

## **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 Cloud Computing**



**SCHOOL OF COMPUTING**

**COLLEGE OF ENGINEERING AND TECHNOLOGY  
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY  
KATTANKULATHUR - 03203**

**JUNE 2022**



## SRM INSTITUTION OF SCIENCE AND TECHNOLOGY KATTANKULATHUR-03203

### BONAFIDE CERTIFICATE

Certified that this lab report titled "**Bookmystay**" is the bonafide work done by NUNE NITESH(RA2011028010140) 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. P. Gouthaman**  
SEPM Course Faculty  
Assistant Professor Department of Networking and Communications

## **ABSTRACT**

Our project '**Bookmystay**' is an online platform that allows people to rent short term accommodation. This ranges from regular people with a spare bedroom, to property management firms who lease multiple rentals. However, we want to expand platform has expanded by partnering with car rental services, restaurants, entertainment and tour sites, among others to become an all-in-one travel site. We brand themselves as an online 'travel community', allowing guests to have a local experience in exotic locations. We are inspired by what Airbnb is doing in western market. We want to replicate the same by focusing on tier 2 and tier 3 market in india

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## **List of Abbreviations**

<b>S.No</b>	<b>Abbreviations</b>	<b>Expansion</b>
1.	UI	User Interface
2.	UX	User Experience
3.	SQL	Structured Query Language
4.	CSS	Cascading Style Sheets
5.	HTML	Hyper Text Markup Language
6.	DB	Database
7.	ER	Entity Relationship
8.	DFD	Data Flow Diagram
9.	WBS	Work Breakdown Structure



## 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	NUNE NITESH
Team Members	MANTHHURI HRITHIKESH, K L.PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	10/3/2022

### 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 <t

## Team Members:

S. No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Lead/Rep
2	RA2011028010140	NUNE NITESH	Member
3	RA2011028010111	K.L.PRASHANTH REDDY	Member

Project Title: Vacation rental online platform

## Project Description:

Our project is a marketplace where travellers get to stay at the property listed on the site by the local hosts. A person who has a spare room/house can list his property on the website and the person who is travelling to that particular location can book it and get to have a unique experience offered by the host

## Business Case

# BUSINESS CASE TEMPLATE

DATE	17/03/2022
SUBMITTED BY	M.HRITHIKESH,N.NITESH,K.L.PRASHANTH REDDY
TITLE / ROLE	CREATING A PAYING GUEST ACCOMODATION PLATFORM/ Bookmystay



## THE PROJECT

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

- Our project is a marketplace where travellers get to stay at the property listed on the site by the local hosts. A person who has a spare room/house can list his property on the website and the person who is travelling to that particular location can book it and get to have a unique experience offered by the host.

Our secondary business model is to provide PG hostel facilities to students at lowfare with better quality of amenities unlike conventional hostel.

- We are inspired by what Airbnb is doing in western market. We want to replicate the same by focusing on tier 2 and tier 3 market in india.

## THE HISTORY

In bullet points, describe the current situation.

- India tourism statistics for 2019 was 31,661,000,000.00, a 8.64% increase from 2018.
- India tourism statistics for 2018 was 29,143,000,000.00, a 4.54% increase from 2017. □ India tourism statistics for 2017 was 27,878,000,000.00, a 20.63% increase from 2016.
- India tourism statistics for 2016 was 23,111,000,000.00, a 7.63% increase from 2015.

- There is only one hostel bed available for every six students enrolled for higher education in India. The student housing industry, therefore, sniffs a great opportunity. Their confidence also stems from the fact that people now want to spend more for a higher standard of living. The unorganised paying guest (PG) market is ripe for disruption.
- A new report by the Student Accommodation Provider Association of India (SAPFI) and consulting firm CBRE, paints a bright future for the organised players. The report titled 'The Herald of a New Chapter: Student Accommodation in India' states that the student housing/co-living sector is expected to witness an investment worth \$700 million and an addition of 0.6 million beds by 2023 across the country.
- The student housing segment is on a rapid growth trajectory across the country and could witness a growth of 36 per cent between 2019 and 2023. Currently, the top 30 players in the student housing/co-living market have a cumulative stock of more than 250,000 beds

## LIMITATIONS

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

- Our biggest con is inconsistency in quality of service. we are partnering with third parties to improve sanitation, training hosts.
- Another challenge is background check of hosts which will consume human resources and time. These checks only work when people give us their full, correct legal names and dates of birth. Even if they provided all required information, we can't guarantee it's accurate or that it even really belongs to them. we made users should upload their identity proof for better check of their criminal record or if any.
- For various reasons we made users of 18 years and above only can able to book their stay.

And many more

## APPROACH

List what is needed to complete the project

- Our project is based on an aggregator business model. Aggregator Business Model is a network model where the company collects the data about a specific good/service providers, make the providers their partners, and sell their services under its brand.

- Since the aggregator is a brand, it has to provide services which have uniform quality and price. This is done by signing up a contract with the partners. You can understand it as an asset-light model where you earn a commission for the services you provide without owning any inventory. We charge commission at rate of 3% while most of the market leaders in the industry are charging 10%.

## BENEFITS

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

- People having vacant space at their home and willing to earn some extra money can list their rooms on the website and earn some extra bucks. Also, the key differentiator is they sell experience and not just space.
- Many travellers wanna feel like home once they go out to travel and explore different countries. The travellers get a local like feel and also feels light on the pocket as compared to hotels. The travellers can get accommodation at reasonable fare.

## 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	NUNE NITESH
Team Members	MANTHURI HRITHIKESH, KOLLILOKA PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	17/3/2022

### Mark Split Up

S.N o	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.

Our project is a marketplace where travellers get to stay at the property listed on the site by the local hosts. A person who has a spare room/house can list his property on the website and the person who is travelling to that particular location can book it and get to have a unique experience offered by the host

## Team Members:

Sl No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Rep/Member
2	RA2011028010111	KOLLIOKAPRASHANTH REDDY	Member
3	RA2011028010140	NUNE NITESH	Member

Project Title: Creating paying guest online guest platform

## Selection of Methodology

We decided to develop our project through agile development model.

Agile software development -- also referred to simply as Agile -- is a type of development methodology that anticipates the need for flexibility and applies a level of pragmatism to the delivery of the finished product. Agile software development requires a cultural shift in many companies because it focuses on the clean delivery of individual pieces or parts of the software and not on the entire application.

The rest of the SDLC models we've chosen fall under the umbrella of Agile. Nowadays, more than 70% of organizations employ this or that Agile approach in their IT projects. In general, at the heart of Agile are iterative development, intensive communication, and early customer feedback.

Each Agile iteration usually takes several weeks and delivers a complete working software version. The models of this group put more focus on delivering a functioning part of the application quickly. They pay less attention to detailed software documentation (detailed requirement specification, detailed architecture description), and more to software testing.

the support team as well as makes its maintenance more complicated as more time is spent to find the problem when there's no detailed software description.

Agile is about working in close collaboration both across the team and with the customers. At the end of each iteration, stakeholders review the development progress and re-evaluate the priority of tasks for the future iteration to increase the return on investment (ROI) and ensure alignment with user needs and business goals.

Accordingly, frequent releases are characteristic to the Agile models. They also allow for continuous software improvement with easy fixes and changes, quick updates, and feature addition, and help to deliver applications that satisfy users' needs better. However, the lack of detailed planning and openness to changes make it difficult to accurately estimate budget, time and people required for the project.

Use cases:

- Practically any startup initiatives, when end users' early feedback is required.
- Most of mid-sized projects in custom software development where business requirements cannot be confidently translated to detailed software requirements.
- Large projects that are easy to divide into small functional parts and can be developed incrementally over each iteration.

Agile comes in different flavors. Today, its most common subtypes are Scrum, Extreme Programming, and Kanban.

