



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

Fall 21-22

Section: A

Software Quality Assurance and Testing

PROJECT TITLE

“eSchool - Online Library Management System”

A Report submitted

By

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Software Test Plan

for

eSchool – Online Library Management System

Version 1.0 approved

Prepared by

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16.12.2021

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Revision History

Revision	Date	Updated by	Update Comments
0.1	2021.12.14	ABU BAKAR SIDDIQUE	First Draft
0.2	2021.12.15	FARJUM HAIDER	Second Draft
0.3	2021.12.16	UMMA KHADIZA	Third Draft

1. TEST PLAN IDENTIFIER:RS-MTP01.3

2. REFERENCES

- Software Quality and Assurance book pdf.
- Functional requirements and business rules will be used as a reference. Some of the ideas are taken from Google.
- Document containing the User Interface Design Rules.
- Specification of **eSchool** Software Requirements (An online Library).
- <https://www.daitm.org.in/wp-content/uploads/2020/04/Gr.-06library-project-report.pdf>
- Technical Information.

3. INTRODUCTION

Background to the Problem

- “**eSchool**” serves an important role for anybody who reads a book. Virtually every library has a website where they keep track of all of their books and other stuff. And this website must be updated since if information changes but is not properly recorded, it will affect the entire system, including the library.
- A library is a place where people can go to find books and information. It's vital to keep its data safe and to monitor their behaviors to guarantee that the data isn't shared. If this occurs, it will be detrimental to both readers and librarians in the long run.

Solution to the Problem

- “**eSchool**” serves an important role for anybody who reads a book. Virtually every library has a website where they keep track of all of their books and other stuff. And this website must be updated since if information changes but is not properly recorded, it will affect the entire system, including the library.
- The goal of the "**eSchool**" virtual library system is to modernize the idea of a physical library while also providing a convenient and user-friendly application for readers and learners across the country. It gives people of all ages access to a comprehensive reading and learning environment. From any part of the country, a user can access all of the services. Above all, the system is intended to provide a pleasant user experience as well as the best possible services.
- A typical library usually necessitates a large amount of space as well as ongoing care. Other expenditures, such as time, electricity, and human resources, may be incurred. These problems must be resolved.

4. REQUIREMENT SPECIFICATION

4.1 System Features

- A feature is a subset of a software system's capability that fulfills a requirement, indicates a design decision, and offers a potential configuration option

1. Login System

Functional Requirements

- 1.1 Users will be able to log in using their assigned username and password.
- 1.2 The system will create a random verification code to retry login if the username and password have been entered incorrectly for more than three times.
- 1.3 The system will prohibit the user account login for one hour if the number of login attempts exceeds the maximum (5 times).

Priority Level: High

Precondition: User have valid user Id and Password

2. Registration System

Functional Requirements

- 2.1 The user's name, id, subscription period, and list of borrowed books will all be visible.
- 2.2 After that, the user must go to the Homepage to choose the books and courses that they want.
- 2.3 After that, the user must click 'Show Enrollment' to view the coursework that he has chosen and confirm his registration.
- 2.4 After completing the registration process, the user will be able to browse the homepage.

Priority Level: Medium.

Precondition: User must Login.

3. Reading System

Functional Requirements

- 3.1 The user has access to free books, magazine and journals.
- 3.2 Through mobile banking or internet banking, users can borrow or purchase books, magazine and journals.
- 3.3 User can access to mobile banking's are bKash, Nagad, rocket account and also Visa card bill payment functionalities.

Priority Level: High

Precondition: User must valid Login & get Payment.

4. Learning System

Functional Requirements

- 4.1 Skill Development Courses are available to users.
- 4.2 Religious Studies and Adult-Literacy are also available.
- 4.3 User can privacy maintain and their proper activity during learning.

Priority Level: High

Precondition: User must correct Login & get Payment.

5. Discussion System

Functional Requirements

- 5.1 A user can converse with another user.
- 5.2 Another user group is being studied.
- 5.3 Proper group discussion to maintaining the conversion each people.

Priority Level: High

Precondition: User must valid Login.

6. Blogging System

Functional Requirements

- 6.1 A user can customize his or her own appearance for the blogging area under the blogging component.
- 6.2 Publishers, writers, editors, content producers, distributors, educators, librarians, and sciences professionals can use this portal to learn about ebooks and digital content, as well as to create, read, publish, manage, curate, and distribute the written word and other interactive materials.

Priority Level: High

Precondition: User must correct Login.

7. Notification System

Functional Requirements

- 7.1 When a user buys or borrows a book, he or she will be able to see all of the notifications that have been sent to him or her, as well as be notified when the payment has been made.
- 7.2 It also features an online notice board where instructors and students can post information about workshops or seminars being held in our institutions or nearby colleges, and librarians can add it to the notice board following proper verification from the respective institution hosting the seminar.

Priority Level: High

Precondition: User must valid Login.

8. Messages System

Functional Requirements

- 8.1 Messages will allow users to check their mailbox.
- 8.2 The user can use message chat-box for upcoming or new books, as well as specific instances such as booking a significant book or journal.

Priority Level: Low

Precondition: User must valid Login-

9. Booking System

Functional Requirements

- 9.1 User can obtain information about any member who already has borrowed a book (status report).
- 9.2 User can issue lateness notices to those who have missed the deadline.
- 9.3 According to library rules, users can extend the time they have to borrow books.

Priority Level: High

Precondition: User must correct Login

10. Settings System

Functional Requirements

- 10.1 The user will be able to update their password from this page.
- 10.2 During registration, the user should double-check and complete the terms and conditions based on the information provided by the user.

