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

with specialization in Computer Science and Engineering



SCHOOL OF COMPUTING

COLLEGE OF ENGINEERING AND TECHNOLOGY SRM INSTITUTE OF SCIENCE AND TECHNOLOGY KATTANKULATHUR - 603203

JUNE 2022

ABSTRACT

Book Reselling portal is all about providing a glossy book selling and buying platform for the students across the country. This platform is exclusively designed for the students who are in dire need of textbooks and informatic books during their exam time. Basically, this application serves as a book trading e-commerce platform, where students can sell their books or even purchase it for their own use. This website is equipped with all crucial and necessary features like, safe and secure payment gateway, an easy UI where we can access the required books easily, books can be added in the cart easily by clicking the required buttons which has a smooth function of executing the process and an attractive web design which attracts students and even customers from everywhere. The safety and security of the platform is always monitored by an Admin round the clock who verifies the profiles of all the users. The admin is also in charge of the maintenance of the website. The website is built using Vue is and has cleared various tests and requirements before releasing it for public use. While building the platform, various risks have been identified by the team. Depending on the risks, the team has worked rigorously on testing and backend development after conducting a SWOT Analysis before indulging in the main development of the platform. But before all these were initiated, the team first drew various UML diagrams which gave us a crystal clear picture of what we are going to build. Use-Case, Class Diagram, Collaboration Diagram, Sequence Diagram, etc; were also drawn to understand the project's needs in depth.

TABLE OF CONTENTS

CHAPTER NO	TITLE	PAGE NO
	ABSTRACT	3
	LIST OF FIGURES	5
1	PROBLEM STATEMENT	6
2	STAKEHOLDERS & PROCESS MODELS	9
3	IDENTIFYING REQUIREMENTS	12
4	PROJECT PLAN & EFFORT	19
5	WORK BREAKDOWN STRUCTURE & RISK ANALYSIS	24
6	SYSTEM ARCHITECTURE, USE CASE & CLASS DIAGRAM	31
7	ENTITY RELATIONSHIP DIAGRAM	36
8	DATA FLOW DIAGRAM	39
9	SEQUENCE & COLLABORATION DIAGRAM	42
10	DEVELOPMENT OF TESTING FRAMEWORK/USER INTERFACE	48
11	TEST CASES & REPORTING	52
12	ARCHITECTURE/DESIGN/FRAMEWORK/IMPLE -MENTATION	55
	CODE	57
	CONCLUSION	78
	REFERENCES	79

LIST OF FIGURES

FIGURE NO	TITLE	
1	PROBLEM STATEMENT	6 - 8
2	STAKEHOLDERS & PROCESS MODELS	9 – 11
3	IDENTIFYING REQUIREMENTS	12 – 18
4	PROJECT PLAN & EFFORT	19 – 23
5	WORK BREAKDOWN STRUCTURE & RISK ANALYSIS	24 – 30
6	SYSTEM ARCHITECTURE, USE CASE & CLASS DIAGRAM	31 – 35
7	ENTITY RELATIONSHIP DIAGRAM	36 – 38
8	DATA FLOW DIAGRAM	39 – 41
9	SEQUENCE & COLLABORATION DIAGRAM	42 – 44
10	DEVELOPMENT OF TESTING FRAMEWORK/ USER INTERFACE	45 - 47
11	TEST CASES & REPORTING	48 – 51
12	ARCHITECTURE/DESIGN/FRAMEWORK/IMPLE	52 - 54



Department of Networking and Communications

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	DHARSAN S
Team Members	R SUBRAMANIAN
	AADHITYA R
Register Number	RA2011003010732
Date of Experiment	15-03-2022

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:

S. No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Lead/Rep
2	RA2011003010727	R SUBRAMANIAN	Member
3	RA2011003010730	AADHITYA R	Member

Project Title: BOOK RESELLING PORTAL

Project Description

The online secondhand book buying and selling portal idea is similar to the concept of shopping carts. The books can be purchased through the online mode and also sold. The updates of the books that are available can be mentioned through this application. This will be one of the web application that the book lovers will love to use.

Result

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

ONE PAGE BUSINESS CASE TEMPLATE

DATE	15-03-2022
SUBMITTED BY	DHARSAN S
TITLE / ROLE	BOOK RESELLING PORTAL



THE PROJECT

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

- > To make a common centre for book reselling.
- > To make it easier for customers to buy old books
- > Enables book collectors to purchase limited edition books
- > Connects book venders in the area via online mode.

THE HISTORY

In bullet points, describe the current situation.

- > There is no well-known specific portal as of now for book reselling,
- By making this web application we are introducing a common hub for book reselling.
- Before, the book vendors can only sell their books within their area. With this web application, they can spread their business far and wide.

LIMITATIONS

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

- System may provide inaccurate results if data no entered correctly.
- Some books may not be available or not in stock for purchase in the market.

APPROACH

List what is needed to complete the project.

- To develop a web application for the portal using HTML, CSS, JavaScript, vue.is
- Firebase is used to completely manage the back end and to store the data of the customers.
- Firebase service authentication is used to authenticate the sellers and buyers.

BENEFITS

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

- The system can be used by the user as well as book shopkeepers to expand their customers.
- This system saves both time and travelling cost of customers.
- Managing of inventory of the books for user becomes easier as customers are not visiting rather ordering it online.



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	DHARSAN S
Team Members	SUBRAMANIAN R
	AADHITYA R
Register Number	RA2011003010732, RA2011003010727, RA2011003010730
Date of Experiment	22/03/2022

Mark Split Up

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

Staff Signature with date

Aim

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

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Rep/Member
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

Project Title: BOOK RESELLING PORTAL

Selection of Methodology: Agile Method

Agile software development is a group of software development methods in which requirements and solutions evolve through collaboration between self-organizing, cross-functional teams.

Agile Methodology is a people-focused, result-focused approach to software development that respects our rapidly changing world.

It's flexible, fast, and aims for continuous improvements in quality, to put in simple terms, Agile helps teams in delivering value to customers quickly and effortlessly.

Thus, developing such software management project, Agile methodology brings out the most effective growth out of it.

Stakeholder Name	Activity/ Area /Phase	Interest	Influence	Priority (High/ Medium/ Low)
Owner	To achieve goals and increase profits.	High	High	1
Team members	Maintains and upgrades the application by providing it with time to time updates and fixing problems.	High	High	2
Project Manager	Leads the team members in every aspect of the project. He/She is accountable for the success or failure of the project.	High	High	2
Technical Manager	Responsible for delegating workflow and smooth functioning of the software	High	Medium	2
Shopkeepers	Responsible for distribution of books	Medium	High	2
End Users	Provides feedback and indirectly promotes the project.	Low	Low	3

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	DHARSAN S
Team Members	SUBRAMANIAN R
	AADHITYA R
Register Number	RA2011003010732
Date of Experiment	01/04/2022

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	RA2011003010732	DHARSAN S	Rep/Member
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

Project Title: BOOK RESELLING PORTAL

1. Executive Summary

This project is like an e- bookstore website where books can be bought from the comfort of home through the Internet. An online bookstore is a virtual store on the Internet where customers can browse the catalog and select books of interest. User can select many books and those books stored in cart. At checkout time, the items in the shopping cart will be presented as an order. At that time, more information will be needed to complete the transaction. Usually, the customer will be asked to fill the basic details or select a billing address, a shipping address, a shipping option, and payment information.

2. Project Scope

S.No	Activities In Scope	Activities Out of Scope
1	Developing a user interface	Developing requirements documents
2	Developing a user registration module	User feedback
3	Status tracking system	Maintaining data
4	Repository maintenance	Getting more shopkeepers registered

2.1. In Scope

Activities that will be delivered as part of the project are in scope activities:

- Developing a user interface: Developing a user-friendly web application for the portal
- Developing a user registration module: using firebase authentication as a backend user can register
- Status tracking system: used to track the current status of the order
- Repository maintenance: to keep the application up to date maintenance is required

2.2. Out of Scope

Activities that are not covered in the deliverable and not addressed as part of the outcome,

- Developing requirements documents
- User feedback
- Maintaining data
- Getting more shop keeper registered
- Promoting the application

3. Epics [Major Functions]

<List down the modules of the product / application >

Epic (#)	Epic Description
E1	User registration and details
E2	Ordering products and details
E3	Book database maintenance
E4	Payment mode integration

4. Requirements

4.1. Functional Requirements

Functional Requirements can also be expressed in the form of "user story" which is the smallest unit of work in an agile framework. It's an end goal, not a feature, expressed from the software user's perspective.