Due to Agile more flexible nature we find it more easier to implement changes while developing whereas traditional models like water fall model offers rigidity and difficulty in altering changes.

In Agile it is easier to find error and bugs if any during development.

Stakeholder Name	Activity/ Area /Phase	Interest	Influence	Priority (High/ Medium/ Low)
INVESTORS	Provides the necessary financial benefits which are required	HIGH	HIGH	HIGH
BUSINESS ANALYSTS	Deliver artifacts such as the project's business case or requirements	LOW	HIGH	MEDIUM
PROJECT TEAM	Does the work required for developing the project	HIGH	HIGH	HIGH
PROJECT MANAGER	Manages the project and reviews the progress	HIGH	LOW	MEDIUM
RESOURCE MANAGERS	Supplies the requirements which are essential to the project.	HIGH	LOW	LOW
PROJECT SPONSOR	Accountable and responsible for representing the sponsoring business	LOW	HIGH	HIGH
OWNER	Who is the person comes out with project idea	HIGH	HIGH	HIGH
HOST/PARTNER	Provides requirements to sponsoring business	LOW	LOW	LOW
EXECUTIVE TEAM	Create visibility that helps to clear issues and recognize project successes	HIGH	LOW	LOW
GUEST/USER	Customers of the project	LOW	LOW	LOW

## 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**

<b>Experiment No</b>	3
<b>Title of Experiment</b>	System, Functional and Non-Functional Requirements of the Project
<b>Name of the candidate</b>	NUNE NITESH
<b>Team Members</b>	KOLLILOKA .PRASHANTH REDDY, MANTHURI HRITHIKESH
<b>Register Number</b>	RA2011028010140
<b>Date of Experiment</b>	29/03/2022

### **Mark Split Up**

S.No	Description	Maximum Mark	Mark Obtained
1	Exercise	5	
2	Viva	5	
<b>Total</b>		<b>10</b>	

**Staff Signature with date**

## Aim

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

## Team Members:

SNo	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	<b>Rep/Member</b>
2	RA2011028010140	NUNENITESH	<b>Member</b>
3	RA2011028010111	KOLLILOKA PRASHANTH REDDY	<b>Member</b>

**Project Title:** <> Creating a online marketplace for lodging, primarily homestays for vacation rentals, and tourism activities

## System Requirements

System requirements are the required specifications a device must have in order to use certain hardware or software System Requirements

## System requirements

	Windows requirements	Mac requirements	Linux requirements
Operating system	Windows 8 or later	macOS Sierra 10.12 or later	64-bit Ubuntu 14.04+, Debian 8+, openSUSE 13.3+, or Fedora Linux 24+
Processor	Intel Pentium 4 or later	Intel	Intel Pentium 4 or later
Memory	2 GB minimum, 4 GB recommended		
Screen resolution	1280x1024 or larger		
Application window size	1024x680 or larger		
Internet connection	Required		

## **Android**

To use Chrome browser on Android, you'll need:

- Android Marshmallow 6.0 or later
- RAM 2GB

## **Network requirements**

Model-driven apps are designed to work best over networks that have the following elements:

Bandwidth greater than 50 KBps (400 kbps)

Latency under 150 ms

## **Functional Requirements**

Functional requirements are the **desired operations of a program, or system** as defined in software development and systems engineering.

We have two major consumers of this application. One is the **host side user** and the other is the **consumer** who wants to book from outside.

### **Host side user:-**

**1. Onboarding:** Hotel side user should be able to onboard to the platform

**2. Update:** Hotel side user should be able to update the platform

**3. Bookings:** And also user should be able to see what the bookings are there

### **Outside User (consumer):-**

**1. Search:** User should be able to search for a property in a particular location.

**2. Bookings:** User should be able to book the hotel room and check the bookings

**3. Analytics**

## **Non-Functional Requirements**

**Non-Functional Requirement** (NFR) specifies the quality attribute of a software system. They judge the software system based on Responsiveness, Usability, Security, Portability and other non-functional standards that are critical to the success of the software system.

- Associate every online booking with an account
- Limit every account to a single user
- Enable users to search and find the most relevant booking options
- Accept date and time to check available rooms for that particular time
- Booking confirmation should be sent to the specified contact details
- Calculate and display accommodation charges and other utilities
- Cancel bookings
- Display and change records of guests
- Change room

## **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	NUNE NITESH
Team Members	MANTHURI HRITHIKESH KOLLI LOKA PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	14-04-2022

### 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 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	RA2011028010133	MANTHURI HRITHIKESH	Lead
2	RA2011028010140	NUNE NITESH	Member
3	RA2011028010111	KOLLI LOKA PRASHANTH REDDY	Member

## 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	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	1500
	E1R1A1T2	Front End	80	40000
	E1R1A1T3	Back End	200	100000
Identify Data Source for displaying units of Energy Consumption	E1R1A1T1	Go through Interface contract (Application Data Exchange) documents	5	2500
	E1R1A1T1	Document	2	1000

Effort (hr)	Cost (INR)
1	500

### 2.2. Maintenance and Support Cost [OpEx]

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

### 3. Project Team Formation

#### 3.1. Identification Team members

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

### 3.2. Responsibility Assignment Matrix

RACI Matrix		Team Members		
Activity	Name (BA)	Name (Developer)	Name (Project Manager)	Key Business User
User Requirement Documentation	M.HRITHIKESH	N.NITESH	M.HRITHIKESH	PRASHANTH
Front end	M.HRITHIKESH	N.NITESH	M.HRITHIKESH	PRASHANTH
Back end	K.PRASHANTH	K.PRASHANTH	M.HRITHIKESH	PRASHANTH
Testing	M.HRITHIKESH	M.HRITHIKESH	M.HRITHIKESH	PRASHANTH
Cloud operations	N.NITESH	N.NITESH	M.HRITHIKESH	PRASHANTH

A	Accountable
R	Responsible
C	Consult
I	Inform

**Result:**

Thus, the Project Plan was documented successfully.



## 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	NUNE NITESH
Team Members	MANTHURI HRITHIKESH, KOLLI LOKA PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	12/4/2022

