces are easy to use or not. All the individuals who tried using the system were able to understand its working easily and results turned out to be successful.

5.2.6 Software Performance Testing

When each module is complete and ready for testing, performance testing for the system will be done. Firstly, the performance of each module will be done separately then in collaboration with other modules, and the performance of the overall system will be evaluated based on the time needed to get the results and display it.

5.2.7 Compatibility Testing

Compatibility testing is non-functional testing conducted on the application to evaluate the application's compatibility within different environments. It can be of two types - forward compatibility testing and backward compatibility testing.

- Operating system Compatibility Testing - Windows 8.1 & 10
- Database Compatibility Testing - MySQL Server
- Browser Compatibility Testing – Chrome

5.2.8 Load Testing

It determines a system's performance under a specific expected load. The purpose of the Load Test is to determine how the application behaves when multiple users access it simultaneously.

Almost 50 Learners can access the MOOCs for Quran-il-Hakeem at a time.

5.2.9 Security Testing

Security testing was performed to check whether a person with no registered ID can log in and fetch data from the system. Since it is a secure system, no one can log in without a registered ID and password.

5.2.10 Installation Testing

As it is a web-based application, therefore, there is no need for the installation of the application on PC.

5.2.11 Acceptance Testing

Acceptance testing is performed to check end user's acceptance criteria. It is performed right before making the system available for actual use.

5.3 Defect or Bug Report

The defect is defined as a deviation from the expected and actual result of the application. It is also defined as the irregularity from the specification mentioned in the product functional specification document. Defects solved by the developer in the development phase.

5.4 Test Report

This section includes the report of all the tests that were performed or chosen to be performed. All of them were executed throughout the project and reported back in this table. This table is according to the last versions of test cases; hence all the test cases are passed. It also includes Pending, In Progress, Blocked, or Deferred test cases.

Table 5.18: Test Report

Testing Activity	Count
Test Executed	20
Tests Passed	20
Test Failed	0
Tests Passed	20
Total Executed	20
Pending	0
In Progress	0

Chapter 6

CONCLUSION

6.1. Introduction

In this chapter, we provide an ending and conclusion to all the work that we have done. It also mentions future work that can enhance the usability and benefits of this system.

6.1.1. Overview of the Project and Product

Muallim is a Semantic Similarity based web-based software application providing an integrated learning and testing environment to facilitate understanding of the message of Seerat-un-Nabi. Being a web-based system, the software enables the user to learn Seerat-un-Nabi on their own pace, beyond the geographical boundaries. The software provides the learners the facility to test their understanding of Seerat-un-Nabi through its computer-based online testing system. The test is comprised of well-defined set of questions posed according to level of the learner.

6.1.2. Contribution and Originality

Our contribution in the system is considerable as we came with an idea which is not implemented and no learning and testing system for Seerat-un-Nabi develop before. We have integrated the both learning and testing system for Seerat-un-Nabi with some variations this making it the quality software or system which is named as Muallim. We have used a new technique in our product that is Semantic Similarity Measures (SSM) based technique. Through this, our application will be able to provide a chapter-oriented searching or learning and testing.

6.2. Conclusion

Massively Open Online Course system for Seerat-un-Nabi is an online platform that works on the process of famous MOOCs and provides facilities to the learners of Seerat-un-Nabi, beyond the geographical limitations. This system does not work without the internet because this is a Web-based application. The application will work on the web platform only. A learner has to log in every time one opens the system. Our contribution to the system is valuable as we have come with an idea that was not implemented and there was no MOOC system for Seerat-un-Nabi exist before this system. The system solves the problem of the learners who are not able to get their concepts of Seerat-un-Nabi teaching clear to discuss and understand by providing this platform. It also gives the Standardized & Quality Content to its leaners. The development of the MOOC system was a great challenge for us. But with the grace of ALL MIGHTY ALLAH and with the help of our supervisor and advisor we have performed very well. We are personally thankful to our respected teachers, coordinator, and supervisor for their dedication and support. Our team worked hard with full dedication to achieve successful implementation. It was great to work with you. And we will look forward to work with our group members again.

6.2.1. Benefits

Learners will able to learn the Seerat-un-Nabi and test his knowledge by answering well defined set of questions in home through this application. Now you don’t have to worry about the learning of Seerat-un-Nabi and don’t worry about the knowledge of Seerat-un-Nabi because our product gives all the facilities to guide the learner and facilities from the message of Seerat-un-Nabi. Our app will provide all the necessary information in learner result i.e. correct answer, wrong answer, pass and fail etc.

6.2.2. Limitations

This product does not work without internet because this is a web-based application. The application will work on the web platform only. Learner has to login every time one opens the app. It stops when turned back. Learner shhould learn the courses to give the test.

6.3 Future Work

In the future, we will add more courses related to Islamic knowledge in the MOOC learning and testing system. The addition of the courses will attract more individuals from the learning community. It is also in our plans, that we shall offer Muslim scholars around the world to upload their Islamic courses in the system and invite their students to learn courses and test their learning outcome through the system. The feedback facility would help them improve the courses after analysis of the student's feedback on the quality of the course content. This will make the system more beneficial for the distant learners of the Seerat-un-Nabi. This product would play a significant role in spreading the message of the last testament, revealed by Allah Subhanahu Wa Tahala.

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