Priority Level: Low

Precondition: User must proper Login

11. Logout System

Functional Requirements

- 11.1 After logging out, the user will be able to return to the login page.
- 11.2 When logging out, ensure the password during registration fill-up user own information.

Priority Level: High

Precondition: User must valid Login.

4.1.1 System Record

- **eSchool** Online Library Management System is the name of the project. We must test the quality of the software and do some project record for this project. In this project, we suggest a system that will preserve all of the information as a record, such as -
 - User first name
 - User last name
 - User Id
 - User Email
 - Gender(male/female)
 - Date of Birth
 - Current Location (city, postal code)
 - Provide a permanent address (city, postal code)
 - User's phone number
 - Purchase information about books and journals
 - Make use of the group study record
 - Record of the Forum
 - A record of the courses taken
 - Token for Member Upgradation (Exm- nineteenth)
 - Payment information
 - Booking information(start time to ending time)
 - Book, journal etc review

4.2 System Quality Attributes

- Quality characteristics are realized non-functional requirements used to evaluate a system's performance in systems engineering. We have identified a collection of quality attribute "generic scenarios" that are intended to contain all of the generally accepted definitions for these quality characteristics (Usability, Reliability, Efficiency, Interoperability, Integrity/Security, Flexibility, Reusability, and Testability). These are:
 - **Usability:** In an average of five and a maximum of six minutes, a trained user should be able to execute a complete request for a product from a vendor database.
 - **Reliability:** Service failure is the subject of reliability requirements. They define the software system's maximum allowable failure rate, and they might refer to the complete system or one or more of its individual operations. Software faults can only result in the loss of 10 experimental tests run out of a total of 1000.
 - **Efficiency:** It is concerned with the hardware resources required to carry out the software system's various duties. It includes processor power (measured in megahertz), storage capacity (measured in megabytes or gigabytes), and data transfer capability (given in MBPS or GBPS). It also considers the period between recharging the system's portable units, such as information parts and components in portable computers or forecasting units in the field.

At the established apex load conditions, at least 20percent of the CPU limit and RAM available to the application will be unused.

- **Interoperability:** The goal of interoperability is to create interfaces with other software systems or equipment firmware. The software of industrial machines and testing equipment, for example, communicates with the production control software. ChemDraw (version 17.0 or before) and ChemStruct (version 18.1 or earlier) tools should be able to acquire any acceptable chemical composition into the Synthetic Tracking System.
- **Integrity:** This element is concerned with the security of the software system, preventing unauthorized access and distinguishing between the groups of people who will be granted read and write permissions. Customer exchange narratives will be visible only to users with Auditor access privileges.
- **Reusability:** This element pertains to the utilization of software modules created for a previous project in a current software project. They may also make it possible for future projects to use a specific module or a set of modules from the presently created program. Software reuse is supposed to reduce development resources, cut development time, and produce higher-quality modules. The elemental composition input capabilities will be designed to be reusable at the article code level in various applications that use the global standard compound presentations.
- **Testability:** The testing of the software system as well as its operation are covered by testability requirements. It comprises predetermined intermediate results, log files, and the automatic diagnostics done by the software system prior to beginning the system to determine if all system components are operational and to obtain a report on any found errors. A module's maximum cyclamate complexity is twenty.
- **Availability:** As a user, receive a very negative impression if the software is offline or unstable. Ascertain that we can reduce service quality and, at the very least, have a good page signaling scheduled maintenance or service saturation.
- **Flexibility:** This component is concerned with the capabilities and effort required to sustain software architecture maintenance activities. Adapting current software to new circumstances and consumers without changing the software is one of them. With only one hour of work, a maintenance programmer with three months of expertise maintaining this item will be able to make additional duplicate yield visible to the item, including code revisions and testing.
- **Performance** (and response time): Only then would there be a performance. we don't want to have to wait too long, but we can wait a little if we get some information on what's going on.

4.3 System Interface

Dashboard

ABU

- Profile
- Settings
- SignUp
- Logout

- Dashboard
- Home
- Course
- Book Store
- Blog
- Group Study
- Forum
- Chat

1000
Total Books

450
Available Books

550
Pending

%90
Review

Available

#	Book/Journal	Author	Publisher	Branch	Price
1	A passage to India	E.M.Forster	"	"	\$1200
2	JOURNAL OF COMMUNICATION ENGINEERING AND SYSTEMS	"	STM	ELECTRONICS	\$360
3	A Week with Gandhi	Louis Fisher	"	"	\$300
4	i-MANAGERS JOURNAL OF MATERIAL SCIENCE	"	I-MANAGER PUB	PRODUCTION	\$360
5	Arabian Nights	Sir Richard Burton	"	"	\$120
6	JOURNAL OF ANALYSIS AND COMPUTATION	"	SERIAL	INFO-TECH	\$360

1000
Total Books

450
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- Math
- Scientific
- Architecture
- Computer
- Art

#	Book/Journal	Author	Publisher	Branch	Price
1	A passage to India	E.M.Forster	"	"	\$1200
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4	i-MANAGERS JOURNAL OF MATERIAL SCIENCE	"	I-MANAGER PUB	PRODUCTION	\$360
5	Arabian Nights	Sir Richard Burton	"	"	\$120
6	JOURNAL OF ANALYSIS AND COMPUTATION	"	SERIAL	INFO-TECH	\$360
7	Antony and Cleopatra	Shakespeare	"	"	\$1800
8	BULLETIN OF MATERIAL SCIENCE	"	IAS	PRODUCTION	\$750
9	INDUSTRIAL SAFETY CHRONICLE	"	NATIONAL SAFETY COUNCIL	PRODUCTION	\$360

