

LAB REPORT

Submitted by

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Under the Guidance of

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In partial satisfaction of the requirements for the degree of

**BACHELOR OF TECHNOLOGY
in
COMPUTER SCIENCE ENGINEERING**



SCHOOL OF COMPUTING

COLLEGE OF ENGINEERING AND TECHNOLOGY

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

KATTANKULATHUR - 603203

JUNE 2022



SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
KATTANKULATHUR-603203

BONAFIDE CERTIFICATE

Certified that this lab report titled “**Book Recommendation System**” is the bonafide work done by **Darshita Tated (RA2011003010500)** who carried out the lab exercises under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other work.

SIGNATURE

Dr. MANJULA

SEPM – Course Faculty

ASSISTANT PROFESSOR

Department of Computing Technologies

ABSTRACT

The booming technology of the modern world has given rise to the enormous book websites. This makes the buyers to choose the best books to read as books play a vital role in many people's life. The various kinds of books come into existence on day-to-day basis. Thus, in order to eliminate this critical situation the recommendation system has been introduced in which the suggestion on the various books can be provided based on the analysis of the buyer's interest. The Book Recommendation System is an intelligent algorithm which reduces the overhead of the people. This provides benefit to both the seller and the consumer creating the win-win situation. The E-commerce site to network security, all demands the need for the recommended system to increase their revenue rate. The content filtering, association rule mining and collaborative filtering are the various decision-making techniques employed in the recommendation system as it helps buyers by the strong recommendations as there are various books, buyer's sometimes cannot find the item they search for. The Book Recommendation System is widely implemented using search engines comprising of data sets.

Application Name: Book Recommendation System

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DEPT. Of NWC

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	1
Title of Experiment	To identify the Software Project, Create Business Case, Arrive at a Problem Statement
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	11/03/2022

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To Frame a project team, analyze and identify a Software project. To create a business case and Arrive at a Problem Statement for the <title of the project>

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Lead
2	RA2011003010495	Shivam Bavaria	Member
3			Member

Project Title: Book recommendation app

Project Description

ONE PAGE BUSINESS CASE TEMPLATE



BookMate

DATE	11-03-2022
SUBMITTED BY	SHIVAM BAVARIA,DARSHITA TATED
TITLE / ROLE	BOOK RECOMMENDATION SYSTEM

THE PROJECT

In bullet points, describe the problem this project aims to solve or the opportunity it aims to develop.

- BY CURATING A BOOK RECOMMENDATION SYSTEM,WE AIM TO SOLVE EVERY STUDENTS AND BOOKLOVERS PROBLEM .
- WE AIM AT MAKING A USER FRIENDLY INTERFACE WHICH SUGGESTS BOOKS ACCORDING TO THE USER'S REQUIREMENTS .

THE HISTORY

In bullet points, describe the current situation.

- FINDING A BOOK OF OUR EXACT MOOD AND REQUIREMENT IS REALLY CHAOTIC.
- SOMETIMES EVEN GOOGLE CAN'T HELP US FIND THE EXACT BOOK WE WANT TO READ AND WE CAN'T BE RUNNING AROUND TEACHERS TO RECOMMEND A GUIDANCE BOOK RIGHT BEFORE AN EXAM.
- THIS IS EXACTLY WHERE OUR SYSTEM COMES TO AID.

LIMITATIONS

List what could prevent the success of the project, such as the need for expensive equipment, bad weather, lack of special training, etc.

- THE DATABASE THAT WE WOULD NEED TO CREATE AND UPDATE TO MANAGE THE HUGE AMOUNT OF BOOKS THAT DO EXIST IN EVERY GENRE AND THE BOOKS THAT ARE PUBLISHED EVERYDAY.

APPROACH

List what is needed to complete the project.

- TO DECIDE AND WORK ON EVERY ASPECT AND OPTION THAT WE WOULD PROVIDE TO THE USER AND PRESENT SOMETHING.
- TO KEEP IT AS USER FRIENDLY AS POSSIBLE.

BENEFITS

In bullet points, list the benefits that this project will bring to the organization.

- OUR SYSTEM WILL PROVIDE THE USER ON THE GO
- BOOK RECOMMENDATION SERVICES BE IT FICTIONAL, NON-FICTIONAL, ACADEMIC COURSE RELATED OR ANY OTHER GENRE THAT THE USER REQUIRES.
- IT WILL PRESENT YOU WITH THE MOST ACCURATE BOOKS ACCORDING TO YOUR RECOMMENDATIONS.

Result

Thus, the project team formed, the project is described, the business case was prepared and the problem statement was arrived.



Department of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	2
Title of Experiment	Identification of Process Methodology and Stakeholder Description
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010495,RA2011003010500
Date of Experiment	1/4/2022

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To identify the appropriate Process Model for the project and prepare Stakeholder and User Description.

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep/Member
2	RA2011003010495	Shivam Bavaria	Member

Project Title:

Selection of Methodology

Agile methodology is a type of project management process, mainly used for software development, where demands and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customers.

The Agile methodology is a collection of principles that value adaptability and flexibility. Agile method aims to provide better responsiveness to changing business needs and therefore focuses on enabling teams to deliver in workable increments.

It promotes adaptive planning, evolutionary development, early delivery, continuous improvement, and encourages rapid and flexible response to change.

Incorporate information to below table regarding stakeholders of the project [Make use of below examples]

Stakeholder Name	Activity/ Area /Phase	Interest	Influence	Priority (High/ Medium/ Low)
Owner	Achieve targets, Increase subscription margin	High	High	1

Investor	Provide financial support,	High	Low	3
Project manager, employees	Lead the team in every aspect, retain and upgrade skills	High	Medium	2
Suppliers, Vendors	Ensure feasible sources and frequently updated database	Low	Low	4
End Users	Provides feedback	Low	High	2

Result

Thus the Project Methodology was identified and the stakeholders were described.



Department Of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	3
Title of Experiment	System, Functional and Non-Functional Requirements of the Project
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	1/4/2022

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To identify the system, functional and non-functional requirements for the project.

Team Members:

S No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep/Member
2	RA2011003010495	Shivam Bavaria	Member
3			Member

Project Title: Online book recommendation app**System Requirements**

SR 1: A database of all the books and their details.

SR 2: A database of the vendors of the books listed on the app.

Functional Requirements

FR 1: A portal for the genre of the book to be searched for.

FR 2: A portal for checking availability of audio books or E-Books.

FR 3: Record customer feedback.

Non-Functional Requirements

NFR 1: Website should run on different operating systems.

NFR 2: Website interface should be user friendly making it easy to use.

NFR 3: Website loading time should be low and result should be displayed within 2-3 sec.

Result

Thus the requirements were identified and accordingly described.



Department of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	4
Title of Experiment	Prepare Project Plan based on scope, Calculate Project effort based on resources and Job roles and responsibilities
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To Prepare Project Plan based on scope, Calculate Project effort based on resources, Find Job roles and responsibilities

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Lead
2	RA2011003010495	Shivam Bavaria	Member

Requirements

<Incorporate the Project plan template>

Result:

Thus, the Project Plan was documented successfully.