Requirement	Requirement	Department	Name of	Status
(#)	Specification		Business User	
FR1	Registration and	Web development	Customer	To Be
	verification for the			developed
	users			
FR2	Multiple payment	Web development	Customer	To Be
	methods for users			developed
FR3	Database management	Database	Developer	To Be
		Administrator		developed
FR4	Book ordering	Web development	Customer	To Be
	system.			Developed
FR5	User Booking Review	Web development	Web	To Be
			development	Developed

4.2. Non-Functional Requirements

Requirement (#)	Category of NFR	Requirement Specification	Department	Name of Business User	Status
NFR1	Performance	All pages should load within 3 seconds	Web development	Customer	To be developed
NFR2	Performance	Search should bring the results less than 8 seconds	Web development	Customer	To be developed
	Availability	Application should be available for 24x7	Maintenance team	Developer	To be developed
	Scalability	Registration Service should scale to serve 1000 request per second over 5 minutes timespan	Web development	Customer	To be developed
	Confidentiality	End-user's data should be secured.	Developer	Developer	To be developed
	Compliance	Terms of Use should be predefined for users to comply with.	Owner and developer	Developer	To be developed
E1NFR2	Security	Product should be properly debugged.	Developer	Developer	To be developed
	Traceability	Tracing of book service should be done.	Web development	Customer	To be developed
	Flexibility	Server upgradation should be done instantly when required	Developer	Developer	To be developed

E1NFR1	Interoperability	allows users to be	Developer	Developer	To be
		connected to			developed
		sellers, with			
		services being			
		delivered in			
		correct			
	Reliability	The bugs should	Testing team	Developer	To be
		be fixed timely			developed
	Rapidity	Review system	Developer	Customer	To be
		and similar			developed
		system quick			
		upgradation			

4.3. Infrastructure Requirements

Requirement	Requirement	Department	Name of Business	Status
(#)	Specification		User / Project	
			Team Member	
IR1	Development Machine	Finance	All member of team	To be
	with 6 GB Ram and 4			done
	Cores			
IR2	Code Repository	Developer team	Dharsan S,	To be
			Subramanian R	done
IR3	Visual studio code	Developer team	Dharsan S,	To be
			Subramanian R	done
			Aadhitya R	
IR4	Firebase	Backend team	Aadhitya R	To be
			Subramanian R	done

4.4. Requirement definition in Agile [Optional ... Use according to methodology chosen by student]

User story is the smallest unit of work in an agile framework. It's an end goal, not a feature, expressed from the software user's perspective.

User Story	Acceptance Criteria	Size of User Story
As a customer, I can load the website within 3 seconds	Whole website should load within 3 seconds. It should be ready to be used further	Big
As a customer, I should be able to order book whenever I want.	24*7 availability of service	Big
Shopkeepers should be registered.	Registration of as many shopkeepers as possible.	Big

Reference

- 1. https://www.tutorialspoint.com/index.htm
- 2. https://www.sanfoundry.com/best-reference-books-software-engineering/

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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	08/04/2022

Mark Split Up

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

Staff Signature with date

Aim

 $To \ \mathsf{Prepare} \ \mathsf{Project} \ \mathsf{Plan} \ \mathsf{based} \ \mathsf{on} \ \mathsf{resources}, \mathsf{Find} \ \mathsf{Job}$ $\mathsf{roles} \ \mathsf{and} \ \mathsf{responsibilities}$

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Lead
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

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
Integration Management	Governance Framework Project Team Structure Roles & Responsibilities of Team Change Management (Change Control, Issue Management) Project Closure
Scope Management	Scope Statement Requirement Management (Gathering, Control, Assumption, Constraint Stakeholder) Define Deliverable Requirement Change Control Activities and Sub-Tasks
Schedule Management	Define Milestones Schedule Control
Cost Management	Estimate Effort Assign Team Budget Control
Quality Management	Quality Assurance: Quality assurance will be managed including governance, roles and responsibilities, tools and techniques and reporting Quality Control: Specify the mechanisms to be used to measure and control the quality of the work products
Resource Management	Estimate and Manage the need People: People & Skills Required Finance: Budget Required Physical: Facilities, IT Infrastructure
Stakeholder	Identifying, Analyzing, Engaging Stakeholders
Communication Management	Determine communication requirements, roles and responsibilities, tools and techniques. [Type of Communication, Schedule, Mechanism Recipient]
Risk Management	Identifying, analysing, and prioritizing project risks
Procurement Management	Adhering to organization procurement process

2. Estimation

2.1. Effort and Cost Estimation

Activity Description	Sub-Task Description Effort (in		•	Cost in
			hours)	INR
Design the user screen	E1R1A1T1	To design a desktop	30	24000
		level website using		
		HTML CSS JAVA SCRIPT		
	E1R1A1T2	To design the website	15	12000
		using vue js		
Data base creation	E1R1A2T1	To create a database	15	12000
		using a database		
		management system		

Effort (hr)	Cost (INR)		
60	48000		

2.2. Infrastructure/Resource Cost [CapEx]

< One-time Infra requirements >

Infrastructure	structure Qty		Cost per item	
Requirement				
Website domain	1	800/per annum	800	
Advertising	Based on size of campaign	25000	25000	
Laptops	4	50000	200000	
Workspace	1	15000	15000	

2.3 Maintenance and Support Cost [OpEx]

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

3. Project Team Formation

3.1. Identification Team members

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

3.2. Responsibility Assignment Matrix

RACI Matrix	Team Members				
Activity	Name (BA)			Key Business User	
		0.41	Manager)		
User Requirement	Α	C/I	1	R	
Documentation					
Database		A	R		
management					
Marketing	Α			1	
Security		Α	R	С	
Frontend		Α	R		
development					

Α	Accountable
R	Responsible
С	Consult
1	Inform

Reference

- 1. https://www.pmi.org/
- 2. https://www.projectmanagement.com/
- $\begin{array}{ll} \textbf{3.} & \underline{\text{https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/ti-it/ervcpgpm-dsfvpmpt-eng.html} \\ \end{array}$

RESULT:

Project plan prepared based on the plan, resources, job roles and responsibilities.



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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	19/04/2022

Mark Split Up

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

Staff Signature with date

Aim

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

Team Members:

Sl No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Rep
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

Table of Contents

1.	Exec	cutive Summary	26
2.	WBS	S With Project Schedule	26
3.	Risk	Identification	27
3	3.1.	List (Describe) Register	27
3	3.2.	Managing Risk	28
Ref	erend	ce :	30

1. Executive Summary

If we are to mention the WBS of the project, first we will layout the milestone of this project. This project was started in March 2022 and will be completed in July 2022. As for the WBS, three members are working on this project and the workload is distributed evenly. All the risks and uncertainties are well analysed by the team before planning and executing the project. Risk management is the process of analysing exposure to risk and determining how to best handle such exposure. And this process will follow sternly till the final product of the project. Our team undertakes a best practices approach and focuses on understanding the key risks and managing them within acceptable levels. Hopefully, this will contribute largely to the success of the project.