- Course
- Book Store
- Blog
- Group Study
- Forum
- Chat
- Outlet
- Logout

Book Store

Blog

Group Study

Forum

Chat

Outlet

Logout

Journal

Magazine

All Books

	Book/Journal	Author	Publisher	Branch	Price
	to India	E.M.Forster	"	"	\$1200
2	JOURNAL OF COMMUNICATION ENGINEERING AND SYSTEMS	"	STM	ELECTRONICS	\$360
3	A Week with Gandhi	Louis Fisher	"	"	\$300
4	i-MANAGERS JOURNAL OF MATERIAL SCIENCE	"	I-MANAGER PUB	PRODUCTION	\$360
5	Arabian Nights	Sir Richard Burton	"	"	\$120
6	JOURNAL OF ANALYSIS AND COMPUTATION	"	SERIAL	INFO-TECH	\$360
7	Antony and Cleopatra	Shakespeare	"	"	\$1800
8	BULLETIN OF MATERIAL SCIENCE	"	IAS	PRODUCTION	\$750
9	INDUSTRIAL SAFETY CHRONICLE	"	NATIONAL SAFETY COUNCIL	PRODUCTION	\$360
10	A Suitable Boy	Vikram Seth	"	"	\$750
11	ELECTRONICS MAKER	"	EM MEDIA	ELECTRONICS	\$360
12	A Tale of Two Cities	Charles Dickens	"	"	\$600