1. Project Management Plan

Describe the key issues driving the project. [Min 3 Focus Areas]

Focus Area	Details
Scope Management	It is a fully data driven website. The use of this website can reduce the hassle of finding the right book according to your genre
Schedule Management	Certain goals will be set that should be achieved within the stipulated time. A proper monitoring will be done at the end of the day by close-up meeting.
Resource Management	In our team we'll require people with technical skills
Communication Management	There will be proper team work between the members. and everyone will perform their roles and responsibilities with honesty

1. Estimation

1.1. Effort and Cost Estimation

Activity Description	Sub-Task	Sub-Task Description	Effort (in hours)	Cost in INR
Design the user screen	E1R1A1T1 (Effort-Requirement-Activity-Task)	Confirm the user requirements (acceptance criteria)	3	5000
	E1R1A1T2	To authenticate the user id	5	6500
	E1R1A1T3	Take the review of user	2	3000
Advertising	E2R1A1T1	Advertisement through official social media handle of website	2	2000

Effort (hr)	Cost (INR)
1	500

1.2. Infrastructure/Resource Cost [CapEx]

Infrastructure Requirement	Qty	Cost per qty	Cost per item
IR1 Servers	5	5000	25000
IR2 Storage	10	10000	100000
IR3 Security Services	10	3000	30000

2.3 Maintenance and Support Cost [OpEx]

Category	Details	Qty	Cost per qty per annum	Cost per item
People	Network, System, Middleware and DB admin	3	2,000,000	6,000,000
	Developer , Support Consultant			
License	Operating System Database Middleware IDE	10	10000	100,000
Infrastructures	Server, Storage and Network	20	20000	400,000

2. Project Team Formation

2.1. Identification Team members

Name	Role	Responsibilities
------	------	------------------

Shivam Bavaria	Key Business User (Product Owner)	Provide clear business and user requirements
Darshita Tated	Project Manager	Manage the project
Shivam Bavaria	Business Analyst	Discuss and Document Requirements
Shivam Bavaria	Technical Lead	Design the end-to-end architecture
Darshita Tated	UX Designer	Design the user experience
Darshita Tated	Frontend Developer	Develop user interface
Shivam Bavaria	Backend Developer	Design, Develop and Unit Test Services/API/DB
Shivam Bavaria	Cloud Architect	Design the cost effective, highly available and scalable architecture
Darshita Tated	Cloud Operations	Provision required Services
Darshita Tated	Tester	Define Test Cases and Perform Testing

2.2. Responsibility Assignment Matrix

RACI Matrix	Team Members			
Activity	Shivam (BA)	Shivam/Darshita (Developer)	Darshita (Project Manager)	Key Business User
Design the user interface	I	A/R	C	C
Developing Partnerships with Stake holders	A/R	I	C	I/C
Advertising	A/R	I	C	C

A	Accountable
R	Responsible
C	Consult
I	Inform

Reference

1. <https://www.pmi.org/>
2. <https://www.projectmanagement.com/>
3. <https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/ti-it/ervcpqpm-dsfvpmpt-eng.html>



Department of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	5
Title of Experiment	Prepare Work breakdown structure, Timeline chart, Risk identification Table
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

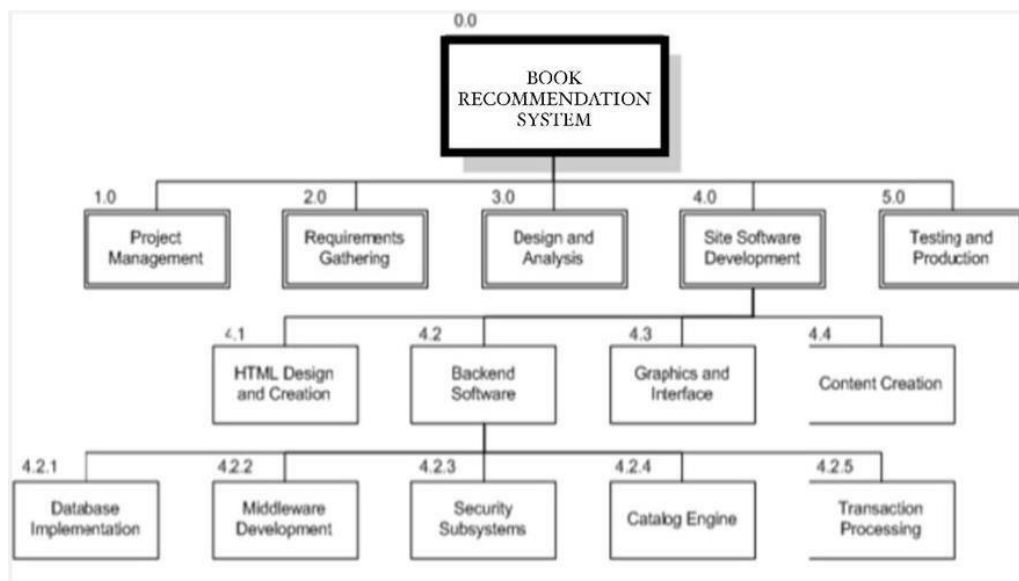
Aim

To Prepare Work breakdown structure, Timeline chart and Risk identification table

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010500	DARSHITA TATED	Rep
2	RA2011003010495	SHIVAM BAVARIA	Member
3			Member

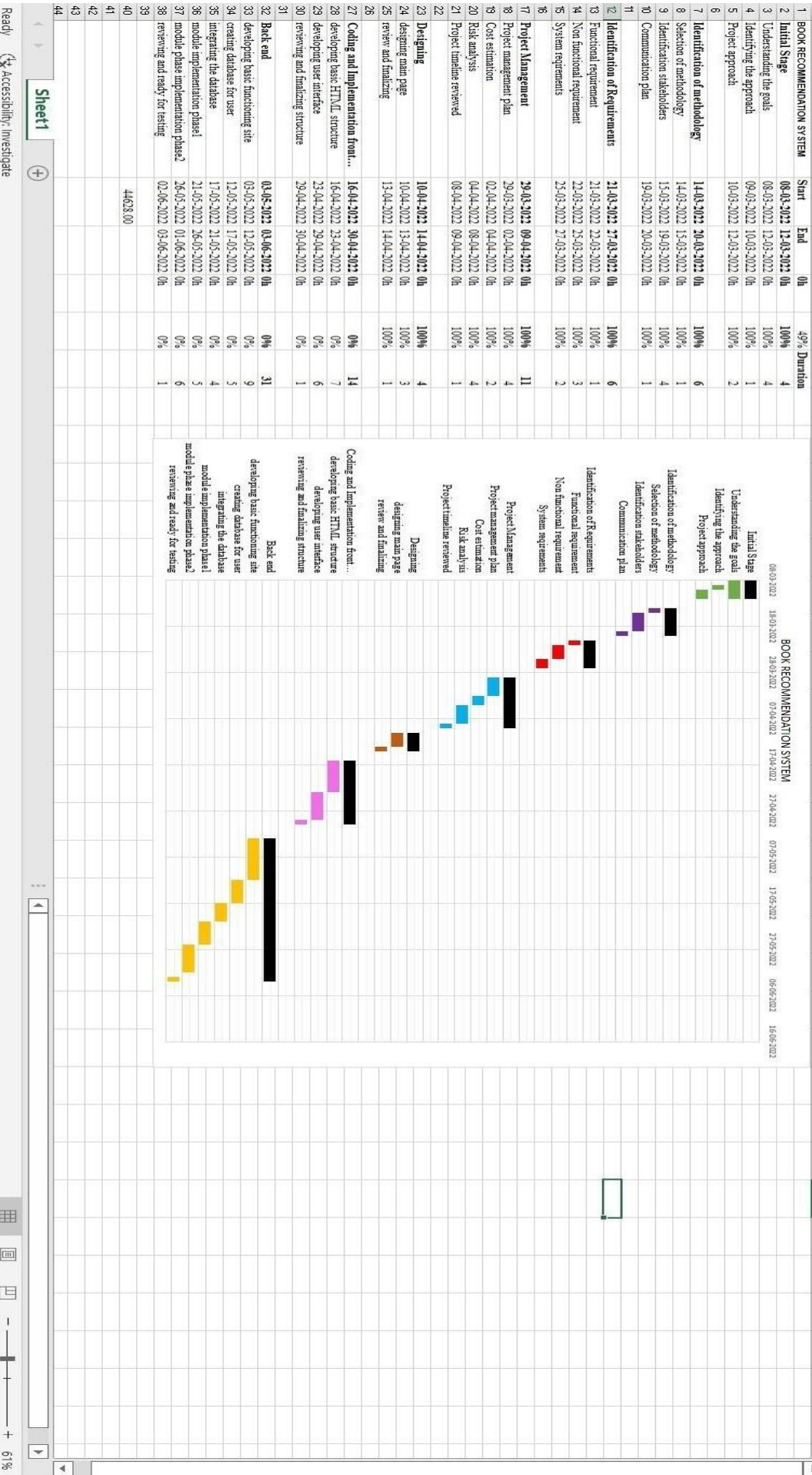
WBS:



- ☒ 0.0 Retail Web Site
- ☒ 1.0 Project Management
- ☒ 2.0 Requirements Gathering
- ☒ 3.0 Analysis & Design
- ☒ 4.0 Site Software Development
 - 4.1 HTML Design and Creation
 - 4.2 Backend Software
 - 4.2.1 Database Implementation
 - 4.2.2 Middleware Development
 - 4.2.3 Security Subsystems
 - 4.2.4 Catalog Engine
 - 4.2.5 Transaction Processing
 - 4.3 Graphics and Interface
 - 4.4 Content Creation
- ☒ 5.0 Testing and Production

TIMELINE – GANTT CHART

Book recommendation system	Start	End	0h	49%	Duration
Initial Stage	08-03-2022	12-03-2022	0h	100%	4
Understanding the goals	08-03-2022	12-03-2022	0h	100%	4
Identifying the approach	09-03-2022	10-03-2022	0h	100%	1
Project approach	10-03-2022	12-03-2022	0h	100%	2
Identification of methodology	14-03-2022	20-03-2022	0h	100%	6
Selection of methodology	14-03-2022	15-03-2022	0h	100%	1
Identification stakeholders	15-03-2022	19-03-2022	0h	100%	4
Communication plan	19-03-2022	20-03-2022	0h	100%	1
Identification of Requirements	21-03-2022	27-03-2022	0h	100%	6
Functional requirement	21-03-2022	22-03-2022	0h	100%	1
Non functional requirement	22-03-2022	25-03-2022	0h	100%	3
System requirements	25-03-2022	27-03-2022	0h	100%	2
Project Management	29-03-2022	09-04-2022	0h	100%	11
Project management plan	29-03-2022	02-04-2022	0h	100%	4
Cost estimation	02-04-2022	04-04-2022	0h	100%	2
Risk analysis	04-04-2022	08-04-2022	0h	100%	4
Project timeline reviewed	08-04-2022	09-04-2022	0h	100%	1
Designing	10-04-2022	14-04-2022	0h	100%	4
designing main page	10-04-2022	13-04-2022	0h	100%	3
review and finalizing	13-04-2022	14-04-2022	0h	100%	1
Coding and Implementation front...	16-04-2022	30-04-2022	0h	0%	14
developing basic HTML structure	16-04-2022	23-04-2022	0h	0%	7
developing user interface	23-04-2022	29-04-2022	0h	0%	6
reviewing and finalizing structure	29-04-2022	30-04-2022	0h	0%	1
Back end	03-05-2022	03-06-2022	0h	0%	31
developing basic functioning site	03-05-2022	12-05-2022	0h	0%	9
creating database for user	12-05-2022	17-05-2022	0h	0%	5
integrating the database	17-05-2022	21-05-2022	0h	0%	4
module implementation phase1	21-05-2022	26-05-2022	0h	0%	5
module phase implementation phase2	26-05-2022	01-06-2022	0h	0%	6
reviewing and ready for testing	02-06-2022	03-06-2022	0h	0%	1
	44628.00				



RISK ANALYSIS – SWOT & RMMM

STRENGTH	<ul style="list-style-type: none"> • USER FRIENDLY INTERFACE • RELEVANT AND WIDE RANGE OF CONTENT • LOW OPERATIONAL COST
WEAKNESS	<ul style="list-style-type: none"> • REGULAR UPDATES AND BUG FIXES • POOR CONTENT
OPPORTUNITY	<ul style="list-style-type: none"> • NEW TECHNOLOGY • ATTRACTING A LARGE RANGE OF TARGET AUDIENCE
THREATS	<ul style="list-style-type: none"> • PLAGARISM ISSUES • FRAUDULENT ACTIVITES

RESPONSE	STRATEGY	EXAMPLE
AVOID	RISK AVOIDANCE IS A STRATEGY WHERE THE PROJECT TEAM TAKES ACTION TO REMOVE THE THREAT OF THE RISK OR PROTECT FROM THE IMPACT	EXTENDING THE SCHEDULE, CHANGE THE EXECUTION STRATEGY, REDUCING SCOPE
TRANSFER	RISK TRANSFER INVOLVES SHIFTING OF TRANSFERRING THE RISK THREAT AND IMPACT TO A THIRD PARTY.	EDITING DATA, STORING INFORMATION
MITIGATE	RISK MITIGATION IS A STRATEGY WHERE THE PROJECT TEAM TAKES AN ACTION OR POTENTIAL IMPACT, TO REDUCE THE PROBABILITY OF THE RISK OCCURING	INCREASING TESTING, REDUCE PROCESS COMPLEXITY, STRESS TEST ON THE SERVER
ACCEPT	RISK ACCEPTANCE MEANS THE TEAM ACKNOWLEDGES THE RISK AND ITS POTENTIAL IMPACT BUT DECIDES NOT TO TAKE ANY PRE – EMPTIVE ACTION TO PREVENT IT. IT IS DEALT WITH ONLY IF IT OCCURS	MANAGEMENT SCHEDULE FLOAT, CONTINGENCY RESERVE BUDGET

Result:

Thus, the work breakdown structure with timeline chart and risk table were formulated successfully.



Department of Networking and Communications

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	6
Title of Experiment	Design a System Architecture, Use Case and Class Diagram
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	11/5/22

Mark Split Up

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To Design a System Architecture, Use case and Class Diagram

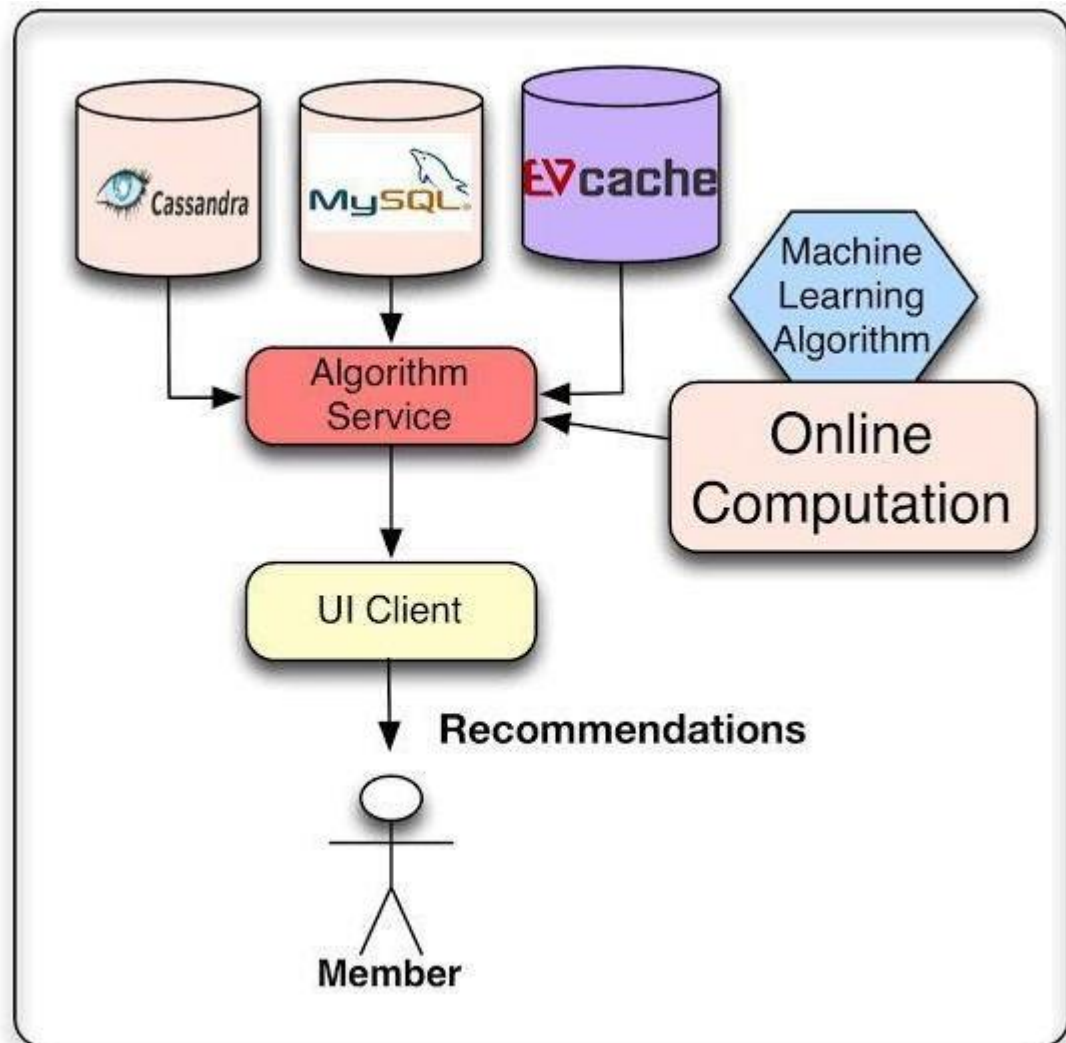
Team Members:

Sl No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep
2	RA2011003010495	Shivam Bavaria	Member
3			Member

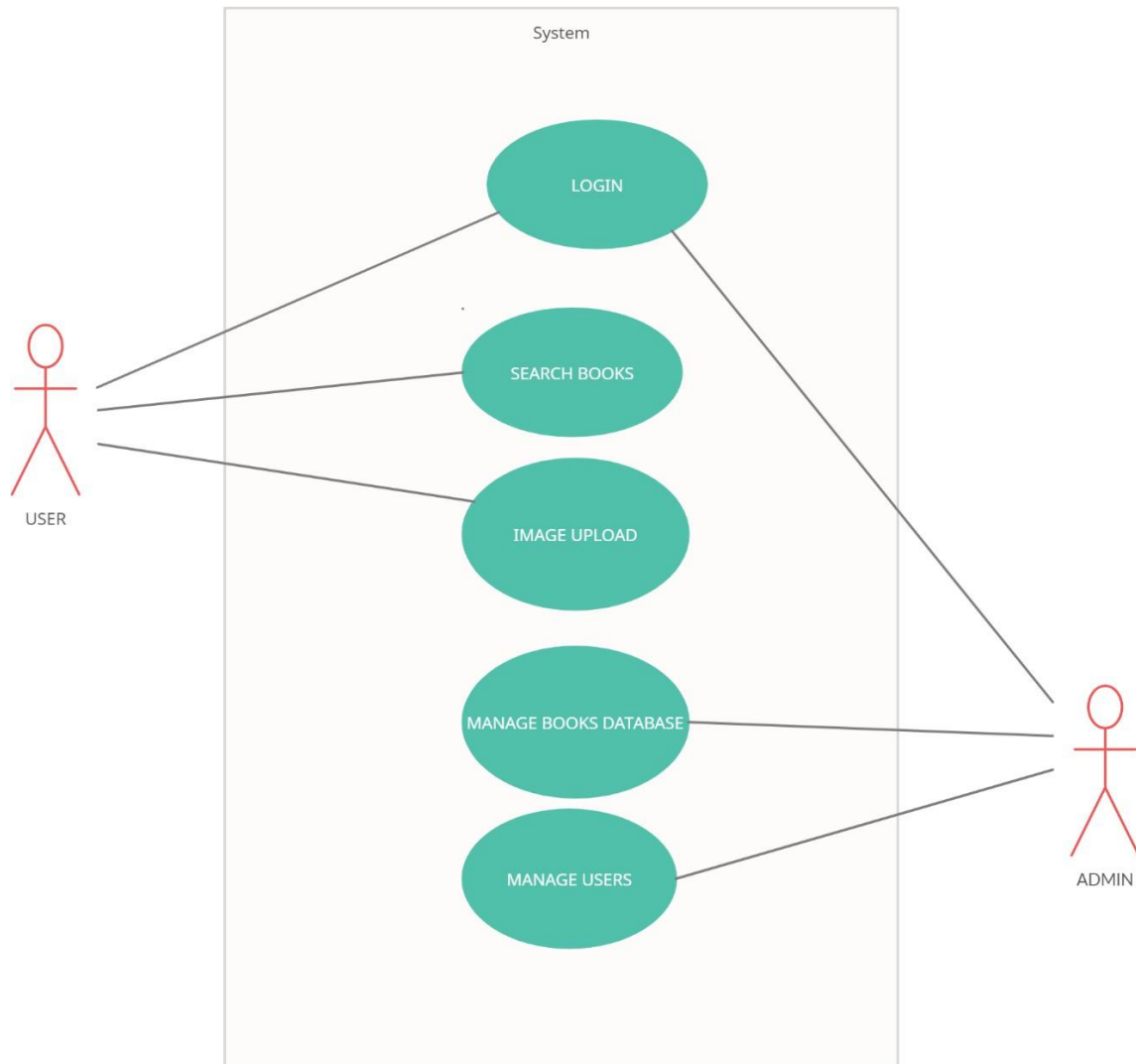
Requirements

<System Architecture, Use Case and Class Diagram>

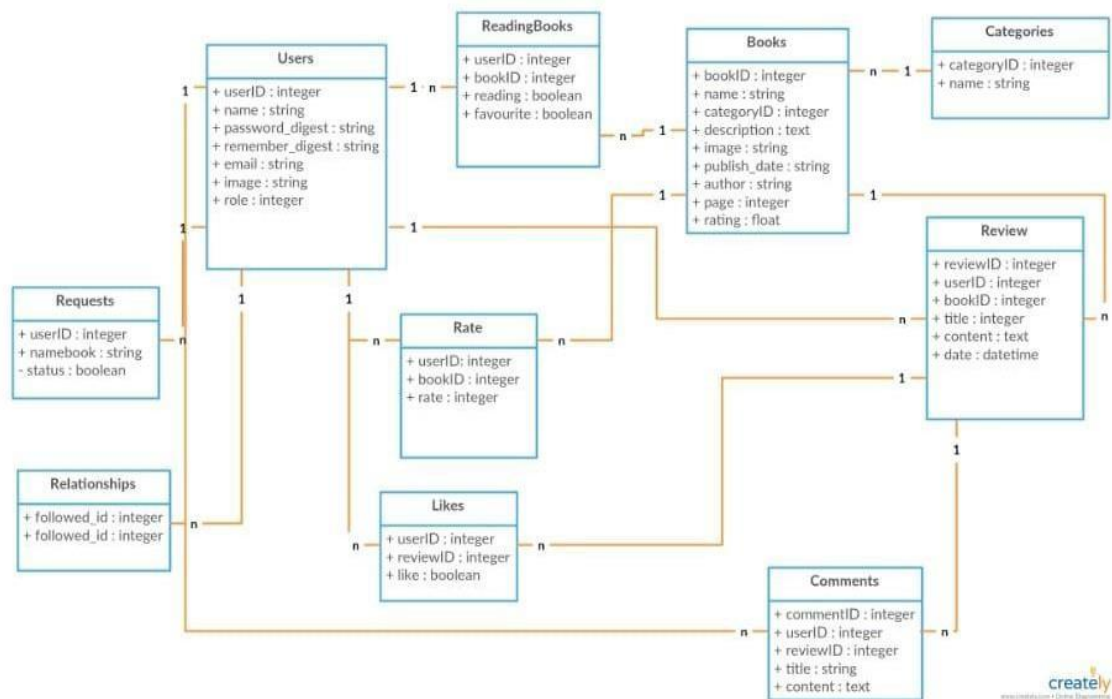
SYSTEM ARCHITECTURE



USE CASE DIAGRAM



CLASS DIAGRAM



Result:

Thus, the system architecture, use case and class diagram created successfully.