### Mark Split Up

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

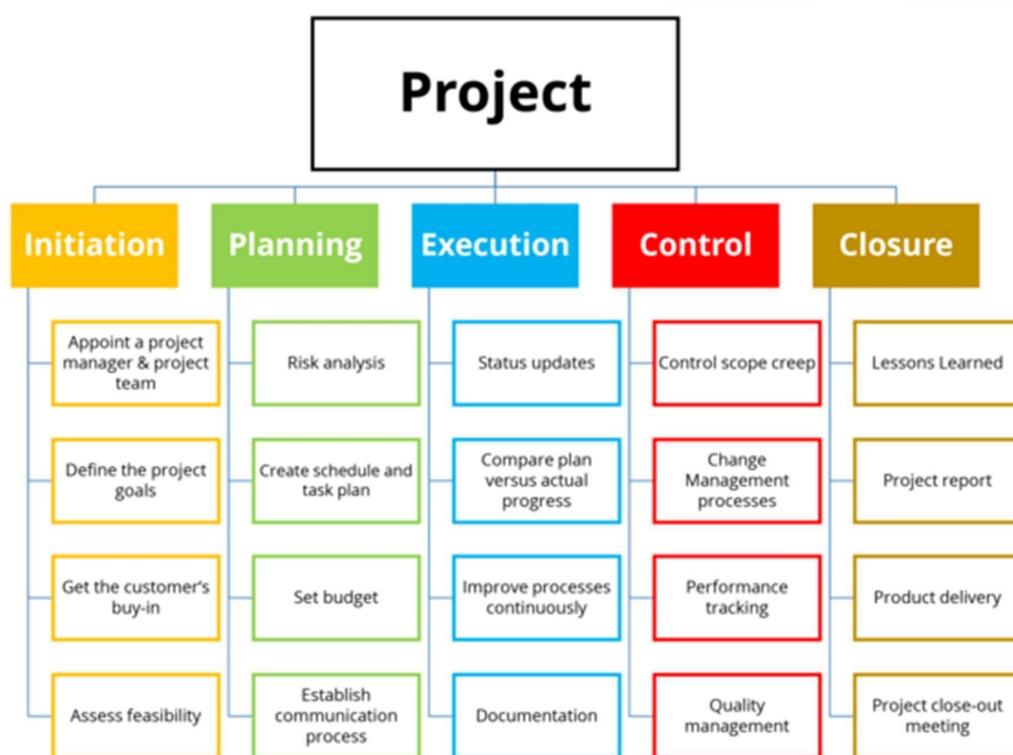
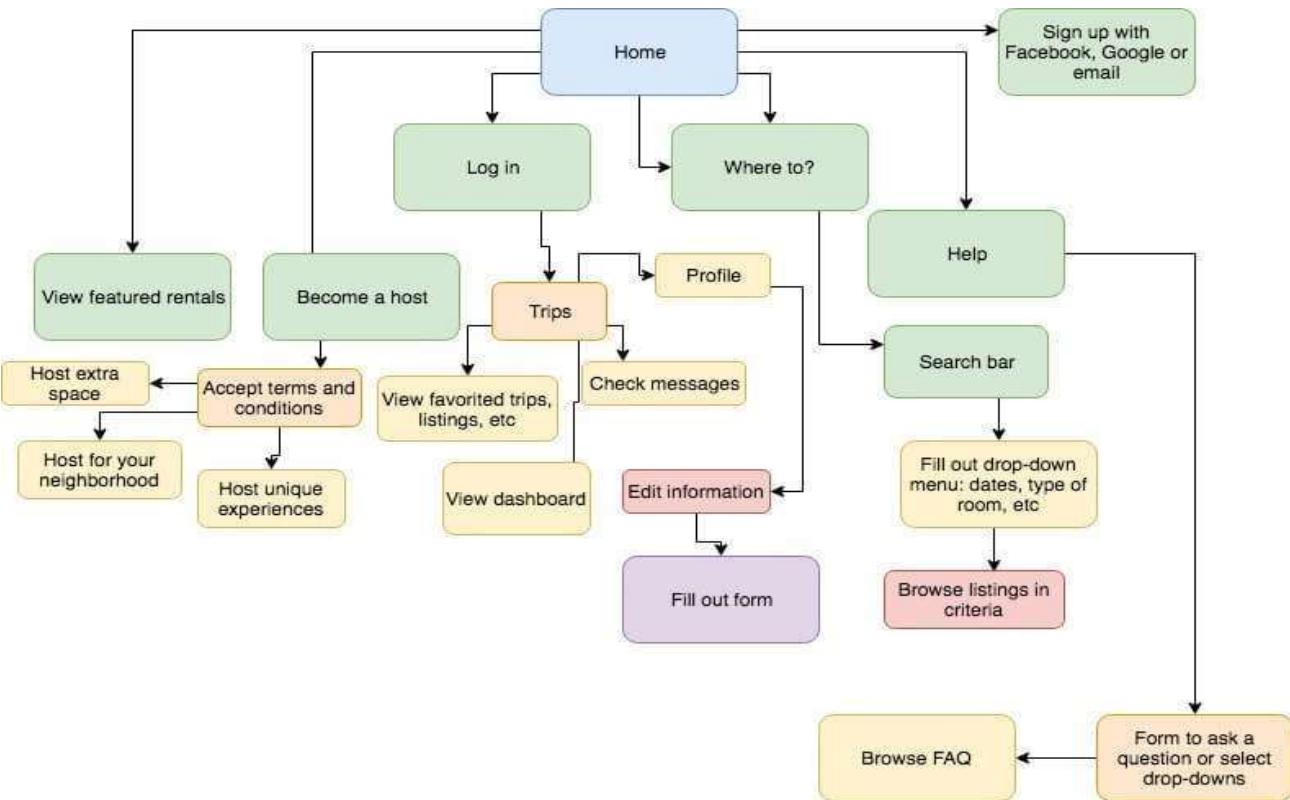
Staff Signature with date

## Aim

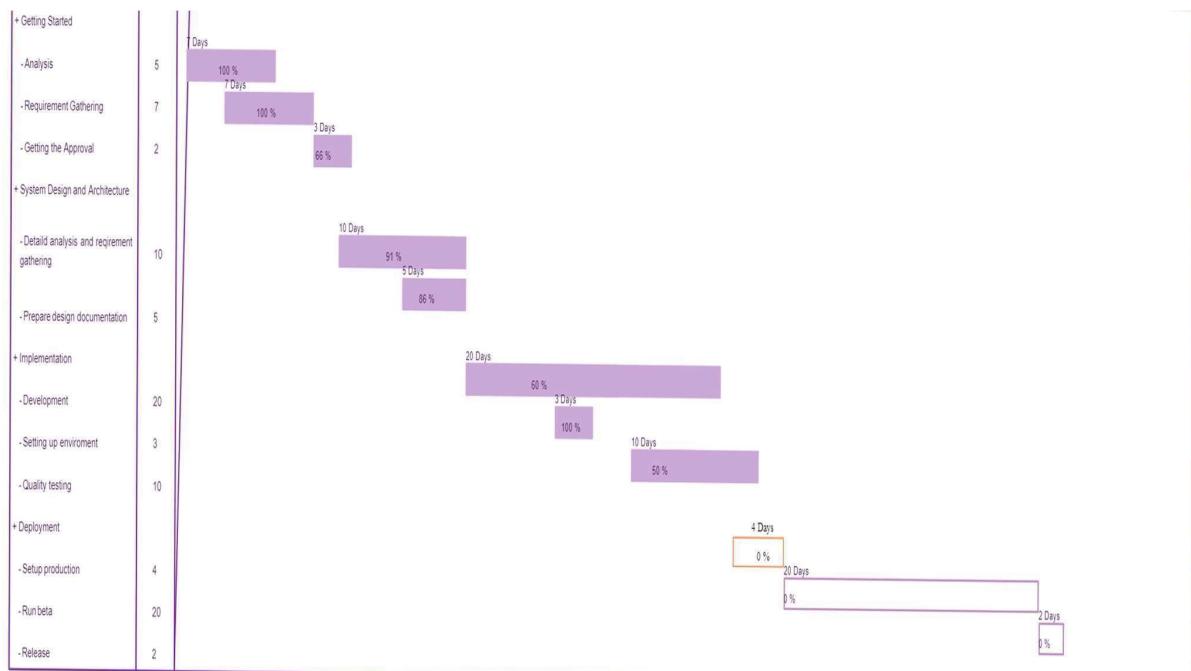
To Prepare Work breakdown structure, Timeline chart and Risk identification table

## Team Members:

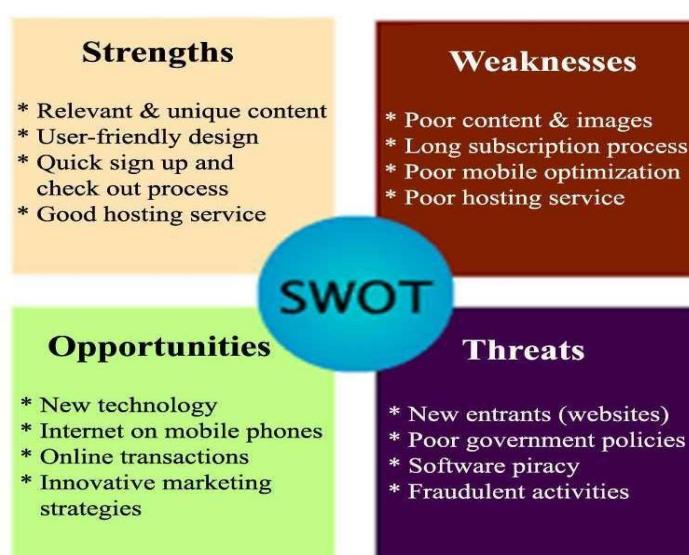
Sl No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Rep
2	RA2011028010111	KOLLI LOKA PRASHATH REDDY	Member
3	RA2011028010140	NUNE NITESH	Member



## TIMELINE – GANTT CHART



## RISK ANALYSIS – SWOT & RMMM



## STRENGTHS :

Strengths are the first aspect of SWOT Analysis. It deals with the positive side of the company. . This tells how the brand can improve itself using its advantages over the business.