2. WBS With Project Schedule

< Assign team members for sub-tasks based on RACI and skill requirement>

Module (#)	Activity (#)	Sub-Task(#)	Assignee(s)	Planned Start Date	Planned End Date	Actual Start Date	Actual End Date	Status
Development (M1)	Backend	User details	Subramanian R	15/03/2 022	23/03/20 22	10/04 /2022	15/04 /2022	DONE
		Book details	Subramanian R	23/03/2 022	30/03/20 22	15/04 /2022	20/04 /2022	DONE
		Information encryption	Aadhitya R	21/03/2 022	30/03/20 22	10/04 /2022	16/04 /2022	DONE
	Frontend	User interface	Dharsan s	22/03/2 022	10/04/20 22	15/04 /2022	20/04 /2022	DONE
		Home page interface	Dharsan s	10/04/2 022	23/04/20 22	Yet to start	-	Open
		Personal details	Dharsan s	23/04/2 022	01/05/20	Yet to start	-	Open
		Book details	Aadhitya R	23/04/2 022	01/05/20 22	Yet to start	-	Open
Integration(M 2)			Aadhitya R	02/05/2 022	12/05/20 22	Yet to start	-	
Testing (M3)	Backend	User profile	Subramanian R	13/05/2 022	20/05/20 22	Yet to start	-	Open
		Bugs	Dharsan s	20/05/2 022	25/05/20 22	Yet to start	-	Open

	Frontend	Book details	Subramanian	20/05/2	30/05/20	Yet to	-	
			R	022	22	start		
		Bugs	Dharsan s	20/05/2	30/05/20	Yet to	-	Open
				022	22	start		
DEPLOYMENT(Deployment	Deploying	Dharsan S	30/05/2	04/06/20	Yet to	-	Open
M4)	of the site	the site in	Subramanian	022	22	start		
		the cloud	R					

3. Risk Identification

SWOT ANALYSIS

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
 Has strong demand and feasibility among students and staff members 	 Unknown market opportunities 	 Can expect a huge demand between users 	Competitors may show up in the future
We are able to respond quick and give good customer care	 Unpredictable problems may show up in future Restricted Budget 	 Unique and innovative idea in the market There is an increase in market need 	Unexplored marketTechnical bugs

3.1. List (Describe) Register

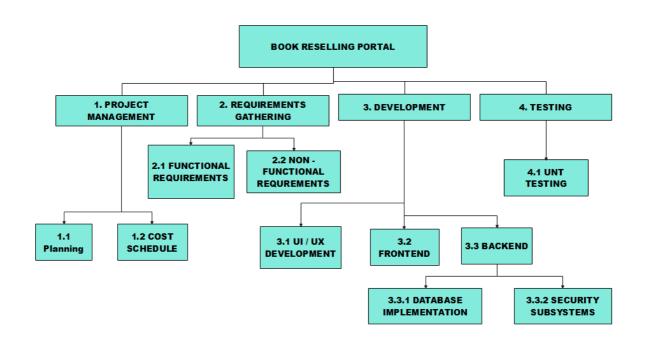
Risk ID (#)	Risk Description	Impact Description
R01	Server down	If the website goes down for a while for
		purpose of updating our servers, we have
		chance of losing customers.
R02	Unsecure Payment gateway	In this situation large sums of money from
		our users can be stolen by hackers and
		scammers. This would lead to a major
		disaster for the company.
R03	Incorrect book details	This may lead to users missing their commute
		giving the company a bad name and creating
		a major inconvenience for the user.

3.2. Managing Risk

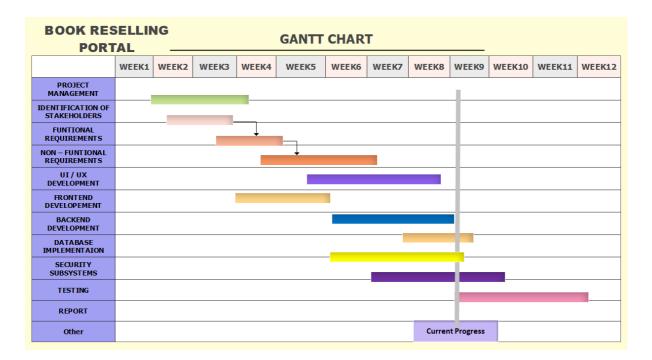
<Risk should be categorized So action can be derived to address these risks could become an issue in future>

Risk ID (#)	Status [Open / Closed]	Risk Appetite [Accept/ Mitigate/ Transfer/Avoid]	Action	Action Owner	Target Date	Remarks
R01	Closed	Accept	Look into the problems and take precautions	Team member	07/07/20 22	1
R02	Closed	Avoid/mitigate	Training the developers skilfully without any further obstacles/shortcomings	Team leader	12/07/20 22	-
R03	Closed	Accept	Communicate the fix and resolve the issue	Team member	18/07/20 22	-

WORK BREAKDOWN STRUCTURE



- **0.0 BOOK RESELLING PORTAL**
- **1.0 PROJECT MANAGEMENT**
 - 1.1 PLANNING
 - 1.2 COST SCHEDULE
- 2.0 REQUIREMENTS GATHERING
 - **2.1 FUNTIONAL REQUIREMENTS**
 - 2.2 NON FUNTIONAL REQUIREMENTS
- 3.0 DEVELOPMENT
 - 3.1 UI / UX DEVELOPMENT
 - **3.2 FRONTEND**
 - **3.3 BACKEND**
 - 3.3.1 DATABASE IMPLEMENTAION
 - 3.3.2 SECURITY SUBSYSTEMS
- **4.0 TESTING**
 - **4.1 UNIT TESTING**



Reference

- 1. https://www.pmi.org/
- 2. https://www.projectmanagement.com/

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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	27-04-2022

Mark Split Up

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

Staff Signature with date

Aim

To Design a System Architecture, Use case and Class Diagram

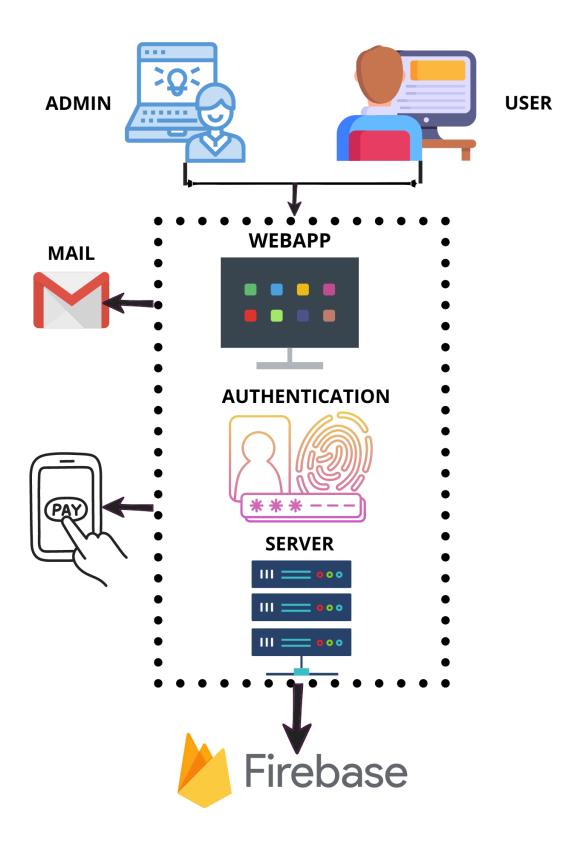
Team Members:

Sl No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Rep
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

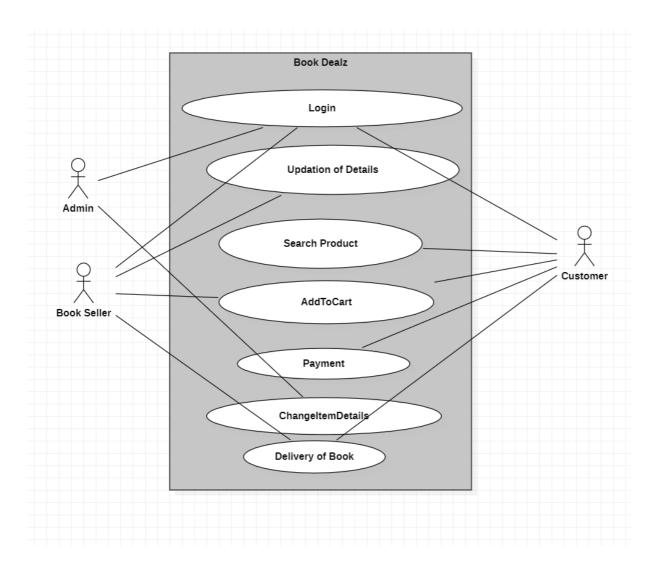
Result:

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

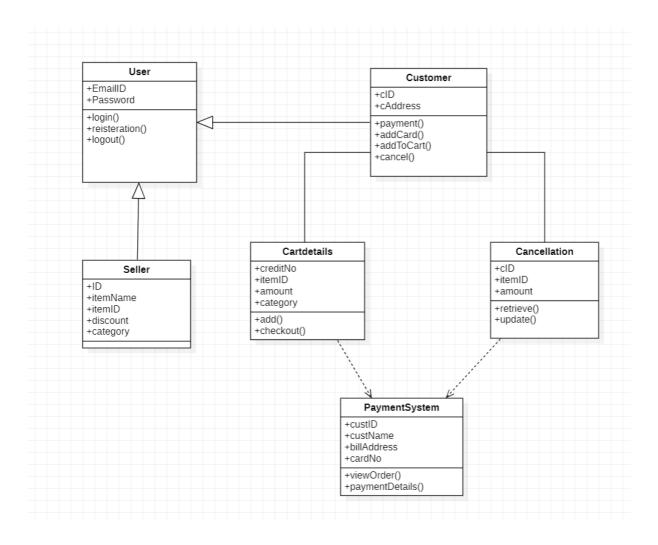
SYSTEM ARCHITECTURE



USE CASE DIAGRAM



CLASS DIAGRAM





School of Computing

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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	27/04/2022

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

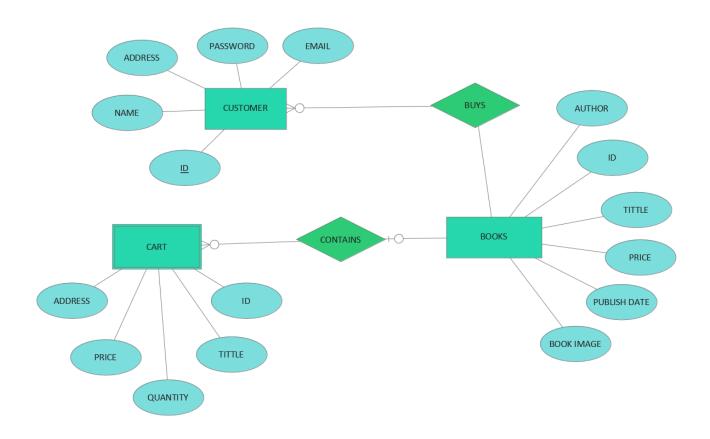
Team Members:

Register No	Name	Role
RA2011003010732	DHARSAN S	Rep
RA2011003010727	SUBRAMANIAN R	Member
RA2011003010730	AADHITYA R	Member
	RA2011003010732 RA2011003010727	RA2011003010732 DHARSAN S RA2011003010727 SUBRAMANIAN R

Result:

Thus, the entity relationship diagram was created successfully.

ER DIAGRAM:





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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	18/05/2022

Mark Split Up

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

To develop the data flow diagram up to level 1 for the project name>

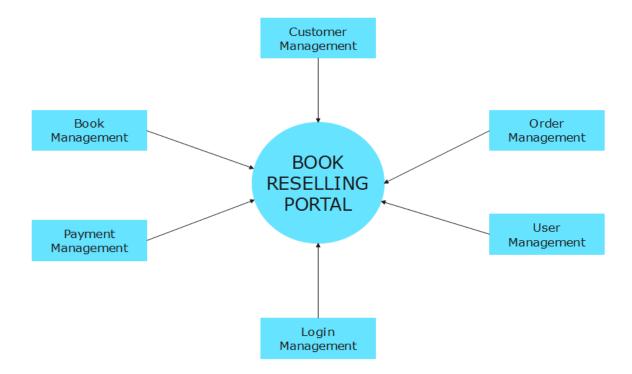
Team Members:

S No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Rep
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

Result:

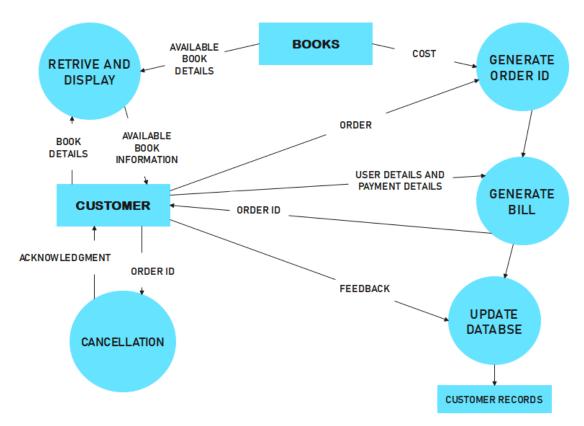
Thus, the data flow diagrams have been created for the project name>.

DATA FLOW DIAGRAM Level 0



ZERO LEVEL DFD - BOOK RESELLING PORTAL

DATA FLOW DIAGRAM Level 1



FIRST LEVEL DFD - BOOK RESELLING PORTAL



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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	18/05/2022

Mark Split Up

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

To create the sequence and collaboration diagram for the cproject name>

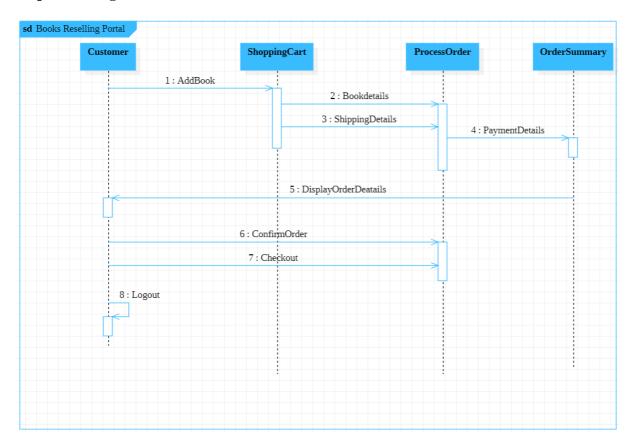
Team Members:

S No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Rep/Member
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

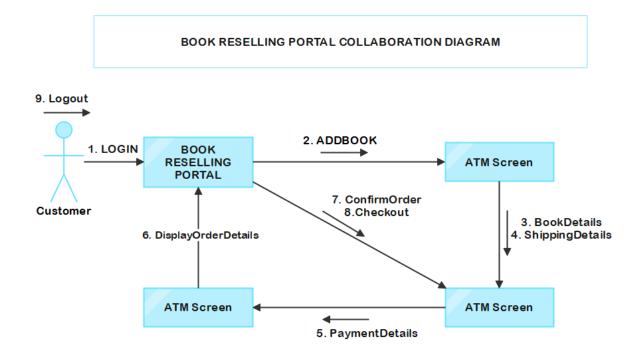
Result:

Thus, the sequence and collaboration diagrams were created for the Book reselling portal.

Sequence Diagram:



Collaboration Diagram:





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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	22/05/2022

Mark Split Up

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

To develop the testing framework and/or user interface framework for the project name>

Team Members:

S No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Rep/Member
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

Test Plan

The testing process will be done in 3 Major steps. First it begins with the Manual testing, then Agile testing and finally we finish with the System testing.

Scope of Testing

Functional: All Modules under the Functional requirements have been completed successfully and have reached the Testing face. Testing needs to be done manually as most features are basic and non-complex and can be finished quickly under Manual Testing

Non-Functional: All Modules under the Non-Functional requirements have been completed successfully and have reached the Testing face. Testing needs to be done manually as most features are basic and non-complex and can be finished quickly under Manual Testing

Functional Requirements:

Requirements (#)	Requirement specification	Department	Name of business user	Status
E1FR1	Product page	Admin	-	Closed

Non-Functional Requirements:

Requirements (#)	Category of NFR	Requirement specification	Department	Name of business user	Status
NFR1	Performance	Testing the load time of the page	Backend team	-	Closed

Types of Testing, Methodology, Tools

Category	Methodology	Tools Required
Functional Requirements	Manual	Manually written test cases, Debugger
Non-Functional Requirements	Manual	Manually written test cases, Debugger

Result:

Thus, the testing framework/user interface framework has been created for the Book reselling portal.