Book Store

Blog

Group Study

Forum

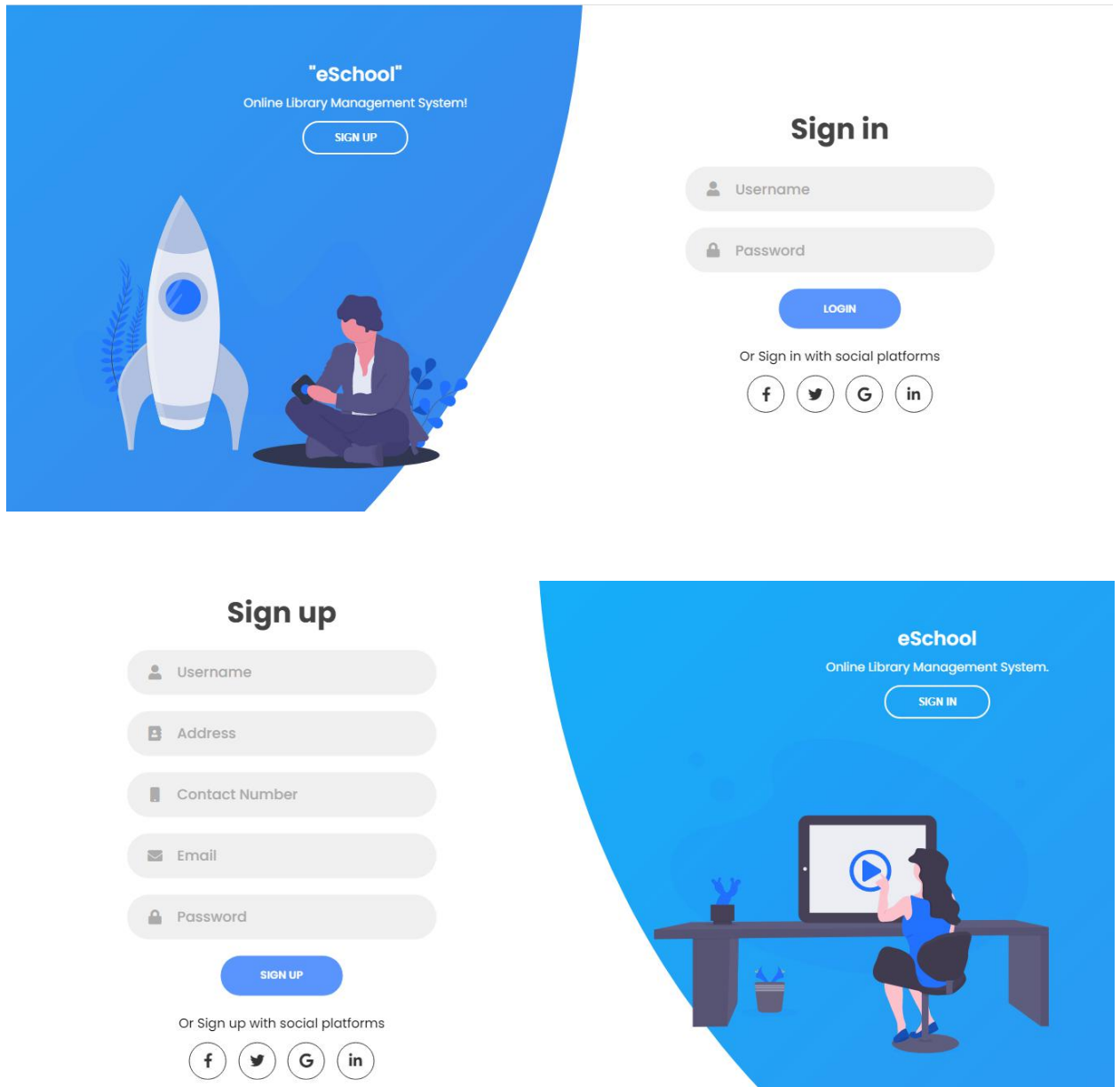
Chat

Outlet

Logout

Available

#	Book/Journal	Author	Publisher	Branch	Price
Blog 1	to India	E.M.Forster	"	"	\$1200
Blog 2					
Blog 3	OF COMMUNICATION ENGINEERING AND SYSTEMS	"	STM	ELECTRONICS	\$360
Blog 4	h Gandhi	Louis Fisher	"	"	\$300
Blog 5	RS JOURNAL OF MATERIAL SCIENCE	"	I-MANAGER PUB	PRODUCTION	\$360
5	Arabian Nights	Sir Richard Burton	"	"	\$120
6	JOURNAL OF ANALYSIS AND COMPUTATION	"	SERIAL	INFO-TECH	\$360
7	Antony and Cleopatra	Shakespeare	"	"	\$1800
8	BULLETIN OF MATERIAL SCIENCE	"	IAS	PRODUCTION	\$750
9	INDUSTRIAL SAFETY CHRONICLE	"	NATIONAL SAFETY COUNCIL	PRODUCTION	\$360
10	A Suitable Boy	Vikram Seth	"	"	\$750
11	ELECTRONICS MAKER	"	EM MEDIA	ELECTRONICS	\$360
12	A Tale of Two Cities	Charles Dickens	"	"	\$600



4.4 Project Requirements

Time Estimation:

For calculation time, we will use COCOMO (Constructive Cost Model) method.

Software Project Type	Coefficient <Effort Factor>	P	T
Organic	2.4	1.05	0.38
Semi-detached	3.0	1.12	0.35
Embedded	3.6	1.20	0.32

As our project falls into Organic Type, then:

1. Coefficient = 2.4
2. P = 1.05
3. T = 0.38
4. SLOC = 10000

$$\text{Effort} = \text{PM} = \text{Coefficient}_{\text{Effort Factor}} * (\text{SLOC}/1000)^P$$

$$= 2.4 * (10000/1000)^{1.05} = 26.93$$

$$\text{Development time} = \text{DM} = 2.50 * (\text{PM})^T$$

$$= 2.50 * (26.93)^{0.38}$$

$$= 8.74$$

$$\text{Required number of people} = \text{ST} = \text{PM}/\text{DM}$$

$$= 26.93 / 8.74$$

$$= 3.088$$

This calculation shows our Project will require more than 9 months to complete. So, we will take 9 months overall to complete this project.

This calculation also shows, we will need 3 person to develop this project.

Earned Value Analysis (EVA):

TASK	PLANNED EFFORT	ACTUAL EFFORT
1	13.0	14.0
2	12.0	12.5
3	12.0	11.0
4	9.5	9.0
5	8.0	9.5
6	10.0	10.0
7	13.0	13.5
8	6.0	6.5
9	12.0	10.0
10	4.0	4.5
11	14.0	14.5
12	5.0	4.5
13	11.0	*
14	8.0	*
15	6.0	*

BCWP=118.5

BCWS=143.5

ACWP=119.5

BAC=216

$SPI = BCWP / BCWS = 118.5 / 143.5$

$= 0.826$

$SV = BCWP - BCWS = 118.5 - 143.5$

$= -25 \text{ person-day}$

$CPI = BCWPI / ACWP = 118.5 / 119.5$

$= 0.992$

$CV = BCWP - ACWP = 118.5 - 119.5$

$= -1 \text{ person-day}$

$\% \text{ Schedule for completion} = BCWS / BAC$

$= 143.5 / 216$

$= 66.44\%$

$\% \text{ Complete} = BCWS / BAC$

$= 118.5 / 216$

$= 54.86\%$

TimeLine Chart :

Task : Person \ Weeks	1	2	3	4	5	6	7	8	9
A : FARJUM									
B : ABU									
C : KHADIZA									
D : FARJUM									
E : FARJUM									
F : ABU									
G : ABU									
H : KHADIZA									