- Cheaper Yet Unique Alternatives: It is cheaper alternative to other resorts and hotels. The prices for the services can be competitive based on the location of the place. Customers can shop around and can choose the place that suits their budget.
- Engaged Guest Community: Our project's community is its greatest asset. The experience of platform is its personal touch of hosts and the interaction with them helps guests to engage with the community. It also offers customers rewards and specials.

## WEAKNESSES:

Weaknesses are the negative internal factors that affect the company. This causes the brand to lose to its competitors.

- Global Pandemic: Due to Covid-19, most countries are on lockdown which had put a stop to business due to rules and regulations in local areas. Also, people are afraid to come out of the house due to the novel coronavirus.
- Lack Of Quality Controls For Hosts: A there is no standard of quality control which creates problems such as less comfort and cleanliness. Poor hosts can damage a company's reputation. If in any case, any host does not comply with guidelines, they can face the consequences. Poor ratings and Backlash on social media hit the company's profit in the current business world.
- The Objectivity Of Guest Review System: our project has a review system, wherein hosts and guests can rate each other after their stay. But both hosts and guests are not able to see their reviews when both have given reviews.
- Maintaining Brand Awareness And Reputation: Our project's biggest assets are brand awareness and reputation. They have to keep it up to stay ahead of the competition. It has been criticized for higher prices for stay. The retail price has increased in a few areas due to keeping properties of the

long-term rental market and instead of that getting higher rental rates for short-term housing.

## OPPORTUNITIES:

- Brand Investments: brand investment can enter in other segments as car rentals, advertisements, travel guides, etc to keep up its business at its peak.
- Innovation: We can improve on making the platform more appealing and can improve engagement for both hosts and guests.
- Offerings: Investing in innovation will improve interaction with hosts and guest interferences. We have a better chance to expand its product mix and offerings and customers can be more satisfied. It can also introduce travel guides, car rentals, etc

**Recovery From Covid-19:** Since the world is recovering from covid-19, the scope for the travel industry will increase in the upcoming months. As people want to leave the house and freshen their minds, travelling would be a great option.

## THREATS:

- Decreased Travel Demand: Due to the worldwide pandemic, the whole travel industry is suffering . Because of the lockdowns, buying power of people has decreased and this impacts on decreased travel demand.
- Increased Competitions: We has been facing heavy competition in some sectors in some areas by companies like Flipkey, HomeAway, tripping.com, Trivago, etc.
- Laws and Regulations in Every Country: Each state and country has its laws that We have to comply with. We have to rely on hosts and guests to rely on so that they could meet local laws.
- Decrease of Acceptance of home-sharing: Home-sharing may become less popular as a result of cultural factors, which could hurt our competitiveness. Also with the COVID-19 pandemic, people are more hesitant in home-sharing.

## Result:

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



## School of Computing

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	NUNE NITESH
Team Members	KOLLILOKA PRASHANTH REDDY, MANTHURI HRITHIKESH
Register Number	RA2011028010140
Date of Experiment	21/04/2022

### Mark Split Up

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

Staff Signature with date

## Aim

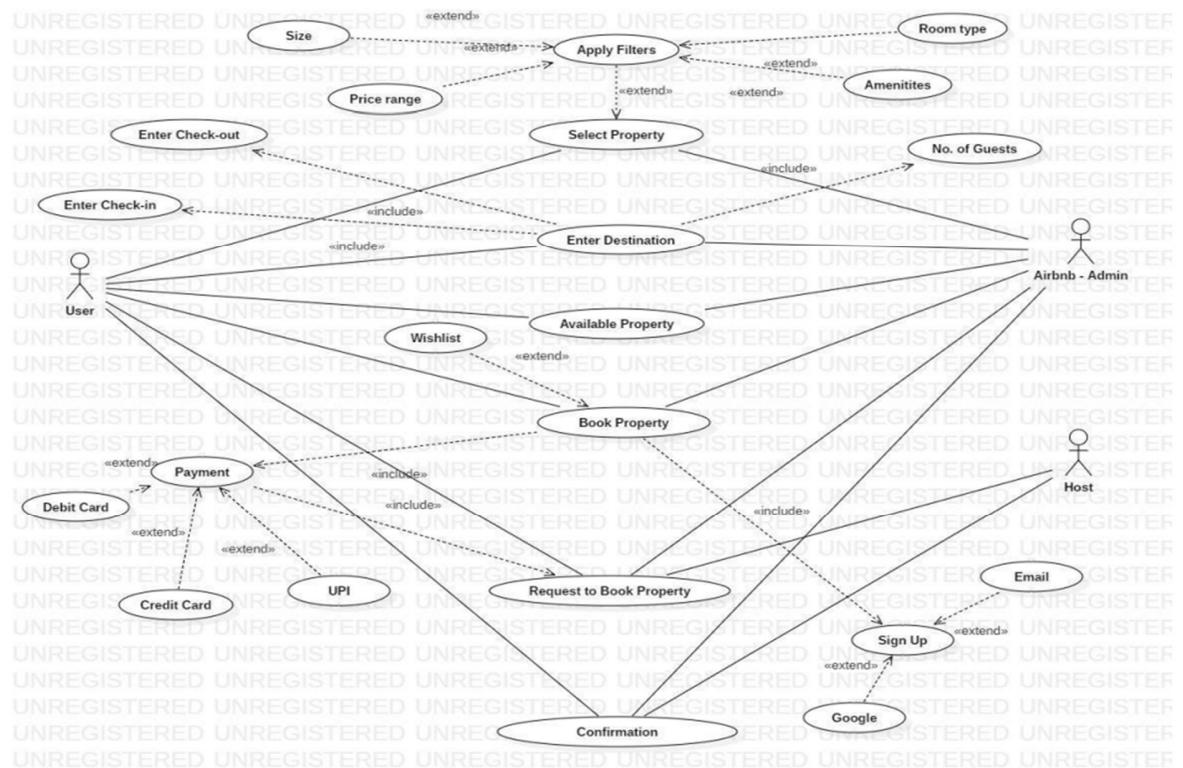
To Design a System Architecture, Use case and Class Diagram

Team Members:

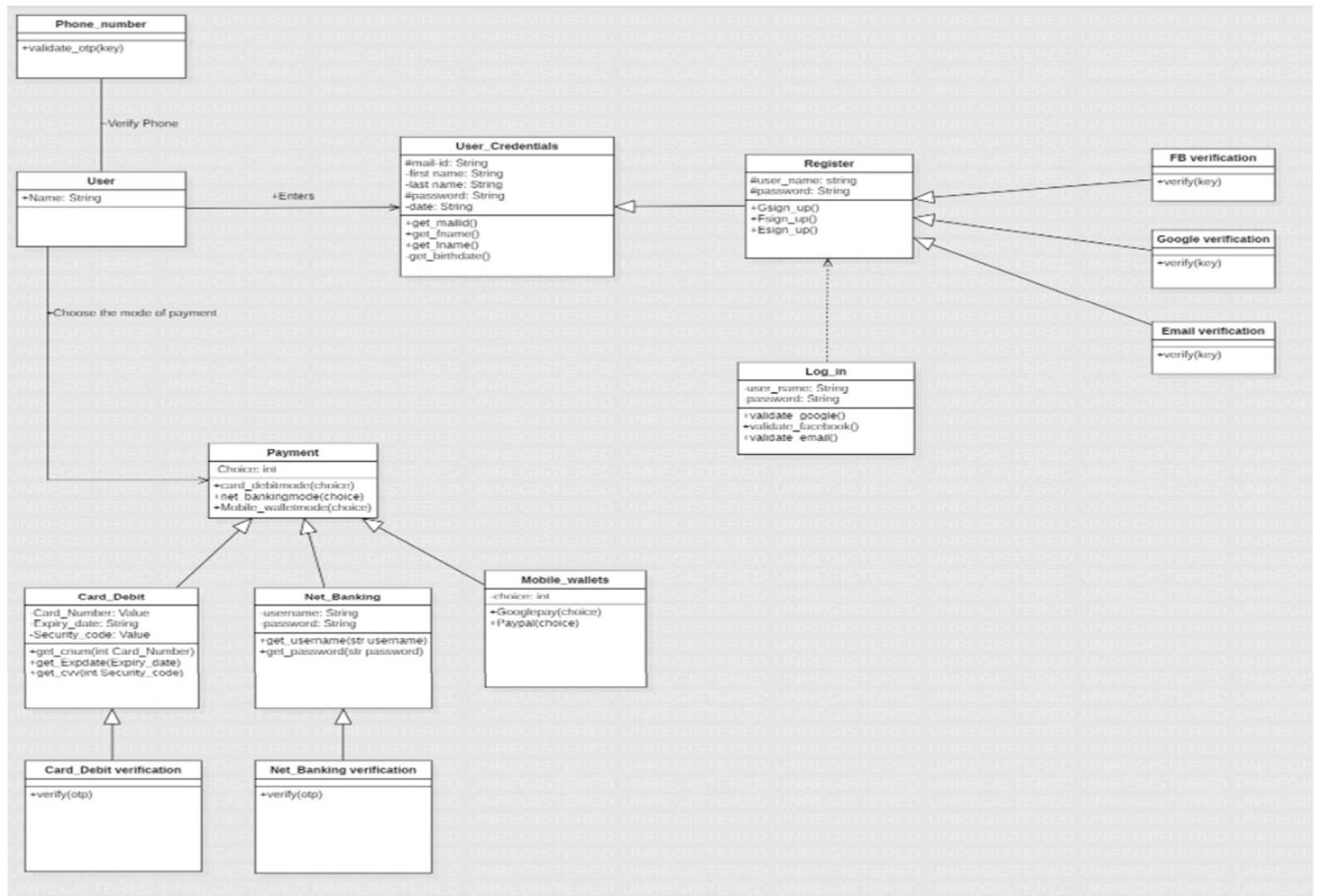
Sl No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Rep
2	RA2011028010140	NUNE NITESH	Member
3	RA2011028010111	KOLLILOKA PRASHANTH REDDY	Member

Requirements

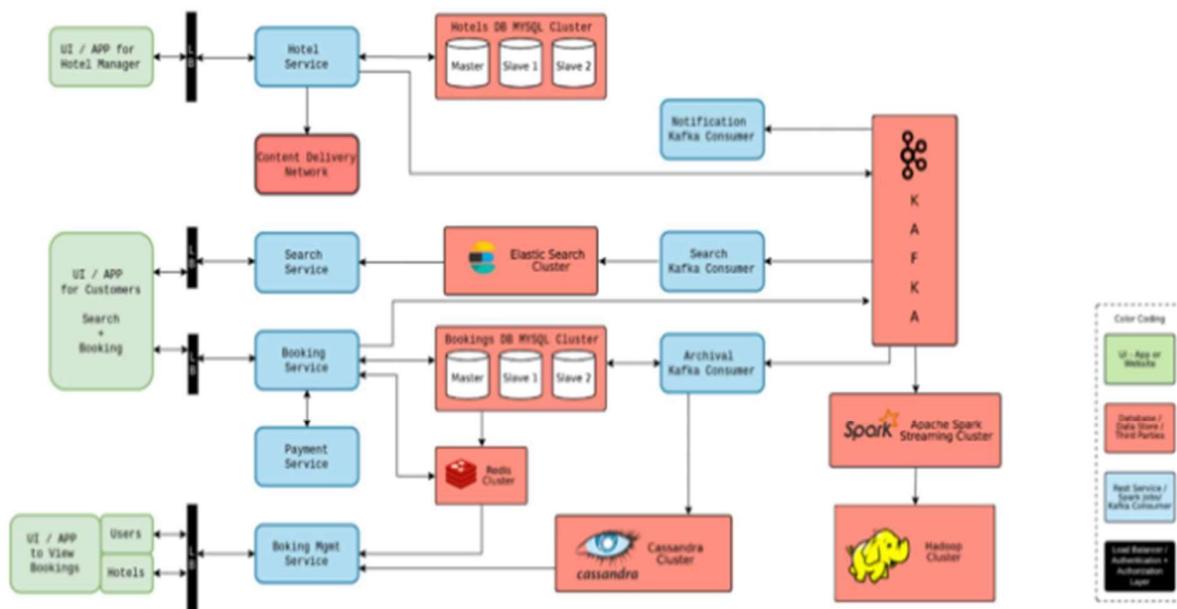
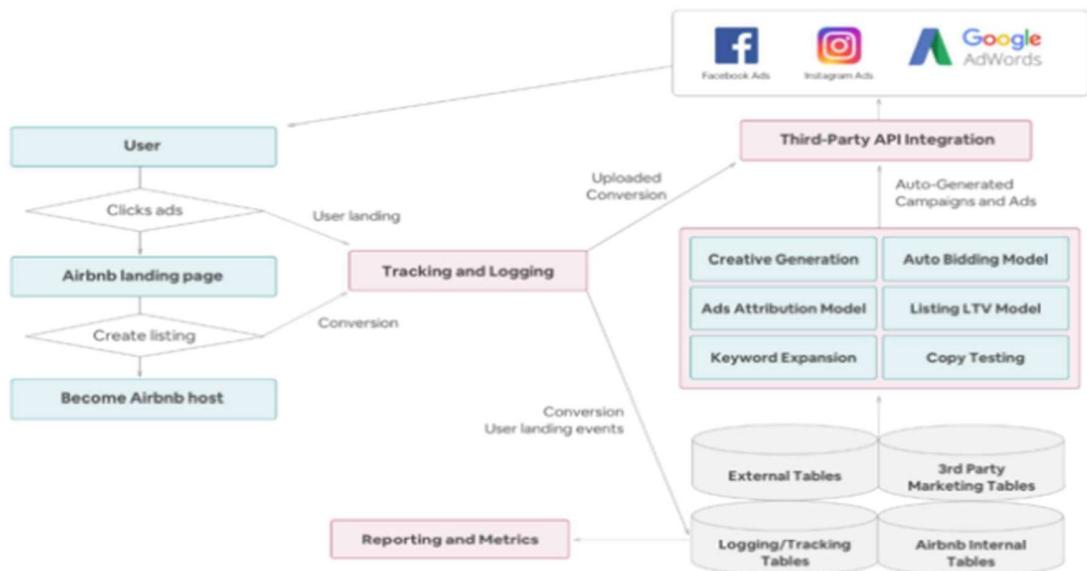
## USE CASE DIAGRAM



## CLASS DIAGRAM



## SYSTEM ARCHITECTURE



Result:

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



### 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	NUNE NITESH
Team Members	MANTHURI HRITHIKESH KOLLI LOKA PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	28/4/2022

### Mark Split Up

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

Staff Signature with date

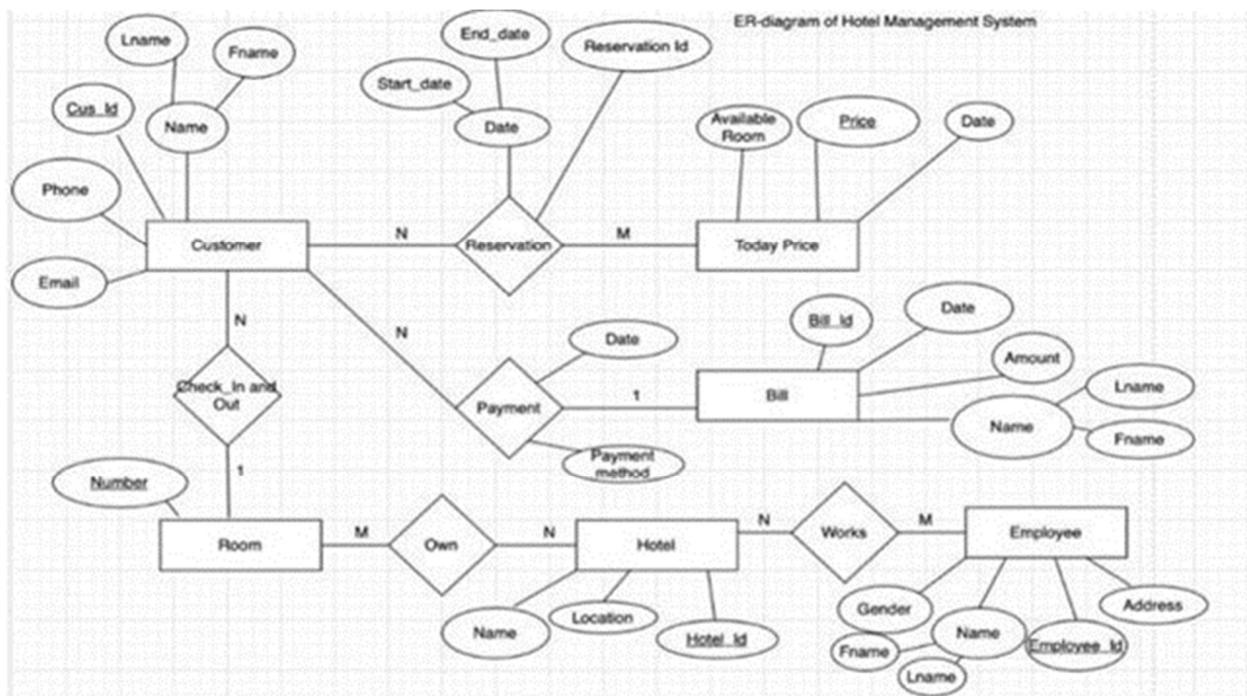
Aim

To create the Entity Relationship Diagram

Team Members:

S No	Register No	Name	Role
1	RA2011028010133	M.HRITHIKESH	Rep
2	RA2011028010140	N.NITESH	Member
3	RA2011028010111	K.PRASHANTH REDDY	Member

## ENTITY RELATIONSHIP MODEL



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	NUNE NITESH
Team Members	MANTHURI HRITHIKESH, KOLLI LOKA PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	6/5/2022

### Mark Split Up

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

Staff Signature with date

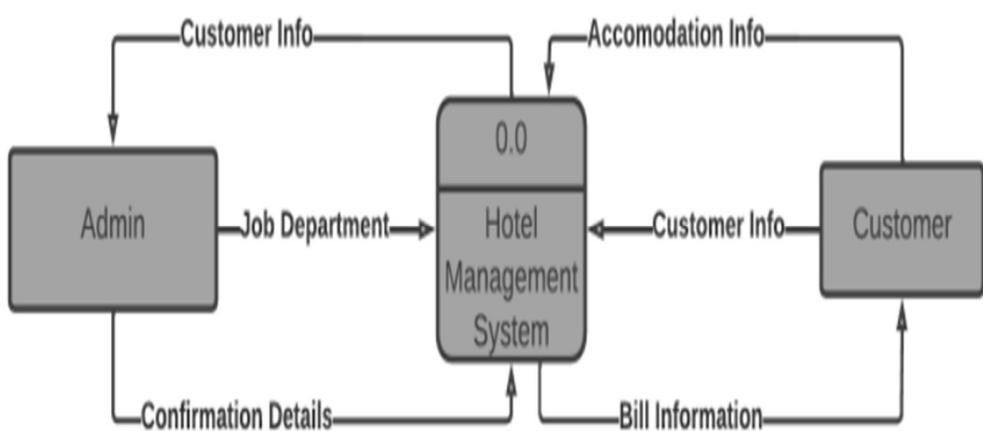
## Aim

To develop the data flow diagram up to level 1 for the vacation rental online platform.

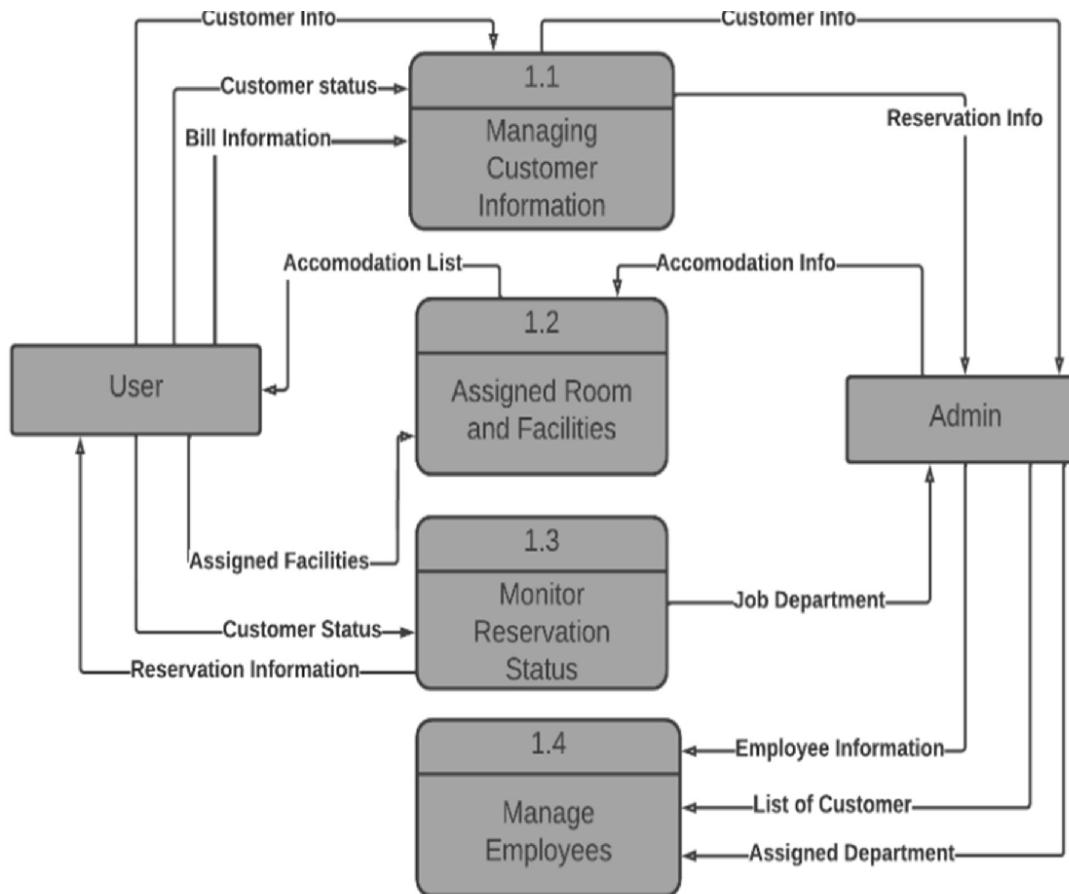
## Team Members:

S No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Rep
2	RA2011028010140	NUNE NITESH	Member
3	RA2011028010111	KOLLI LOKA PRASHANTH REDDY	Member

## DFD LEVEL 0:



DFD LEVEL 1:



]

Result:

Thus, the data flow diagrams have been created for the vacation rental online platform



## School of Computing

SRM IST, Kattankulathur – 603 203

**Course Code: 18CSC206J**

**Course Name: Software Engineering and Project Management**

<b>Experiment No</b>	9
<b>Title of Experiment</b>	Design a Sequence and Collaboration Diagram
<b>Name of the candidate</b>	NUNE NITESH
<b>Team Members</b>	KOLLILOKA PRASHANTH REDDY  MANTHURI HRITHIKESH
<b>Register Number</b>	RA2011028010140
<b>Date of Experiment</b>	13/5/2022

### Mark Split Up

<b>S. No</b>	<b>Description</b>	<b>Maximum Mark</b>	<b>Mark Obtained</b>
1	Exercise	5	
2	Viva	5	
	<b>Total</b>	<b>10</b>	

**Staff Signature with date**

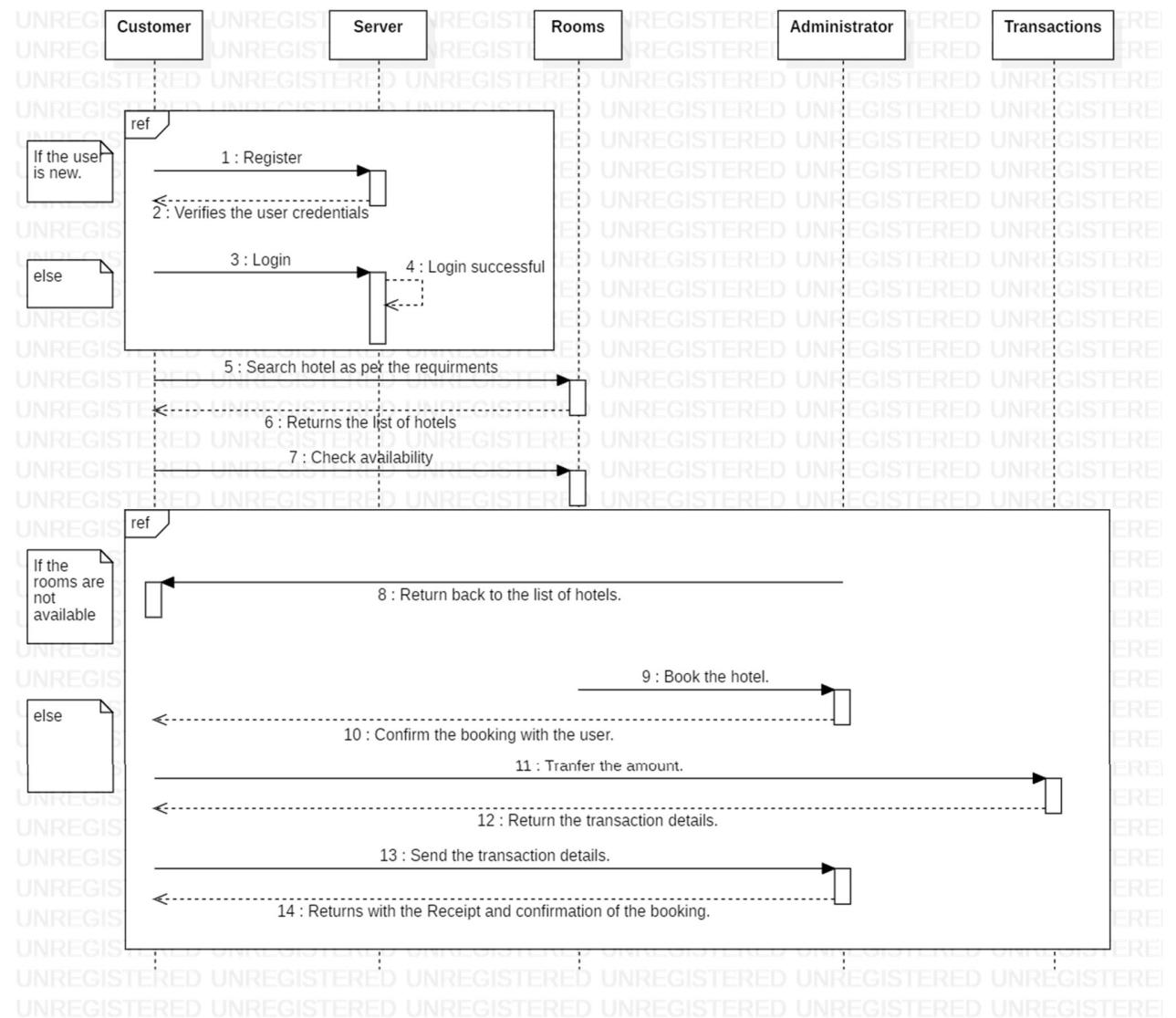
### **Aim**

To create the sequence and collaboration diagram for the vacation rental online platform

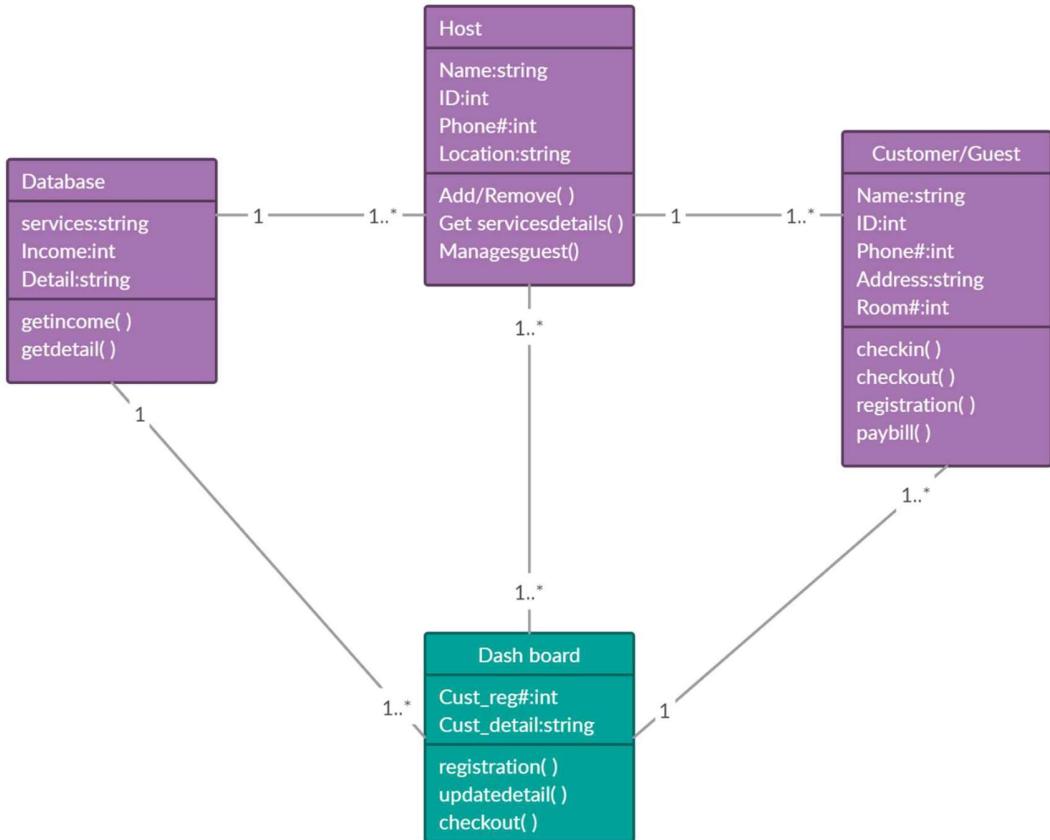
### **Team Members:**

S No	Register No	Name	Role
1	RA2011028010133	<b>MANTHURI HRITHIKESH</b>	<b>Rep/Member</b>
2	RA2011028010140	<b>NUNE NITESH</b>	<b>Member</b>
3	RA2011028010111	<b>KOLLI LOKA PRASHANTH REDDY</b>	<b>Member</b>