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SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	7
Title of Experiment	Design a Entity relationship diagram
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	18.05.2022

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

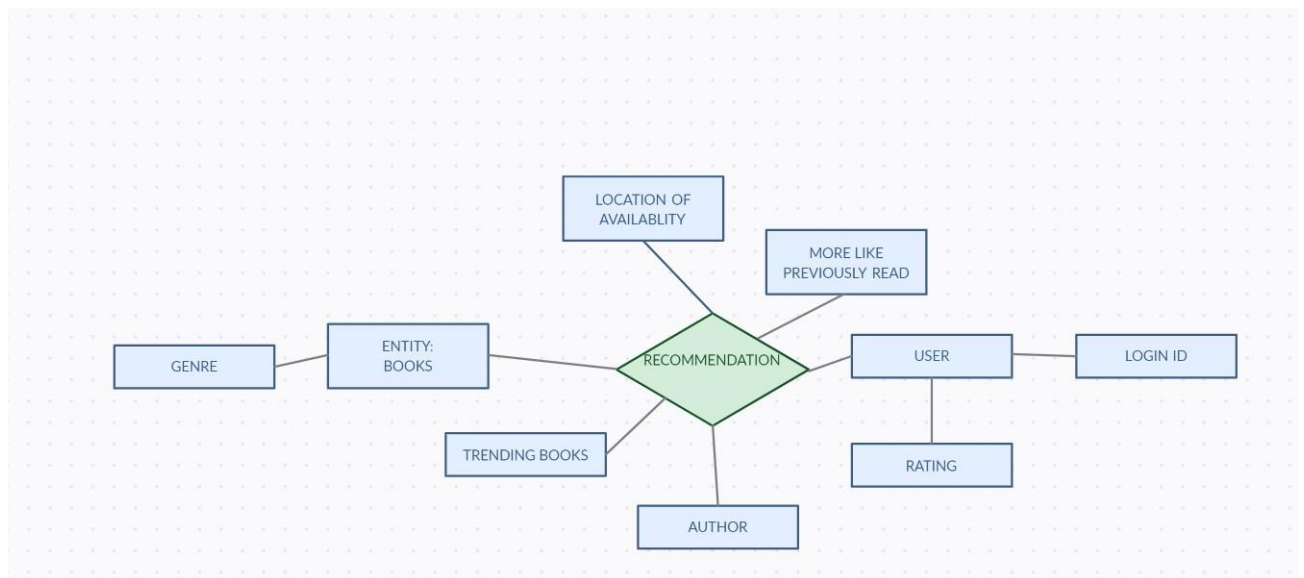
Staff Signature with date

Aim

To create the Entity Relationship Diagram

Team Members:

S No	Register No	Name	Role
1	RA2011003010500	DARSHITA TATED	Rep
2	RA2011003010495	SHIVAM BAVARIA	Member
3			Member



ER DIAGRAM FOR BOOK RECOMMENDATION SYSTEM

Result:

Thus, the entity relationship diagram was created successfully.



School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	8
Title of Experiment	Develop a Data Flow Diagram (Process-Up to Level 1)
Name of the candidate	Darshita Tated
Team members	Shivam Bavaria
Register Number	RA201003010495
Date of Experiment	1.06.2022

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

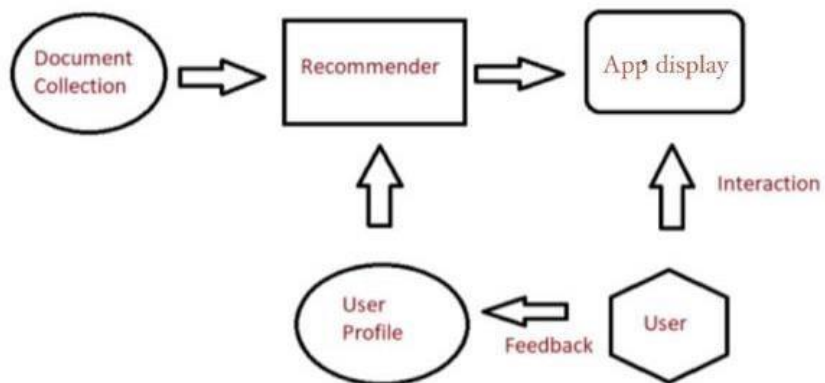
To develop the data flow diagram up to level 1 for the book recommendation system.

Team Members:

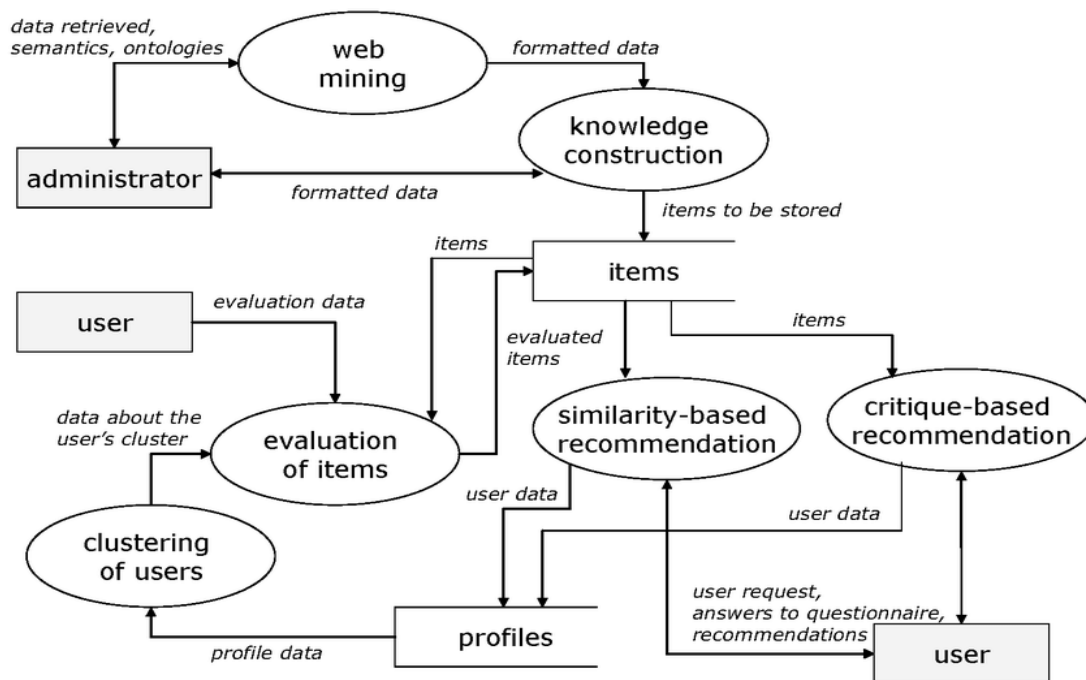
S No	Register No	Name	Role
1	RA2011003010500	DARSHITA TATED	Rep
2	RA2011003010495	SHIVAM BAVARIA	Member
3			Member

DATA FLOW DIAGRAM (DFD):

LEVEL 0:



LEVEL 1:



Result:

Thus, the data flow diagrams have been created for the book recommendation system.



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SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	9
Title of Experiment	Design a Sequence and Collaboration Diagram
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	08.06.2022