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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	25/05/2022

Mark Split Up

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

To develop the test cases manual for the project name>

Team Members:

Register No	Name	Role
RA2011003010732	DHARSAN S	Rep
RA2011003010727	SUBRAMANIAN R	Member
RA2011003010730	AADHITYA R	Member
	RA2011003010732 RA2011003010727	RA2011003010732 DHARSAN S RA2011003010727 SUBRAMANIAN R

Result:

Thus, the test case manual has been created for the project name>.

Test Case

Functional Test Cases

Tes t ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcom e	Status	Remark s
1	Registratio n and login test cases	A user enters registration details in the correct format	 User clicks on User Register Enter the basic details Click Register button 	registratio n or login is successful.	registrati on or login is successf ul.	Pass	success
2	Check if all the pages have proper products	The product should be in proper category	 Go to home page Click categories 	User should able to see all the categories	User should able to see all the categorie s	Pass	success
3	To Check the product's Details	The product should be correct	1. Click on product 2. Check whether the product details are correct	Product details should be correct	Product image visibility is not good	failure	fail

Non-Functional Test Cases

Tes t ID (#)	Test Scenario	Test Case	Executio n Steps	Expecte d Outcom e	Actual Outcom e	Status	Remark s
1.	Performance testing	To test the site if it loads within 5s.	1.open the website 2.switch between pages	Loads within 2s	Loads in 10s	Failure	Need to improve the loading time
2.	Usability accessibility	To test ease of the users	1.open the site 2.check the site is ease of use	The site should easy to use for the non-technical users also	The site is easy to use	pass	Success
3.	Scalability	To test the scalabil ity of the site	1.increas e the number of users	Site should run without crashing	Crashes	Failure	Need to modify the database relations hip



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	DHARSAN S
Team Members	SUBRAMANIAN R, AADHITYA R
Register Number	RA2011003010732
Date of Experiment	01/06/2022

Mark Split Up

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

To prepare the manual test case report for the Book Reselling portal

Team Members:

S No	Register No	Name	Role
1	RA2011003010732	DHARSAN S	Rep/Member
2	RA2011003010727	SUBRAMANIAN R	Member
3	RA2011003010730	AADHITYA R	Member

Summarizing the current status of the Testing

The entire source code has been tested to identify the bugs. We ran all the test cases to make sure all the test cases were passed and running correctly. We created a log of the details of failed cases. After that we started with the regression testing which was completed successfully. After a bug fix, we test the complete product again because after a bug fix it could create another bug on some other part of the bug as we will be testing with the same test cases.

Present obstacles

- The storage of the application must be kept minimal.
- Optimization of communication time between database and the application
- Budget constraints for the completion of the project
- Stakeholders can help the team by sharing their experience and perspective to the project.
- Stakeholders can chip in with better resources for the team to achieve a better result which would also reduce the workload.

Category	Test	Progress Against Plan	Status
Functional Testing	Home Page	Green	Completed
	Search And	Green	Completed
	Navigation		
	Add To Cart	Green	Completed
Non-Functional	Performance Testing	Green	Completed
Testing	esting Load Testing		Completed
	Usability Testing	Green	Completed

Functional	Test Case Coverage (%)	Status
Module 1(Front-End)	100%	Completed
Module 2(User interface)	100%	Completed
Module 3 (Back-End)	50%	Not – Completed
Module 4 (Database)	40%	Not - Completed

Result:

Thus, the test case report has been created for the Book reselling portal.



SRM IST, Kattankulathur – 603 203

Course Code: 18CSC206J

Course Name: Software Engineering and Project Management

Experiment No	13				
Title of Experiment	Provide Design/Fran	the nework/Imple	details mentation	of	Architecture
Name of the candidate	DHARSAN	N S			
Team Members	SUBRAMA	ANIAN R, A	ADHITYA R		
Register Numbers	RA201100	3010732			
Date of Experiment	01/06/2022	2			

Mark Split Up

Description	Maximum Mark	Mark Obtained
Exercise	5	
Viva	5	
Total	10	
	/iva	Viva 5

To provide the details of architectural design/framework/implementation

Team Members:

Register No	Name	Role
RA2011003010732	DHARSAN S	Rep/Member
RA2011003010727	SUBRAMANIAN R	Member
RA2011003010730	AADHITYA R	Member
	RA2011003010732 RA2011003010727	RA2011003010732 DHARSAN S RA2011003010727 SUBRAMANIAN R

< Provide the details of architectural design/framework/implementation with screenshots - Minimum three modules to be completed (excluding login page) use of software on their choice to implement>

Full documentation with the coding

Result:

CODE:

Header.vue

```
<template>
 <div class="container-flex">
  <nav class="navbar navbar-light">
   <div class="dropdown d-xl-none d-lg-none mr-auto">
                 src="https://png.icons8.com/windows/32/00000/menu.png"
                                                                                  data-
toggle="dropdown" data-target="#navd" aria-haspopup="true" aria-expanded="false">
    <div class="dropdown-menu hb" aria-labelledby="navd">
     <router-link class="dropdown-item" to="/">Home</router-link>
     <ru><router-link class="dropdown-item" to="/products">Products</router-link>
     <router-link class="dropdown-item" to="/contact">Contact us</router-link>
    </div>
   </div>
   <!--Logo-->
   <a class="navbar-brand py-0 pl-5">
     <img src="@/assets/fi-logo.svg" width="50" height="50">
   </a>
   <!--Header navigation-->
   <span class="navbar-item bc d-none d-xl-block d-lg-block py-0">
    <router-link class="pl-5" to="/">Home</router-link>
    <router-link class="px-5" to="/products">Products</router-link>
    <router-link to="/contact">Contact us</router-link>
   </span>
   <div class="searc d-none d-xl-block d-lg-block pr-3">
     <input type="search" class="search">
    </div>
    <div class="user">
     <h5 style="cursor: pointer" data-toggle="modal" data-target="#userModal">Sign
In < /h5 >
    </div>
    <div class="bag" @click="openCart">
      <img class="pb-1" src="@/assets/cart.svg">
      <span class="mb-3" v-if="this.bagItemscount > 0">{{ bagItemscount }}</span>
    </div>
  </nav>
  <!--User Modal-->
            class="modal
                               fade"
                                                                role="dialog"
  <div
                                          id="userModal"
                                                                                   aria-
labelledby="exampleModalLabel" aria-hidden="true">
   <div class="modal-dialog" role="document">
    <div class="modal-content">
     <div class="modal-body">
      <button type="button" class="close" data-dismiss="modal" style="outline-style:none;"
aria-label="Close">
        <span>x</span>
```

```
</button>
       <form class="px-3 py-2">
        <div class="form-group">
         <label for="exampleDropdownFormEmail1">Email address</label>
         <input type="email" class="form-control" placeholder="email@example.com">
        </div>
        <div class="form-group">
         <label for="exampleDropdownFormPassword1">Password</label>
         <input type="password" class="form-control" placeholder="Password">
        </div>
        <div class="form-check">
         <input type="checkbox" class="form-check-input">
         <label class="form-check-label" for="dropdownCheck">
           Remember me
          </label>
        </div>
        <button type="submit" class="btn-xl btn-success mt-3">Sign in</button>
       </form>
     </div>
     <div class="modal-footer">
       <a class="dropdown-item" href="#">Forgot password?</a>
       <a class="dropdown-item text-right" href="#">Sign up</a>
     </div>
    </div>
   </div>
  </div>
  <!--Cart Component-->
  <Cart ref="cartMove" />
  </div>
</template>
<script>
import Cart from '@/Components/Cart.vue'
export default {
 name: 'Header',
 components: {
  Cart
 },
 computed: {
  bagItemscount() {
   return this.$store.getters.itemsNumber
  }
 },
 methods: {
  openCart() {
   this.$refs.cartMove.cartON()
  }
 }
}
```

```
</script>
<style>
nav {
 z-index:100;
.navbar {
 border-bottom: 1px solid #DCDCDC;
 background-color: #F8F8F8;
.close {
 position:relative;
 bottom:20px;
 left:10px;
 font-size: 31px;
 color: #000;
.navbar-item.bc a {
 font-size: 17px;
 text-decoration: none;
 color: black;
}
.navbar-item.bc a:hover, .navbar-item.bc a:active {
 color: #FFD700;
.btn-sm{
 border-radius: 0;
.search {
 outline: none;
 border: 1px #F8F8F8;
 background: #ededed url('../assets/search.png') no-repeat 5px center;
 padding: 5px 8px 0px 26px;
 width: 10px;
 -webkit-border-radius: 10em;
 -moz-border-radius: 10em;
 border-radius: 10em;
 -webkit-transition: all .5s;
 -moz-transition: all .5s;
 transition: all .5s;
 margin-right: 10px;
.search:focus {
 width: 160px;
 border: solid 1px #ccc;
 background-color: #fff;
```

```
border-color: #98ccfd;
 -webkit-box-shadow: 0 0 5px rgba(109, 207, 246, .5);
 -moz-box-shadow: 0 0 5px rgba(109, 207, 246, .5);
 box-shadow: 0 0 5px rgba(109, 207, 246, .5);
 backface-visibility: hidden;
 perspective: 1000;
form .btn-xl.btn-success.mt-3 {
 position: relative;
 -webkit-transition-duration: 100ms;
 transition-duration: 100ms;
 width: 100%;
 height: 50px;
 font-size: 20px;
 outline:none;
 cursor: pointer;
 box-shadow: 0 26px 38px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19);
.bag span {
  background-color: #6394F8;
  border-radius: 10px;
  color: white;
  position: absolute;
  font-size: 15px;
  line-height: 1;
  padding: 2px 3px 3px 3px;
  text-align: center;
  vertical-align: middle;
  white-space: nowrap;
  margin-left: -9px;
  bottom: 1rem;
}
.bag img {
 cursor: pointer;
 width: 30px;
 height: auto;
}
.user{
 margin-right: 20px;
 padding-top: 10px;
.user:hover {
 text-decoration: underline;
```