A : Planning

B : Overall design 1

C : Code module 1

D : Code module 2

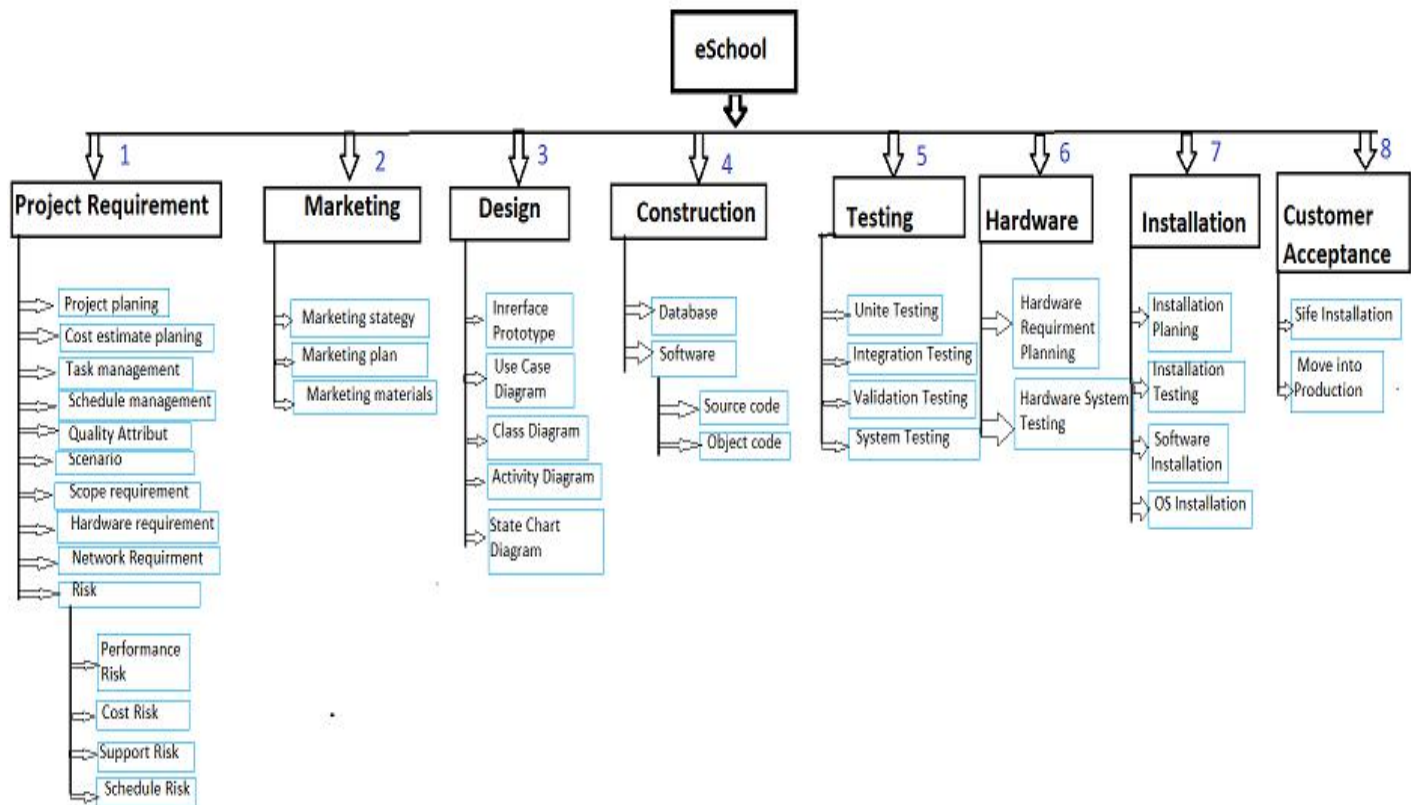
E : Code module 3

F : Integration testing

G : System testing

H : Delivery

Work breakdown structure (WBS):



Total budget 5,65,100 BDT

Total Development Time 9 months

5. FEATURES NOT TO BE TESTED

The following is a list of topics that will not be discussed in depth. As a result of other testing initiatives, all testing in these areas will be indirect. For example:

- Reassigned Sales data is used in PC-based spreadsheet analysis programs. Because these apps are totally within the control of the customer and are not part of this project's scope. Customers will be given the essential data base format information so that they may extract data. The application maintainer or developer is responsible for testing their applications.
- Apply group study.
- User personal information.
- Create a new Course.
- Network related problem.
- Database management.
- Upgrades to Members.
- Payment gateway system.

- Forum.
- Hardware related problem.
- Browser Compatibility.
- Security issues.

6. TESTING APPROACH

6.1 Testing Levels

- Unit, System/Integration (combined), and Acceptance testing will be performed for the SMS project. For system/integration testing, it is hoped that at least one full-time independent tester will be employed. With the financial limitations and time frame in place, the majority of testing will be performed by the test manager with the help of the development teams.
- The developer will conduct UNIT testing and the development team leader will approve it. Before unit testing can be accepted and handed on to the tester, the programmer must present proof of unit testing (test case list, sample output, data printouts, and defect information) to the team leader. The test person will be given all of the unit test information as well.
- SYSTEM/INTEGRATION The test manager and development team leader will be in charge of testing, with assistance from individual developers as needed. This project doesn't have any specialized testing tools. After all critical faults have been fixed, programs will be put through a System/Integration test. A program may contain up to two major flaws as long as they do not prevent the program from being tested (I.E. there is a work around for the error).
- ACCEPTANCE With the help of the test manager and the development team leader, genuine end users will complete the testing. After the System/Integration test is completed, the acceptance test will run concurrently with the existing manual ZIP/FAX process for one month.

6.2 Test Tools

The only test tools to be used are the standard AS/400 provided utilities and commands.

- In conjunction with the in-house check-in/check-out control utility, the Program Development Manager (PDM) will be used as the source version configuration management tool. Each developer's standard AS/400 access menu includes a check-in/out function.
- The AS/400 Screen Design Aid will be used to create the first prototypes for the new screens (SDA). Prior to testing and development of the screens, the sales administration employees will be presented the original layout and general content of the screens.

6.3 Meetings

Every two weeks, the test team will convene to assess progress and identify mistake trends and concerns as soon as possible. Once every two weeks, the test team leader will meet with the project manager and development. These two gatherings will take place on separate weeks. For emergency situations, further meetings can be convened as needed.

7. TEST CASES/TEST ITEMS

Test case-01

Project Name: eSchool- Online Library Management System		Test Designed by: ABU BAKAR		
Test Case ID: FR_1		Test Designed date: 15/12/2021		
Test Priority (Low, Medium, High): Medium		Test Executed by: ABU BAKAR		
Module Name: Login Session		Test Execution date: 15/12/2021		
Test Title: verify login with valid username and password				
Description: Test website login page				
Precondition (If any): User must have valid username and password				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Enter username 3. Enter password 4. Click submit	Username: 99999999999 Password: 321	User should login into the application	As expected,	Pass
Post Condition: User is validated with database and successfully login to account. The account session details are logged in the database.				

Test case-02

Project Name: eSchool- Online Library Management System		Test Designed by: ABU BAKAR		
Test Case ID: FR_2		Test Designed date: 15/12/2021		
Test Priority (Low, Medium, High): Medium		Test Executed by: ABU BAKAR		
Module Name: Registration		Test Execution date: 15/12/2021		
Test Title: Check Registration in web form				
Description: Test the Registration button				
Precondition (If any): Should be logged in Homepage section				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Click on 'Registration' form in Homepage	Name: ABU BAKAR Id:12345 Subscription: Monthly Borrowing Books: Historical Interests	Should include a title such as 'Registration,' as well as details on borrowed books.	As expected,	Pass
Post Condition: The user's identity is verified against the database, and he or she is able to access their account. The information of the account session are saved in the database.				