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

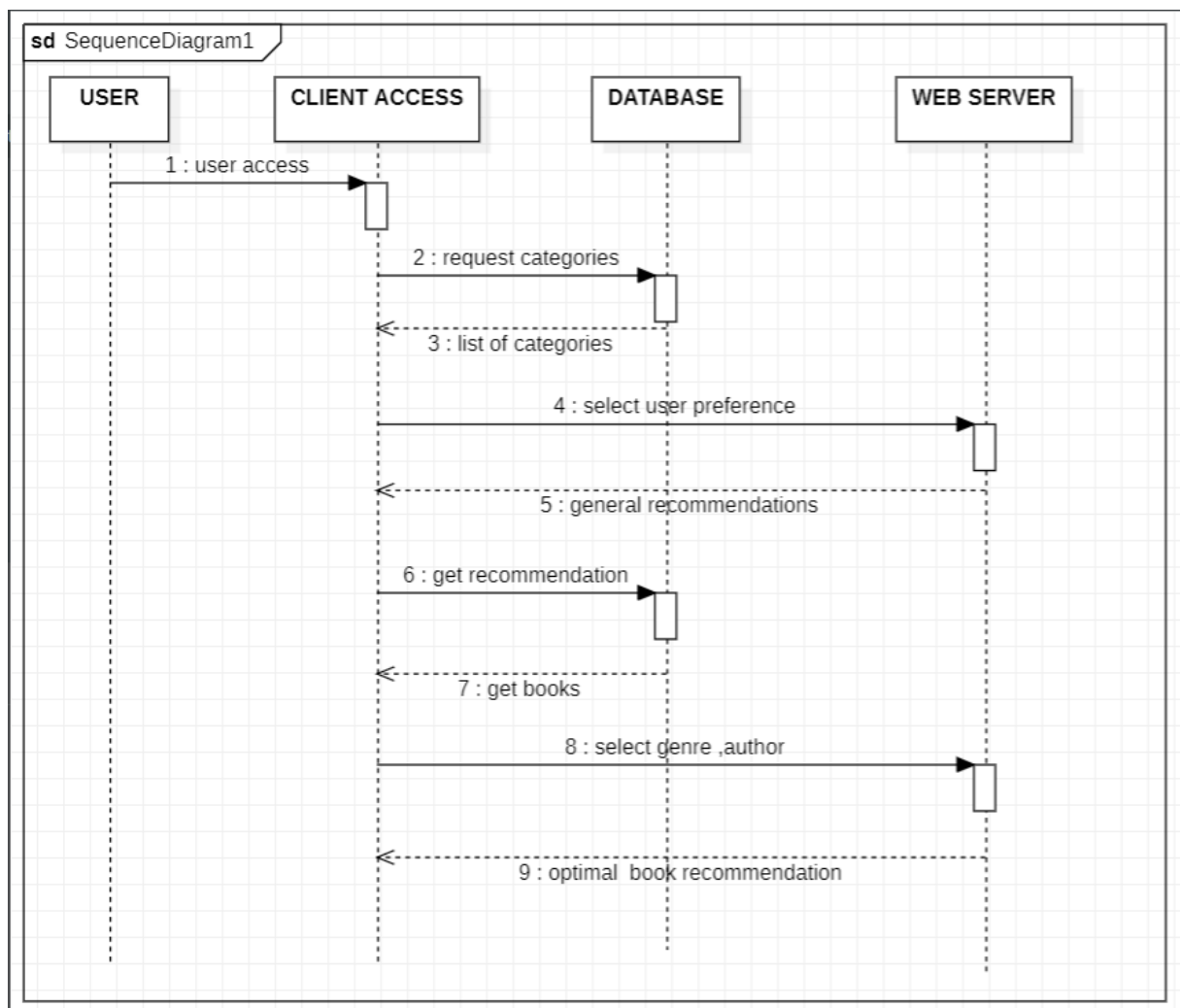
Staff Signature with date

Aim

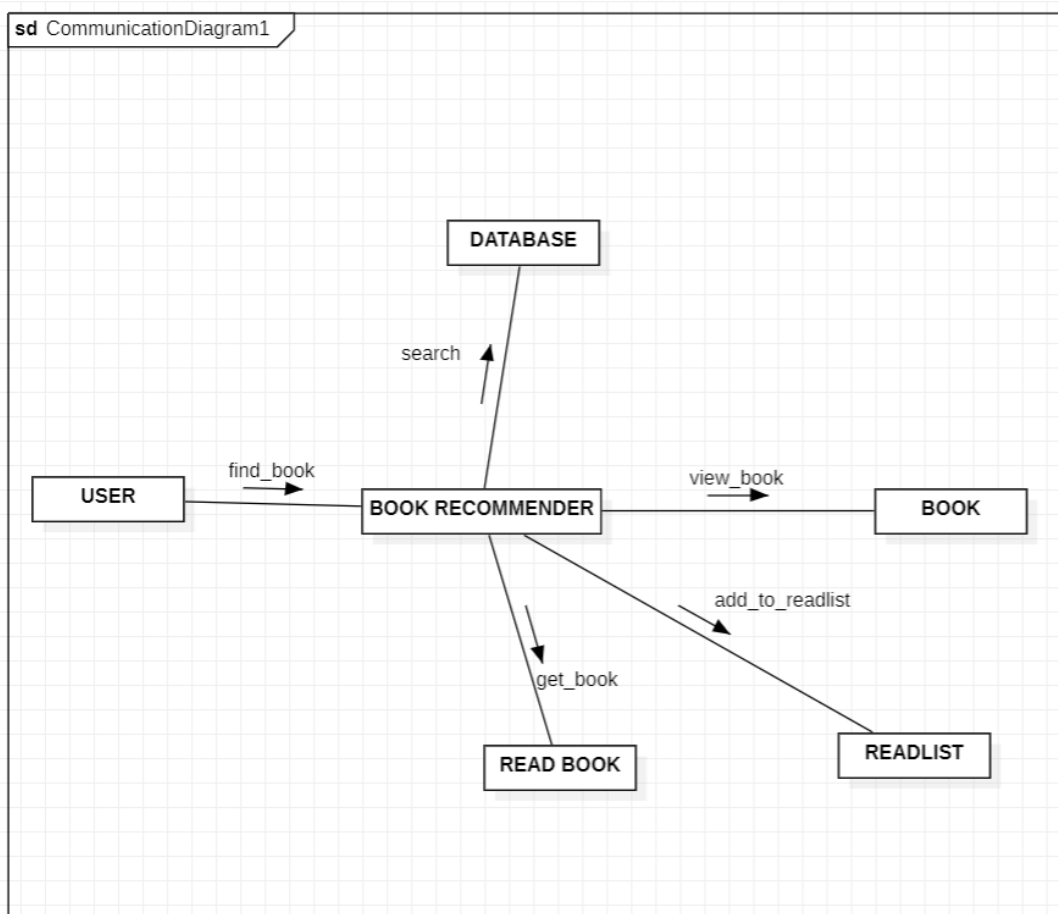
To create the sequence and collaboration diagram for the <project name>

Team Members:

S No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep/Member
2	RA2011003010495	Shivam Bavaria	Member
3			Member



COLLABORATION DIAGRAM:



Result:

Thus, the sequence and collaboration diagrams were created for the book recommendation system



School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	10
Title of Experiment	Develop a Testing Framework/User Interface
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA201003010500
Date of Experiment	

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To develop the testing framework and/or user interface framework for the Book Recommendation System.

Team Members:

S No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep/Member
2	RA2011003010495	Shivam Bavaria	Member
3			Member

EXECUTIVE SUMMARY:

Through BookMate , user can register and create account to search books from wide collection of books which reduce user's searching time as books are arranged and distributed based on categories. Recommendation system provides best rated book to the user . For large number of data, larger servers are needed to run the programs smoothly and efficiently which we cannot implement in our local server. Only highest rated books are recommended as this system does not facilitates hybrid recommendation techniques.

TEST PLAN:

SCOPE OF TESTING:

FUNCTIONAL:

Unit Testing: It was ensured that the individual components of a piece of software at the code level are functional and work as they were designed to.

Integration Testing: After each unit is thoroughly tested, it is integrated with other units to create modules or components that are designed to perform specific tasks or activities. These are then tested as groups through integration testing to ensure whole segments of an application behave as expected.

System Testing: The functionality of the software is tested from end-to-end and is typically conducted by a separate testing team than the development team before the product is pushed into production.

Acceptance Testing: Acceptance testing is the last phase of functional testing and is used to assess whether or not the final piece of software is ready for delivery. It involves ensuring that the product is in compliance with all of the original business criteria and that it meets the end user's needs.

Non-Functional:

Performance Testing: It is a non-functional testing technique used to determine how an application will behave under various conditions. The goal is to test its responsiveness and stability in real user situations.

Security Testing: The goal is to purposefully find loopholes and security risks in the system that could result in unauthorized access to or the loss of information by probing the application for weaknesses.

Usability Testing: Measures an application's ease-of-use from the end-user perspective and is often performed during the system or acceptance testing stages. The goal is to determine whether or not the visible design and aesthetics of an application meet the intended workflow for various processes, such as logging into an application.

Compatibility testing: Is used to gauge how an application or piece of software will work in different environments. It is used to check that the product is compatible with multiple operating systems, platforms and browsers. The goal is to ensure that the software's functionality is consistently supported across any environment the end users are using.