Footer.vue

```
<template>
 <footer class="footer_area">
  <div class="container">
   <div class="row justify-content-between">
    <div class="col-3 col-xl-2 col-lg-3 col-md-3 col-sm-3">
     <div class="footer-widget">
      <div class="footer-title">Navigate</div>
      <router-link to="/">About Us</router-link>
       <router-link to="/">Blog</router-link>
       <router-link to="/">Contact Us</router-link>
       <router-link to="/">Sitemap</router-link>
      </div>
    </div>
    <div class="col-3 col-xl-2 col-lg-3 col-md-3 col-sm-3">
     <div class="footer-widget">
      <div class="footer-title">Collection</div>
      <router-link to="/products">New arrivals/router-link>
       <router-link to="/products">Featured</router-link>
       <router-link to="/products">Catalog</router-link>
       <router-link to="/products">Brands</router-link>
      </div>
    </div>
    <div class="col-3 col-xl-2 col-lg-3 col-md-3 col-sm-3">
     <div class="footer-widget">
      <div class="footer-title">Catagories</div>
      <router-link to="/products">Tables/router-link>
       <router-link to="/products">Lamps/router-link>
       <router-link to="/products">Chairs/router-link>
       <router-link to="/products">Sofas</router-link>
      </div>
    </div>
    <div class="col-12 col-xl-6 col-lg-3 col-md-3 col-sm-12 text-left text-md-right pb-5">
     <div class="footer-widget">
      <h4>399 Crowfield Road,</h4>
      <h4>Phoenix, Arizona 85012</h4>
      <a href="mailto:#">asff@fdsfsdc.com</a>
```

```
<h6>+602-926-5809</h6>
      </div>
    </div>
   </div>
   <div class="row justify-content-between">
     <div class="col-xl-7 col-lg-6 col-md-6 col-sm-6 col-6">
      <div class="tiny-footer">
       Copyright © All Rights Reserved 2020 
      </div>
    </div>
    <div class="col-4 col-xl-4 col-lg-4 col-md-4 col-sm-4 text-right">
      <div class="social-info">
       <strong>Get social</strong>
       <img class="twitter" src="@/assets/twitter.png">
       <img class="pinterest" src="@/assets/pinterest.png">
       <img class="facebook" src="@/assets/facebook.png">
       <img class="instagram" src="@/assets/insta.png">
      </div>
    </div>
   </div>
  </div>
 </footer>
</template>
<script>
export default {
 name: 'Footer'
</script>
<style scoped>
.footer_area {
 position: relative;
 z-index: 1;
 color: #2c3539;
 background-color: #fefefe;
}
.footer-widget {
 padding-top: 60px;
.footer-title {
 padding-bottom: 20px;
 font-weight: bold;
.list-unstyled a {
```

```
text-decoration: none;
}
.list-unstyled a li {
 color: #2c3e50;
 margin-bottom: 10px;
.social-info>img {
 padding-left: 10px;
.social-info>img:hover {
 opacity: 0.7;
}
</style>
Cart.vue
<template>
 <div>
  <div :class="cClass">
   <div class="cart-menu">
    <h1 class="text-center">Cart</h1>
    <transition name="fade">
      <div v-if="this.cartContent.length === 0" class="text-center font-italic">
       Your cart is empty, try to Add stuff.
      </div>
    </transition>
    <transition-group name="fade">
      <div class="row" v-for="thing in cartContent" v-bind:key="thing.id">
       <div class="col4 col-xl-4 col-lg-4 col-md-4 col-sm-4">
        <img :src="thing.img" style="width: 90px;">
       </div>
       <div class="col6 col-xl-6 col-lg-6 col-md-6 col-sm-6">
        <h4>{{ thing.title }}</h4>
        <h6>{{ thing.price }}</h6>
       </div>
       <div class="col2 col-xl-2 col-lg-2 col-md-2 col-sm-2 pt-4">
        <span class="remove-btn" @click="removeThing(thing.id)">remove</span>
       </div>
      </div>
    </transition-group>
    <hr v-if="this.cartContent.length !== 0">
```

```
<div class="row justify-content-between" style="background:#7dcf85;padding:10px</pre>
10px 10px 10px"
      v-if="this.cartPrice != undefined">
      <div class="flex-column pl-3">
       <h4>Total</h4>
      </div>
      <div class="flex-column pr-3">
       <h4>${{ cartPrice }}</h4>
      </div>
    </div>
    <router-link to="/checkout">
      <v-btn @click="cartON" color="pink darken-1 white--text">
       Checkout
      </v-btn>
    </router-link>
   </div>
  </div>
  <div :class="modalClass" @click="cartON"></div>
 </div>
</template>
<script>
 export default {
  name: 'Cart',
  data() {
   return {
    cClass: 'cart',
    modalClass: 'modal off'
   }
  },
  computed: {
   cartContent() {
    return this.$store.state.cartItems
   cartPrice() {
    return this.$store.getters.totalPrice
   }
  },
  methods: {
   cartON() {
    if (this.cClass === 'cart on') {
      this.cClass = 'cart'
      this.modalClass = 'modal off'
     } else {
      this.cClass = 'cart on'
      this.modalClass = 'modal'
     }
   },
   removeThing(id) {
```

```
this.$store.commit('outCart', id)
   }
  }
</script>
<style scoped>
 /* Modal Overlay */
 .modal {
  display: block;
  z-index: 1050;
  position: fixed;
  top: 0;
  left: 0;
  width: 100%;
  height: 100%;
  overflow: auto;
  /* Enable scroll if needed */
  background-color: rgb(0, 0, 0);
  /* Fallback color */
  background-color: rgba(0, 0, 0, 0.4);
  /* Black w/ opacity */
 .modal.off {
  display: none;
 /* Transitions */
 .fade-enter-active,
 .fade-leave-active {
  transition: opacity .5s;
 }
 .fade-enter,
 .fade-leave-to {
  opacity: 0;
 /* Cart Body */
 .cart {
  position: fixed;
  margin-right: 0px;
  top: 0;
  right: 0;
  width: 360px;
  height: 100%;
  background: #303e49;
  overflow-y: auto;
  z-index: 1051;
```

```
-webkit-overflow-scrolling: touch;
  transform: translateX(360px);
  transition-property: transform;
  transition-duration: 0.4s;
 .cart.on {
  transform: translateX(0);
  -webkit-overflow-scrolling: touch;
  transition-property: transform;
  transition-duration: 0.4s;
 .cart-menu {
  color: #eee;
  margin-left: 10px;
  margin-right: 15px;
 hr {
  border-color: white;
 .row {
  margin-top: 10px;
  margin-bottom: 10px;
 .remove-btn {
  border-radius: 50%;
  content: url('../assets/multiply.png')
 .remove-btn:hover {
  background-color: grey;
</style>
```