Test case-03

Project Name: eSchool- Online Library Management System			Test Designed by: ABU BAKAR	
Test Case ID: FR_3			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): High			Test Executed by: ABU BAKAR	
Module Name: Learning			Test Execution date: 15/12/2021	
Test Title: Provide Learning Opportunity				
Description: Test the learning button				
Precondition (If any): The user must be login in order to receive payment.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Enter username 3. Enter password 4. Click “Login”	Username: ABU BAKAR Password: 12345	Brings you to the page where you can learn about the features and make a payments.	As expected,	Pass
Post Condition: The identification of the user is checked against the database, and he or she is granted access to their account. The account session information is recorded in the database.				

Test case-04

Project Name: eSchool- Online Library Management System			Test Designed by: FARJUM HAIDER	
Test Case ID: FR_4			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): High			Test Executed by: FARJUM HAIDER	
Module Name: Reading			Test Execution date: 15/12/2021	
Test Title: Reads a variety of free books and journals				
Description: Test Reading ability				
Precondition (If any): User must login and get Payment.				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to the website 2. Enter username 3. Enter password 4. Click “Login”	Username: FARJUM Password: 12345	Brings you to the page where you can read about the features and make a payments.	As expected,	Pass
Post Condition: The user's identity is verified against the database, and he or she is able to access their account. The information of the account session are saved in the database.				

Test case-05

Project Name: eSchool- Online Library Management System			Test Designed by: FARJUM HAIDER	
Test Case ID: FR_5			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): High			Test Executed by: FARJUM HAIDER	
Module Name: Blogging			Test Execution date: 15/12/2021	
Test Title: Including features for blogging				
Description: Test blogging button				
Precondition (If any): The user must first login				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter username 2. Enter password 3. Click “Blog”	Username: FARJUM Password: 12345	Brings you to the page where you can make your own blogging interface.	As expected,	Pass
Post Condition: The identification of the user is checked against the database, and he or she is granted access to their account. The account session information is recorded in the database.				

Test case-06

Project Name: eSchool- Online Library Management System			Test Designed by: FARJUM HAIDER	
Test Case ID: FR_6			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): High			Test Executed by: FARJUM HAIDER	
Module Name: Discussion			Test Execution date: 15/12/2021	
Test Title: Discuss with another user				
Description: Test discussion button				
Precondition (If any): The user must first login				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter username 2. Enter password 3. Click “Discussion”	Username: FARJUM Password: 12345	Brings you to the page where you can use the Discussion features. Another User Group is being studied.	As expected,	Pass
Post Condition: The user is successfully logged into the account after being confirmed by the database. The database keeps track of account session information.				

Test case-07

Project Name: eSchool- Online Library Management System			Test Designed by: UMMA KHADIZA	
Test Case ID: FR_7			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): High			Test Executed by: UMMA KHADIZA	
Module Name: Notification			Test Execution date: 15/12/2021	
Test Title: Notification features are available				
Description: Notification button				
Precondition (If any): The user must first login				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter username 2. Enter password 3. Click “Notification”	Username: KHADIZA Password: 12345	Notification When a user buys or borrows a book, they will be able to check all of their notifications and will also be notified.	As expected,	Pass
Post Condition: The user's identity is verified against the database, and he or she is able to access their account. The information of the account session are saved in the database.				

Test case-08

Project Name: eSchool- Online Library Management System			Test Designed by: UMMA KHADIZA	
Test Case ID: FR_8			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): Low			Test Executed by: UMMA KHADIZA	
Module Name: Settings			Test Execution date: 15/12/2021	
Test Title: Including options for settings				
Description: Setting button				
Precondition (If any): The user must first login				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter username 2. Enter password 3. Click “Setting” option	Username: KHADIZA Password: 12345	The user will be able to update their password from this page.	As expected,	Pass
Post Condition: The identification of the user is checked against the database, and he or she is granted access to their account. The account session information is recorded in the database.				

Test case-09

Project Name: eSchool- Online Library Management System			Test Designed by: FARJUM HAIDER	
Test Case ID: FR_9			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): Low			Test Executed by: FARJUM HAIDER	
Module Name: Messages			Test Execution date: 15/12/2021	
Test Title: Messages is a feature that allows you to send and receive messages.				
Description: Message button				
Precondition (If any): The user must first login				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter username 2. Enter password 3. Click “Messages” button	Username: FARJUM Password: 12345	Users will be able to check their mailbox via messages.	As expected,	Pass
Post Condition: User is validated with database and successfully login to account. The account session details are logged in the database.				

Test case-10

Project Name: eSchool- Online Library Management System			Test Designed by: ABU BAKAR	
Test Case ID: FR_10			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): High			Test Executed by: ABU BAKAR	
Module Name: Book booking			Test Execution date: 15/12/2021	
Test Title: Providing book booking features				
Description: Booking button				
Precondition (If any): The user must first login				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1.Enter username 2. Enter password 3. Click “Booking” button	Username: ABU Password: 12345	To relieve your workload and save time, automate reservation and booking management.	As expected,	Pass
Post Condition: The user's identity is verified against the database, and he or she is able to access their account. The information of the account session are saved in the database.				