Types of Testing, Methodology, Tools

Category	Methodology	Tools Required
Functional Requirements	Manual	Word Template
Non-Functional Requirements	Usability Testing, System Testing	Code Editor

Result:

Thus, the testing framework/user interface framework has been created for the Book Recommendation System.



School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	11
Title of Experiment	Test Cases
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To develop the test cases manual for the <project name>

Team Members:

S No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep
2	RA2011003010495	Shivam Bavaria	Member
3			Member

Test Case

Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status	Remarks
001	Successful User Registration	Accept all the information of customers on page 1	Username= madan10, First Name=Madan, Last Name=Bhandari, Email Address=mdns@gmail.com, Address=Sallaghari, Bhaktapur, Phone Number=9841168126 Password=madan123 Confirm Password=madan123	A message" You have been Registered!!!" should be displayed	A message" You have been Registered!!!" is displayed	Pass / Failure	success

002	Book Update	Update, Delete or Edit books name	Add, delete or edit books.	Books should be added to the database and displayed to the browser, should be edited and deleted on click.	Books is added to the database, edited and deleted.	Pass / Failure	Success
003	Book Browsing based on Categories	To check if searched book is recommended or not	Specific category is clicked	Only the book belong to clicked category should be displayed.	Only the book belong to clicked category is displayed.	Pass / Failure	Success

Non-Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status	Remarks
101	Customer Login	To check if customer is able to login or not	Username= madan10, Password = madan123	Homepage with logged in status should be displayed	Homepage with logged in status is displayed	Pass / Failure	success
102	Customers getting recommendations	To check if customer is getting recommendation based on their search	Click Get recommendation	Customer should get recommended books based on highest ratings.	Highest rated books are recommended	Pass / Failure	success

Result:

Thus, the test case manual has been created for the Book Recommendation System.



School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	12
Title of Experiment	Manual Test Case Reporting
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Number	RA2011003010500
Date of Experiment	

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

Aim

To prepare the manual test case report for the <project name>

Team Members:

S No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep/Member
2	RA2011003010495	Shivam Bavaria	Member
3			Member

Category	Progress Against Plan	Status
Functional Testing	Green	Completed
Non-Functional Testing	Amber	In-Progress

Functional	Test Case Coverage (%)	Status
Home page	96%	Completed
Search bar	100%	Completed
Post page	92%	Completed

Result:

Thus, the test case report has been created for the Book Recommendation System.



School of Computing

SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	13
Title of Experiment	Provide the details of Architecture Design/Framework/Implementation
Name of the candidate	Darshita Tated
Team Members	Shivam Bavaria
Register Numbers	RA2011003010500
Date of Experiment	

Mark Split Up

S. No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
Total		10	

Staff Signature with date

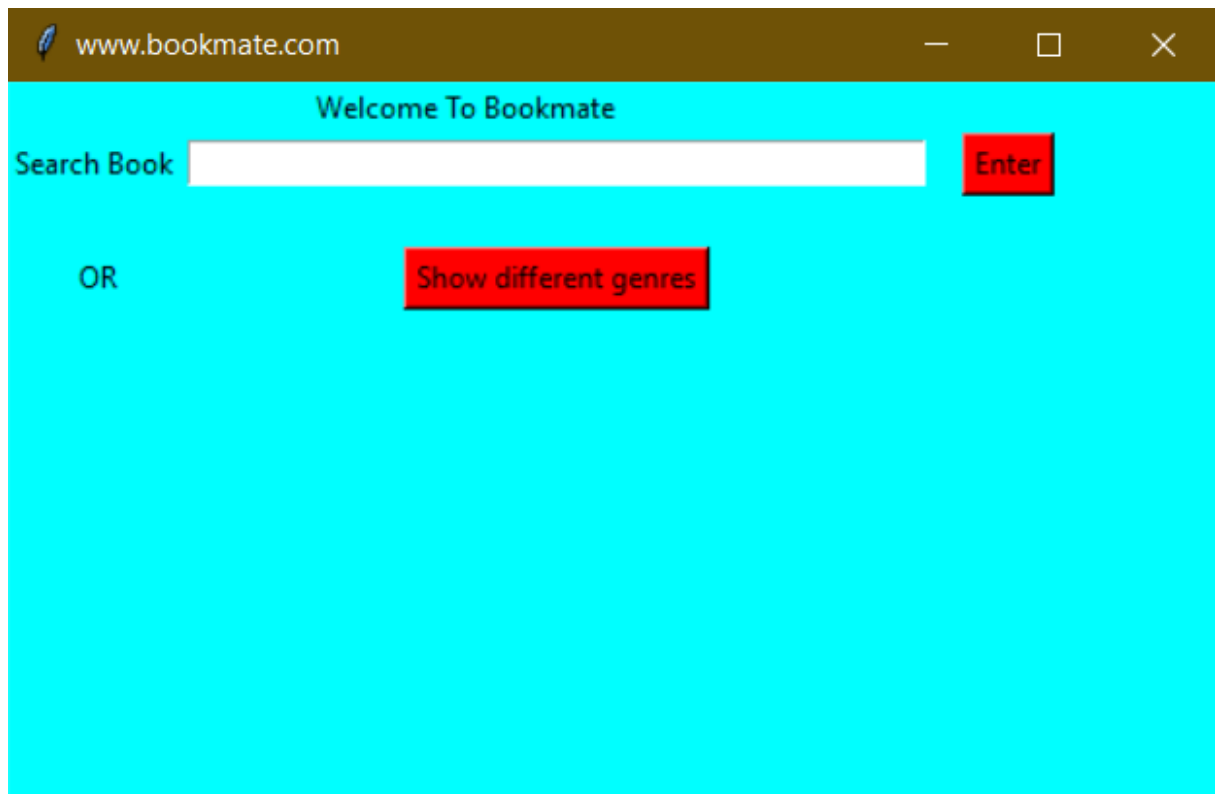
Aim

To provide the details of architectural design/framework/implementation

Team Members:

S No	Register No	Name	Role
1	RA2011003010500	Darshita Tated	Rep/Member
2	RA2011003010495	Shivam Bavaria	Member
3			Member