Contactform.vue

```
<template>
 <section>
  <div class="container-fluid py-5">
   <div class="row d-flex">
    <div class="col-12 col-xl-6 col-lg-6 col-md-6 col-sm-12 order-sm-0 order-12"</pre>
style="margin-right:-120px;">
     <img class="img-fluid" src="@/assets/con.jpg">
    </div>
    <div class="col-12 col-xl-6 col-lg-5 col-md-6 col-sm-12 order-first order-xl-0">
     <h1>Hello there</h1>
     <h2 style="color:grey">got a thought to discuss?</h2>
     <form>
       <div class="form-group">
        <input type="text" class="form-control" required>
        <label class="label" for="name">Name</label>
       </div>
       <div class="form-group">
        <input type="email" class="form-control" required>
        <label class="label" for="E-mail">E-mail</label>
       </div>
       <div class="form-group">
        <textarea class="form-control" style="overflow:hidden; height:130px" rows="3"
required></textarea>
        <label class="label" for="Message">Message</label>
        <button class="btn btn-light" href="#" role="button">submit</button>
     </form>
    </div>
    </div>
   </div>
 </section>
</template>
<script>
export default {
 name: 'ContactForm'
</script>
<style scoped>
form {
 width: 100%;
 padding: 50px 0;
 display: block;
 margin: 0 auto;
.form-group {
```

```
width: 100%;
 position: relative;
 margin: 0 0 50px;
.form-group label {
 font-weight: 100;
 font-size: 1.5rem;
 color: grey;
 position: absolute;
 transition: .5s ease-in-out;
 top: 0px;
 z-index: 0;
.form-group input, .form-group textarea {
 outline: none;
 box-shadow: none;
 background-color: transparent;
 border: 0:
 border-bottom: 1px solid #555;
 font-size: 1.4rem;
 font-weight: 100;
 width: 100%;
 height: 40px;
 transition: all 0.5s;
 z-index: 1;
 position: relative;
 border-radius: 0;
 resize: none;
 scroll-behavior: none;
.form-group input:valid ~ label,
.form-group input:focus ~ label,
.form-group textarea:valid ~ label,
.form-group textarea:focus ~ label {
 color: #71acd6;
 font-size: 1rem;
 top: -15px;
 transition: all 0.5s;
.form-group input:valid,
.form-group input:focus,
.form-group textarea:valid,
.form-group textarea:focus{
 border-color: #71acd6;
}
form button {
 -webkit-transition-duration: 200ms;
```

```
transition-duration: 200ms;
 width: 120px;
 height: 50px;
 font-size: 15px;
 padding: 0px 30px;
 cursor: pointer;
 box-shadow: 0 26px 38px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19);
</style>
Home page
<template>
 <section class="carousel">
  <div id="heroControls" class="carousel slide" data-ride="carousel">

    class="carousel-indicators">

    data-target="#heroControls" class="active" data-slide-to="0">
    data-target="#heroControls" data-slide-to="1">
    data-target="#heroControls" data-slide-to="2">
   <div class="carousel-inner">
    <div class="carousel-item active">
     <img class="img-fluid" src="@/assets/jum1.jpg" alt="First slide">
    </div>
    <div class="carousel-item">
     <img class="img-fluid" src="@/assets/jum2.jpg" alt="Second slide">
    </div>
    <div class="carousel-item">
     <img class="img-fluid" src="@/assets/jum3.jpg" alt="Third slide">
    </div>
   </div>
  </div>
 </section>
</template>
<script>
export default {
 name: 'Carousel'
</script>
<style scoped>
.img-fluid {
 min-width: 800px !important;
ol.carousel-indicators li {
 background-color: white;
 height: 20px;
```

```
width: 20px;
 border-radius: 30px;
 border: 0.6px solid black;
ol.carousel-indicators li.active {
 background: #dbf0fa;
</style>
Product page:
<template>
 <div>
  <transition-group name="fade" class="row" tag="div">
   <div v-for="item in CardArray" class="col-6 col-xl-4 col-lg-4 col-md-4 col-sm-6 col-xs-4</p>
pb-3":key="item.id">
      <div class="card">
       <img class="card-img-top" :src="item.img" alt="Card image cap">
       <div class="overlay">
                     type="button"
        <button
                                         class="btn
                                                         btn-outline-secondary
                                                                                    btn-lg"
@click="addtoCart(item)">Add +</button>
        <ru><router-link to="/Info"><button type="button" class="btn btn-outline-secondary btn-</td>
lg" @click="sendInfo(item)">Info</button></router-link>
       </div>
       <div class="card-body">
        <h5 class="card-title">{{ item.title }}</h5>
        ${{ item.price }}
       </div>
      </div>
   </div>
  </transition-group>
 </div>
</template>
<script>
export default {
 props: ['CardArray'],
 name: 'Card',
 methods: {
  addtoCart(it) {
   this.\$store.commit('inCart', it)
  sendInfo(it) {
   this.$store.commit('addtoInfo', it)
 }
```

```
</script>
<style>
/* transition Group style */
.fade-move {
 transition: transform 1s;
/* Card Style */
.card {
 transition: 500ms;
 position: relative;
 overflow: hidden;
.card img {
 z-index: 1;
}
.card button {
 width: 140px;
 margin-bottom: 10px;
.card:hover img {
 filter: blur(4px);
}
.card:hover .overlay {
 opacity: 0.8;
}
.card .overlay {
 position: absolute;
 display: flex;
 flex-direction: column;
 justify-content: center;
 align-items: center;
 width: 100%;
 height: 70%;
 background-color: #232b34;
 opacity: 0;
 z-index: 100;
 transition: all 0.3s ease-in;
.card:hover, .card:active {
 transform: scaleY(1.1) scaleX(1.06);
 box-shadow: 0 14px 98px rgba(0, 0, 0, 0.25), 0 0px 60px rgba(0, 0, 0, 0.22);
}
```

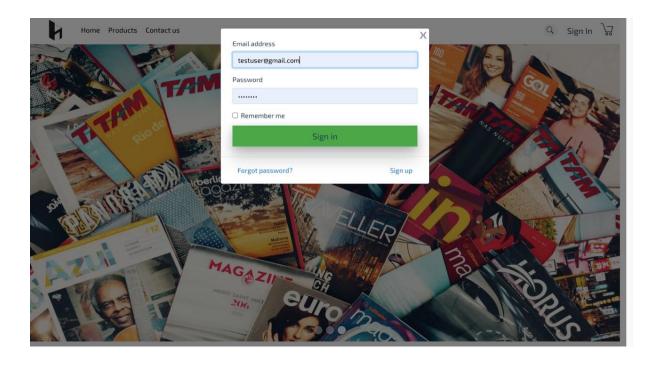
```
</style>
```

Info page:

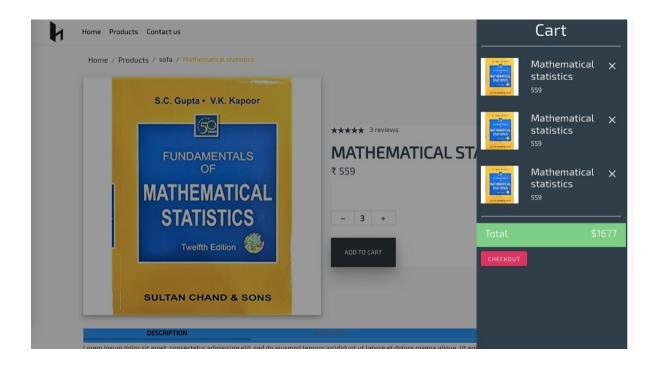
```
<template>
 <div>
  <div class="row mb-5" v-for="it in information" :key="it.id">
   <div class="col6 col-xl-6 col-lg-6 col-md-12 col-sm-12">
    <img class="img-fluid" :src="it.img">
   </div>
   <div class="col6 col-xl-6 col-lg-6 col-md-12 col-sm-12 d-flex align-items-center justify-</pre>
content-start">
     <div class="info pt-xl-0 pt-lg-0 pt-5">
      <span
                class="float-left
                                   pr-3">\star\star\star\star</span><h6
                                                                    style="width:190px;">3
reviews</h6>
      <h1 class="font-weight-bold text-uppercase pt-3">{{ it.title }}</h1>
      <h4>${{ it.price }}</h4>
      <br><br><br>>
      <div class="control number text-center">
       <button class="decrement-button" @click="dec" style="border-right: 0.2px solid</pre>
lightgrey;float:left;margin-right: 11px;">-</button>
       <span>{{ quan }}</span>
       <button class="increment-button"
                                            @click="inc" style="border-left: 0.2px solid
lightgrey;margin-left: 16px;">+</button>
       <br>><br>>
      </div>
      <button
                 class="add-to-cart-button"
                                               @click="addtoCart(it,
                                                                        it.id)">ADD
                                                                                         TO
CART</button>
    </div>
   </div>
  </div>
 </div>
</template>
<script>
export default {
 props: ['information'],
 name: 'InfoBox',
 data() {
  return {
   quan: 1,
  }
 },
 methods:{
  inc() { // Info box Increment button
   if (this.quan \leq 8)
    return this.quan ++
  },
  dec() { // Info box Decrement button
```

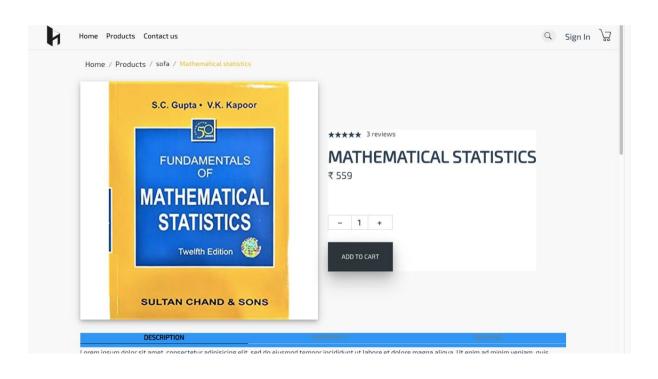
```
if (this.quan \geq 2)
    return this.quan --
  },
  addtoCart(it, id) { // Info box Add to cart button
   for (var i = 0; i < this.quan; i++) {
     this.$store.commit('inCart', it, id)
   }
  },
 }
</script>
<style scoped>
.img-fluid{
 min-width: 90% !important;
 box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19);
.control.number {
 border: 0.2px solid lightgrey;
 font-size: 19px;
 font-weight: bold;
 height: 35px;
 width: 155px;
 margin-bottom: 30px;
.control.number button{
 border:none;
 background: inherit;
 width: 56px;
 height: 35px;
 outline-style: none;
.control.number button:active{
 background-color: lightgrey;
.control.number h5 {
 margin-left: 13px;
 margin-right: 13px;
.add-to-cart-button {
 -webkit-transition-duration: 500ms;
 transition-duration: 500ms;
 width: 155px;
 height: 70px;
 background-color: #2c3539;
 color: #fff;
 font-size: 15px;
 padding: 0px 30px;
 cursor: pointer;
```

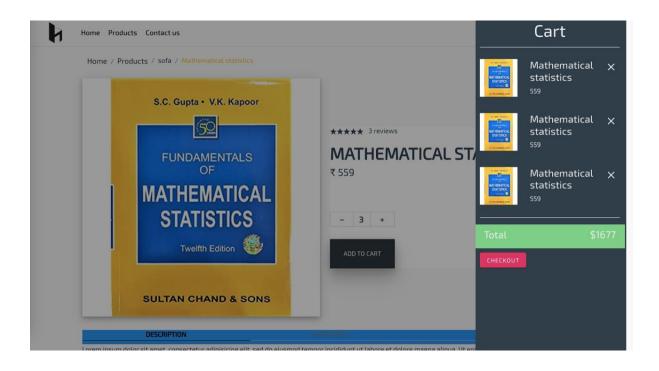
```
position: relative;
top: 0;
z-index: 10;
border: none;
box-shadow: 0 26px 38px 0 rgba(0, 0, 0, 0.2), 0 6px 20px 0 rgba(0, 0, 0, 0.19);
}
.add-to-cart-button:hover, .add-to-cart-button:focus {
  background-color: inherit;
  color: black;
}
</style>
```

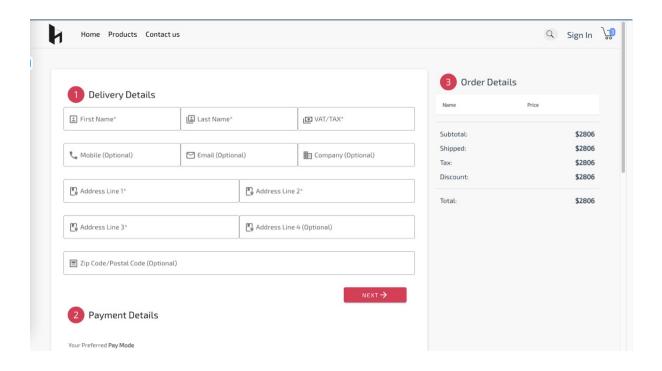


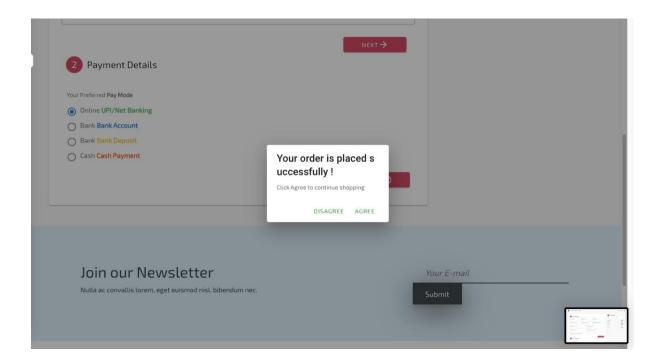












CONCLUSION:

As a team, we have given our best effort and invested a lot of time in this project as this application has enormous capacity and usefulness for students. This application eradicates the difficulty of acquiring a book for educational and personal use. Book Deals is our endeavor to the students of the future who wish to access any type of book according to their tastes and at any given time anywhere. This platform has fabulous features which include a UI design that boosts the user's satisfaction with using this application. It also has a secured payment gateway and the platform is monitored 24/7 round the clock which verifies users' profiles and checks for technical glitches. Therefore, we hope that this project succeeds at the maximum level and it achieves the goals which we worked on for the last couple of months. As this project is very close to the heart, we present our hard-worked endeavor, Book deals.

REFERENCE:

- 1. https://jpinfotech.org/online-book-buying-and-selling-portal/
- 2. https://nevonprojects.com/online-book-reselling-portal/