Test case-11

Project Name: eSchool- Online Library Management System			Test Designed by: FARJUM HAIDER	
Test Case ID: FR_11			Test Designed date: 15/12/2021	
Test Priority (Low, Medium, High): High			Test Executed by: FARJUM HAIDER	
Module Name: Logout			Test Execution date: 15/12/2021	
Test Title: Providing Logout features				
Description: Logout button				
Precondition (If any): The user must first login				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Enter username 2. Enter password 3. Click “Logout” button	Username: FARJUM Password: 12345	After logging out, the user will be able to return to the login page.	As expected,	Pass
Post Condition: User is validated with database and successfully login to account. The account session details are logged in the database.				

8. ITEM PASS/FAIL CRITERIA

The majority of software setups must meet memory performance requirements. Unless the component meets the sustainability factor, the test case may not function properly. Any test case could have a planned result to aid the test investigator in deciding if the test case was successful or not. After the impacting re-allocation of the primary product information over a period of time, as well as the unique data exchange balance for both the outdated Wrap files, the testing process was finished. The examination is finished. The original package of producers will have an impact and the logs will stop once the distributors are convinced that the information is possibly available.

9. TEST DELIVERABLES

- **Installation / configuration guide:** This tutorial will assist you in installing or configuring the system's components, as well as its hardware and software requirements.
- **Test Closure Report:** Provides a complete analysis of the defects discovered, the issues fixed, and the software inconsistencies discovered.
- **Release Note:** The client, customer, or stakeholders, as well as the construction team, will receive release notes. A list of new releases and problem patches is included.
- **Test Events Report:** All occurrences that occur during software testing, whether resolved or unresolved, are recorded here.
- **Summary Test Report:** This document includes an overview of the test activities as well as the final test findings
- **Graphs and Metrics:** To monitor and regulate the process and product, software test metrics are used. It enables us to keep the project on track to meet our objectives without deviating. Metrics provide answers to a variety of questions. It's critical to choose the questions you want answered.
- **Error report / bug report:** The goal of using an error report template or bug report template is to provide developers with detailed information about the defect (such as background information, reproduction steps, and so on). Allows developers to easily reproduce the bug
- **Matrix Tracking Requirements:** The Matrix Tracking Requirements (RTM) method is used to keep track of the requirements in the tests to guarantee that they are met. Matrix tracking (also known as Traceability Matrix or Cross Reference Matrix) is required.
- **Test Data:** Testers employ data test data to generate test cases. Testers must enter some inclusion data while the testing cases are being handled. Testers prepare test data in order to accomplish this. It can also be fixed by hand or with the use of tools. Testing the basic login capabilities with the user id and password fields, for example. In the user id and password areas, we must provide information. As a result, some experimental data is required.
- **Test Cases / Scripts:** Testing Phase are a collection of excellent and bad practical actions for a testing environment, including pre-conditions, test data, expected outcomes, delivery schedule, and actual outcomes.
- **Assessment Conditions:** The Assessment Status gives us a quick snapshot of everything we need to evaluate. The Test condition is comparable to a more advanced test case.
- **Attempt Evaluation Reports:** The test teams usually state the specific attempts of the evaluation team to finish the assessment procedure in this report.
- **Assessment Strategy:** A project manager frequently creates the Assessment Strategy, which is a high-quality document (standing document). It's a document that outlines how we evaluate a product and achieve our objectives. It is usually based on the Definition of Business Needs (BRS). This document serves as a foundation for other documents, such as the Test Plan.
- **Testing Programs:** A reference implementation specification is a document that outlines the testing operations that will be carried out in order to deliver a high-quality product. For all future project activities, the Test Plan document can be found in product descriptions, SRS, or application papers. It is usually written by the Test Lead or the Test Manager.
- **Test Application Reports:** Test results and a description of test activities are included.

10. STAFFING AND TRAINING NEEDS

During the system framework and acceptance testing phases of the project, a minimum of one full-time analyst can be assigned to the software project. This will necessitate the hiring of a low-maintenance employee to assist with inspections and other tasks at the start of the project. They'd be

given full-time work about four months into the project. If a different test individual is unavailable, the project manager or test manager will take over the task.