Module 1



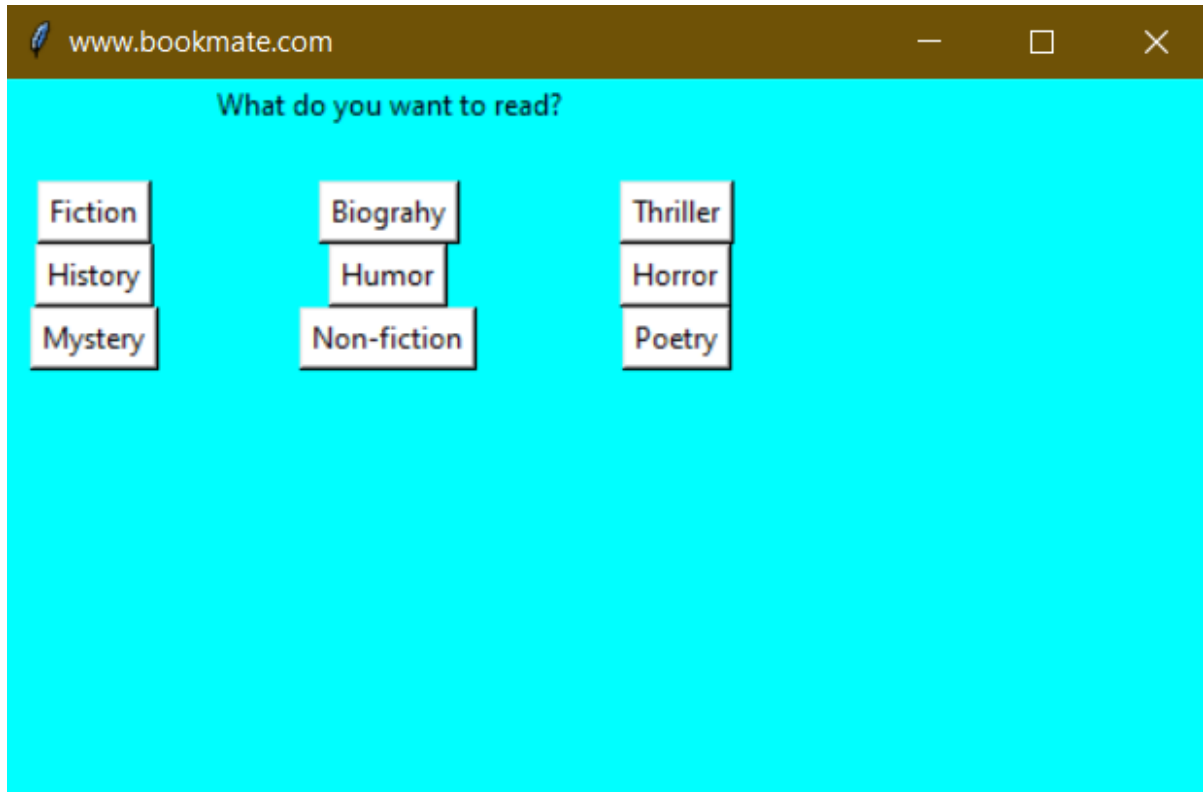
```
import tkinter as tk
from tkinter import *
r=Tk()
r.title('www.bookmate.com')
r.configure(bg="cyan")
r.geometry("500x300")
r.title("www.bookmate.com")
a_495=Label(r,text="Welcome To
Bookmate",bg="cyan").grid(row=0,column=0,columnspan=2)
l1_495=Label(r, text="Search Book ",bg="cyan").grid(row=1,column=0)
t=Entry(r,width=50).grid(row=1,column=1)
```

```

13_495=Label(r, text=" ",bg="cyan").grid(row=1,column=2)
button1 = Button(r, text='Enter',bg="red").grid(row=1,column=3)
14_495=Label(r, text=" ",bg="cyan").grid(row=2,column=0)
12_495=Label(r, text="OR",bg="cyan").grid(row=3,column=0)
button2 = Button(r, text='Show different
genres',bg="red").grid(row=3,column=1)
r.mainloop()

```

Module 2



```

import tkinter as tk
from tkinter import *
r=Tk()
r.title('www.bookmate.com')
r.configure(bg="cyan")
r.geometry("500x300")
r.title("www.bookmate.com")
a_495=Label(r,text="What do you want to
read?",bg="cyan").grid(row=0,column=3)
b_495=Label(r,text=" ",bg="cyan").grid(row=1,column=0)
z_495=Label(r,text=" ",bg="cyan").grid(row=2,column=0)
button1 = Button(r, text='Fiction',bg="white").grid(row=2,column=1)
c_495=Label(r,text=" ",bg="cyan").grid(row=2,column=2)
button2 = Button(r, text='Biograhly',bg="white").grid(row=2,column=3)
d_495=Label(r,text=" ",bg="cyan").grid(row=2,column=4)
button3 = Button(r, text='Thriller',bg="white").grid(row=2,column=5)

x_495=Label(r,text=" ",bg="cyan").grid(row=3,column=0)
button4 = Button(r, text='History',bg="white").grid(row=3,column=1)
m_495=Label(r,text=" ",bg="cyan").grid(row=3,column=2)
button5 = Button(r, text='Humor',bg="white").grid(row=3,column=3)
n_495=Label(r,text=" ",bg="cyan").grid(row=3,column=4)
button6 = Button(r, text='Horror',bg="white").grid(row=3,column=5)

```

```

i_495=Label(r,text=" ",bg="cyan").grid(row=4,column=0)
button7 = Button(r, text='Mystery',bg="white").grid(row=4,column=1)
f_495=Label(r,text=" ",bg="cyan").grid(row=4,column=2)
button8 = Button(r, text='Non-fiction',bg="white").grid(row=4,column=3)
u_495=Label(r,text=" ",bg="cyan").grid(row=4,column=4)
button9 = Button(r, text='Poetry',bg="white").grid(row=4,column=5)

r.mainloop()

```

Module 3



```

import tkinter as tk
from tkinter import *
r=Tk()
r.title('www.bookmate.com')
r.configure(bg="cyan")
r.geometry("500x300")
r.title("www.bookmate.com")

a_495=Label(r,text="BOOKMATE",bg="cyan").grid(row=0,column=2)
b_495=Label(r,text=" ",bg="cyan").grid(row=1,column=0)
z_495=Label(r,text="Horror",bg="cyan").grid(row=2,column=0)
km_495=Label(r,text=" ",bg="cyan").grid(row=2,column=1)
t=Entry(r,width=40).grid(row=2,column=2)

x_495=Label(r,text="1.",bg="cyan").grid(row=3,column=0)
xt_495=Label(r,text=" ",bg="cyan").grid(row=3,column=1)
xc_495=Label(r,text="It",bg="cyan").grid(row=3,column=2)
xj_495=Label(r,text=" ",bg="cyan").grid(row=3,column=3)
xl_495=Label(r,text="Stephen King",bg="cyan").grid(row=3,column=4)
xk_495=Label(r,text=" ",bg="cyan").grid(row=3,column=5)
button5 = Button(r, text='READ',bg="white").grid(row=3,column=6)

```

```

qt_495=Label(r,text=" ",bg="cyan").grid(row=4,column=0)

y_495=Label(r,text="2.",bg="cyan").grid(row=5,column=0)
yt_495=Label(r,text=" ",bg="cyan").grid(row=5,column=1)
yc_495=Label(r,text="Dracula",bg="cyan").grid(row=5,column=2)
yj_495=Label(r,text=" ",bg="cyan").grid(row=5,column=3)
yl_495=Label(r,text="Bram Stoker",bg="cyan").grid(row=5,column=4)
yk_495=Label(r,text=" ",bg="cyan").grid(row=5,column=5)
button6 = Button(r, text='READ',bg="white").grid(row=5,column=6)

wt_495=Label(r,text=" ",bg="cyan").grid(row=6,column=0)

s_495=Label(r,text="3.",bg="cyan").grid(row=7,column=0)
st_495=Label(r,text=" ",bg="cyan").grid(row=7,column=1)
sc_495=Label(r,text="The Haunting of Hill
House",bg="cyan").grid(row=7,column=2)
sj_495=Label(r,text=" ",bg="cyan").grid(row=7,column=3)
sl_495=Label(r,text="Shirley Jackson",bg="cyan").grid(row=7,column=4)
sk_495=Label(r,text=" ",bg="cyan").grid(row=7,column=5)
button7 = Button(r, text='READ',bg="white").grid(row=7,column=6)

ot_495=Label(r,text=" ",bg="cyan").grid(row=8,column=0)

u_495=Label(r,text="4.",bg="cyan").grid(row=9,column=0)
ut_495=Label(r,text=" ",bg="cyan").grid(row=9,column=1)
uc_495=Label(r,text="Something Wicked This Way
Comes",bg="cyan").grid(row=9,column=2)
uj_495=Label(r,text=" ",bg="cyan").grid(row=9,column=3)
ul_495=Label(r,text="Ray Bradbury",bg="cyan").grid(row=9,column=4)
uk_495=Label(r,text=" ",bg="cyan").grid(row=9,column=5)
button8 = Button(r, text='READ',bg="white").grid(row=9,column=6)

pt_495=Label(r,text=" ",bg="cyan").grid(row=10,column=0)

jt_495=Label(r,text=" ",bg="cyan").grid(row=11,column=0)
jh_495=Label(r,text=" ",bg="cyan").grid(row=11,column=1)
jo_495=Label(r,text=" ",bg="cyan").grid(row=11,column=2)
ji_495=Label(r,text=" ",bg="cyan").grid(row=11,column=3)
jp_495=Label(r,text=" ",bg="cyan").grid(row=11,column=4)
je_495=Label(r,text=" ",bg="cyan").grid(row=11,column=5)
button9 = Button(r, text='Next Page',bg="Green").grid(row=11,column=6)

r.mainloop()

```

Result:

Thus, the details of architectural design/framework/implementation along with the screenshots were provided.