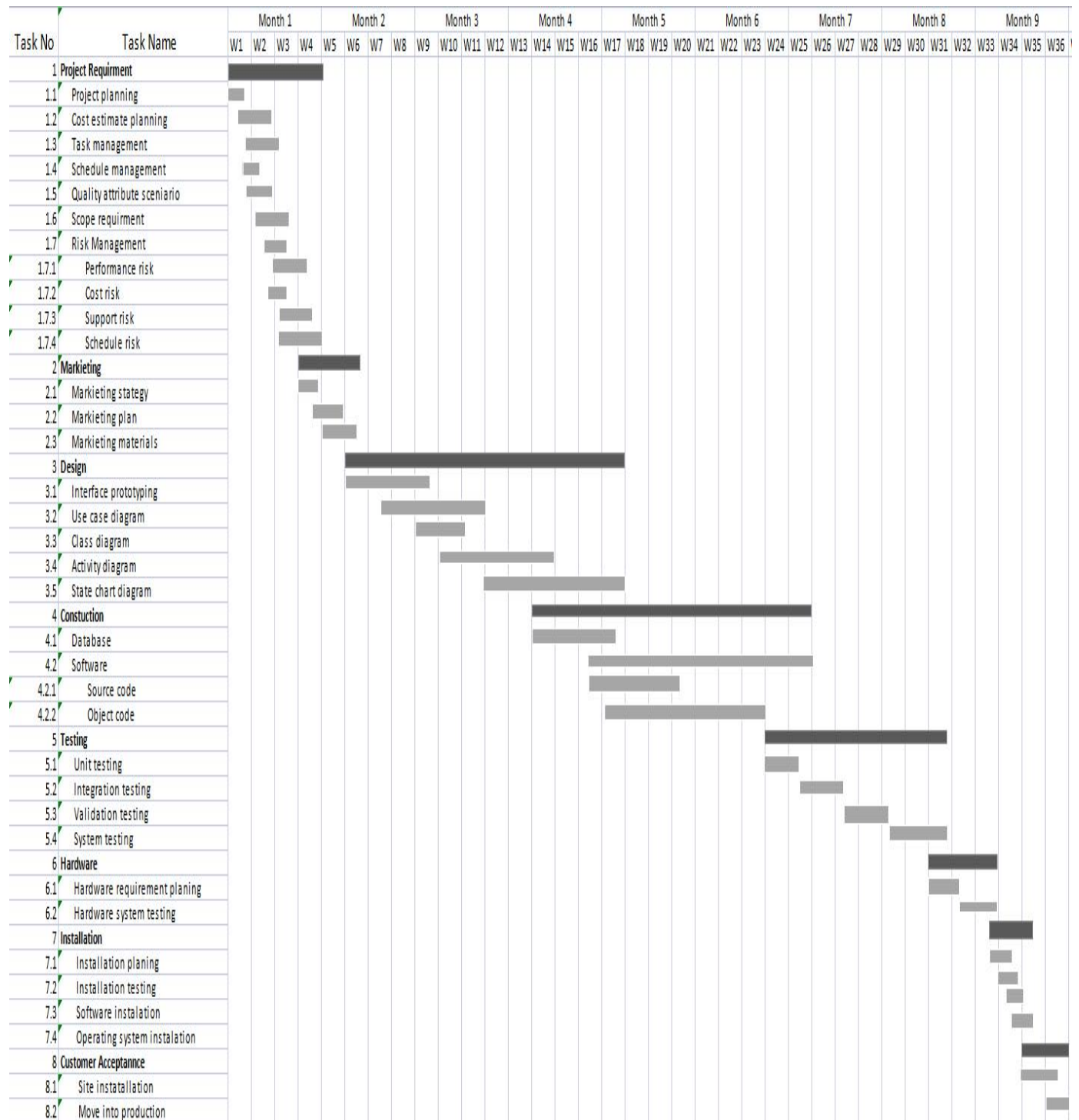
- Engineers and testers should be familiar with the EDI interface's key functions. Prior to final acknowledgement of the project, the tasks team will also require extensive training in the EDI interchanges method.
- The software tester and project coordinator must collaborate with university management to learn about the internal functioning of a course distribution stream and to identify affordable and essential programs.

11. RESPONSIBILITIES

	TM	PM	Dev Team	Test Team	Client
Acceptance test Documentation & Execution	X	X		X	X
System/Integration test Documentation & Exec.	X		X	X	
Unit test documentation & execution	X		X	X	
System Design Reviews	X	X	X	X	X
Detail Design Reviews	X	X	X	X	
Test procedures and rules	X	X	X	X	
Screen & Report prototype reviews			X	X	X
Change Control and regression testing	X	X	X	X	X

12. TESTING SCHEDULE

The following testing activities have been scheduled in the project plan. The project plan timetable specifies the particular dates and hours for each task. The people who are needed for each procedure are also listed in the project timeline and plan. The project manager, in collaboration with the development and test team leaders, will coordinate the individuals required for each assignment, including the test team, development team, management, and customer.



13. PLANNING RISKS AND CONTINGENCIES

Client (Learner) data and necessities may be altered or revised. Users cannot change their names or identification numbers, but they can update or change their email, phone number, department, and address. Because it is necessary to maintain accurate information on the User, and it will be used by Putishala to send messages and emails to the User. As a result, such should only be changeable by Putishala management in order to maintain user data current. That specific data upgrade will necessitate the hiring of additional administrative personnel. As a result, the conveyance dates will be pushed back. To avoid these problems, the software development team can plan in advance.

Restricted Sales people have been reassigned. At the moment, two positions in the Reassigned Sales organization are vacant. There may be delays in getting workers to survey appropriate data and participate in the Acceptance test measure as a result of the staff shortage. If customer service becomes a problem, the survey and acknowledgement testing deadlines will be pushed back accordingly. There will be no attempt to get around any of the auditing and testing requirements.

Risk	Impact	Preparation
Budget concerns: Resources were hired due to a shortage of resources or time, which increased the cost. The preparations did not go as planned. As a result of involving a third party, costs rise, and the overall budget rises.	High	Manage the client's payment increment. When it comes to system testing, make use of clients and get the project done.
Gateway for Payment: The payment gateway system is a security risk.	High	For a safe transaction, maintain a reliable payment gateway system.
Staff Shortage: Incomplete works that cause a delay in submission due to a staffing shortage	Medium	Wherever possible, use clients to test whether or not they are satisfied. According to the project's progress, hire resources.
Inadequate testing tools: Testing is difficult and time-consuming due to a lack of advanced testing tools.	Medium	Consult with the PM to set up testing tools that will make checking more effective..
Changes in client requirements: Clients have a habit of changing their requirements out of nowhere. This is a major issue that leads to a rise in development and testing jobs.	High	Members of the quality assurance team with programming experience can begin assisting programmers.

Risk	Impact	Preparation
The testing team lead's understanding of the requirements is incorrect: As a result, the objection has become completely muddled.	Medium	Organize two or three members of the testing team while discussing the required specifications.

14. APPROVALS

There is a list of those who have given their approval to the project:

Approval	Personnel
Project manager	ABU BAKAR
Test Manager	UMMA KHADIZA
Development Manager	FARJUM HAIDER
Test Engineer	SIDDIQUE
Data Validation	Personnel from the administration