## SEQUENCE DIAGRAM



## COLLABORATION DIAGRAM



Result:

Thus, the sequence and collaboration diagrams were created for the vacastion rental online platform



### 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	NUNE NITESH
Team Members	MANTHURI HRITHIKESH, KOLLILOKA PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	20/5/2022

#### 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 testing framework and/or user interface framework for the homestay vacation rental online marketplace platform

## Team Members:

S No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Rep/Member
2	RA2011028010140	NUNE NITESH	Member
3	RA2011028010111	KOLLI LOKA PRASHANTH REDDY	Member

## Types of Testing, Methodology, Tools

### Executive Summary

- The scope of testing of our Bluetooth messaging app includes Testing Bluetooth Protocol Stacks with Computer-Generated Tests, making a test-cases for different modules to check if the code can withstand boundary cases that can arise if an exception arises.
- The objective of this testing includes testing of all the modules and to check if any exception exists in any of the modules.
- Regression testing would be an important part of our software testing practice that would ensure our application still functions as expected after any code changes, updates, or improvements.
- Lastly critical path testing would be aimed at exploring the functionality used by typical users in typical daily activities. Test Plan We as a team have decided that the testing will follow a top-down approach, as it goes well with waterfall method of software development. We will first go through components, then test the archetype and then other minute details. After completing the functional testing, we will move on to the testing of NFR (Non-functional requirements). Scope of

**Testing** The scope of testing of our Bluetooth messaging app includes Testing Bluetooth Protocol Stacks with Computer-Generated Tests, making a test-cases for different modules to check if the code can withstand boundary cases that can arise if an exception arises. Functional Testing:

Testing is done on these 4 stages/steps- □

**Unit testing-** Unit testing is the first level of testing and will be performed by the developers themselves. It is the process of ensuring 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.
- **System testing-** System testing is a black box testing method used to evaluate the completed and integrated system, as a whole, to ensure it meets specified requirements
- **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. 43 Modules and the aspects they will be tested on:
  1. **User interface testing-** The testing of this particular module code will comprise of checking if the application displays all the required buttons and check if the settings panel is in with the main screen. The border line case of this module would be to check how the UI responds when the keyboard or the touch screen does not work or the user provides or gives too many stimuli to the software.
  2. **Bluetooth connectivity-** The testing of the code of this module would deal with the software/hardware connectivity and processing. We will check that how much traffic can be a device handle, in short, the number of Bluetooth devices a unit can be connected to at a given point of time.
  3. **Message delivery-** In this module we will check that if messages that are being sent are being sent to the correct person and without the content of the message being affected.
  4. **Cloud/Backup-** In this module we will be checking if the backup is being made and is being retrieved as and when the user wants to.

Non-Functional:

- **Performance testing-** is a non-functional testing technique used to determine how an application will behave under various conditions.
- **Security testing -** With the presence of cloud-based testing platforms and cyber-attacks, there is a growing concern and need for the security of data being used and stored in software. Security testing is a non-functional software testing technique used to determine if the information and data in a system is protected.
- **Usability testing-** Usability testing is a testing method that measures an application's ease-of-use from the end-user perspective and is often performed during the system or acceptance testing stages.

- Compatibility testing- Compatibility testing is used to gauge how an application or piece of software will work in different environments

Category	Methodology	Tools Required
Non-Functional requirements	Manual validation	Performance testing Security testing Usability testing Compatibility testing
Functional Requirements	Manual	Acceptance testing Unit testing System testing Integration testing

Result:-

Thus, the testing framework/user interface framework has been created for the vacation rental online platform



### 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 & Reporting
Name of the candidate	NUNE NITESH
Team Members	MANTHURI HRITHIKESH, KOLLI LOKA PRASHANTH REDDY
Register Number	RA2011028010140
Date of Experiment	27/5/2022

#### 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 test cases manual and report for the homestay vacation rental online market platform.

## Team Members:

S No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Rep
2	RA2011028010140	NUNE NITESH	Member
3	RA2011028010111	KOLLI LOKA PRASHANTH REDDY	Member

## Test Case

### Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status	Remarks
1.	Verify User Registration from India	Accept Valid India Mobile Number on the Page#1	1. User clicks on User Registration link 2. Enter the mobile Number on the text box 3. Click Register button	User should be taken to the next page for entering more user details	User should be taken to the next page for entering more user detail	Pass / Failure	success
2.	Verify User Registration from India	Don't Accept Non IndianMobile Number on the Page#1	Directly exits the login console	User should be taken to The next page for entering more user details	Shows ERROR message on the console.	Pass	success

3.	Verify that user can add reservation	To check whether user can add reservation	Add reservation button is displayed in main menu	1.System should allow user to enter data in the form 2.system should display error message 3.system should save the form 4.system should cancel form	System allowed to enter data and it is saved	Pass	success
4.	Verify that system should calculate and display departure,time,date	Allow arrival date entered in correct format, no.of days entered in integer value,display departure,time,date	Arrival date is entered by the user No.of days are entered by the user	System allows user to enter date in correct format.allows no.of days in integer	System displayed date,no of days ,departure time in correct format	Pass	Success
5.	Verify that user can select room/property for staying	Show data only if property is vacant for given dates	Select button is displayed to allow user to select room/property	System should show only vacant room available between user given dates	System showed only vacant properties for given dates	Pass	Success
6.	Verify that system must display a confirmation message upon booking room	Allow booking if only above conditions are meant	User has to click save button to save their booking	Booking id should be generated when reservation is saved by system	Booking is generated	Pass	Success

## Non-Functional Test Cases

Test ID (#)	Test Scenario	Test Case	Execution Steps	Expected Outcome	Actual Outcome	Status	Remarks
1.	Performance testing	Application load time should not be more than 5 sec for 20 users at same time	Performance should be evaluated	Performance should be robust	No lag detected	Pass	Success
2.	Security testing	Authorization	User has to give valid login credentials on login page	User should be given access	Access is given to user	Pass	Success
3.	Compatibility testing	Compatibility check across various browsers	Testing with different browsers	No Compatibility issues	No issues	Pass	Success

Category	Progress Against Plan	Status
Functional Testing	Green / Amber / Red	Not-Started / In-Progress / Completed
Non-Functional Testing	Amber	In progress

Functional	Test Case Coverage (%)	Status
User registration	100%	completed
User can search for room/property	100%	completed
User can add reservation	100%	completed

Non-Functional	Test Case Coverage (%)	Status
compatability	100%	completed
security	50% login access	In progress
Performance	40% small scale	In progress

## Result:

Thus, the test case manual and report been created for the vacation rental online market platform.



### School of Computing

Experiment No	12
Title of Experiment	Provide the details of Architecture Design/Framework/Implementation
Name of the candidate	NUNE NITESH
Team Members	MANTHURI HRITHIKESH, KOLLI LOKA PRASHANTH REDDY
Register Numbers	RA2011028010140
Date of Experiment	3/6/2022

#### Mark Split Up

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

Staff Signature with date

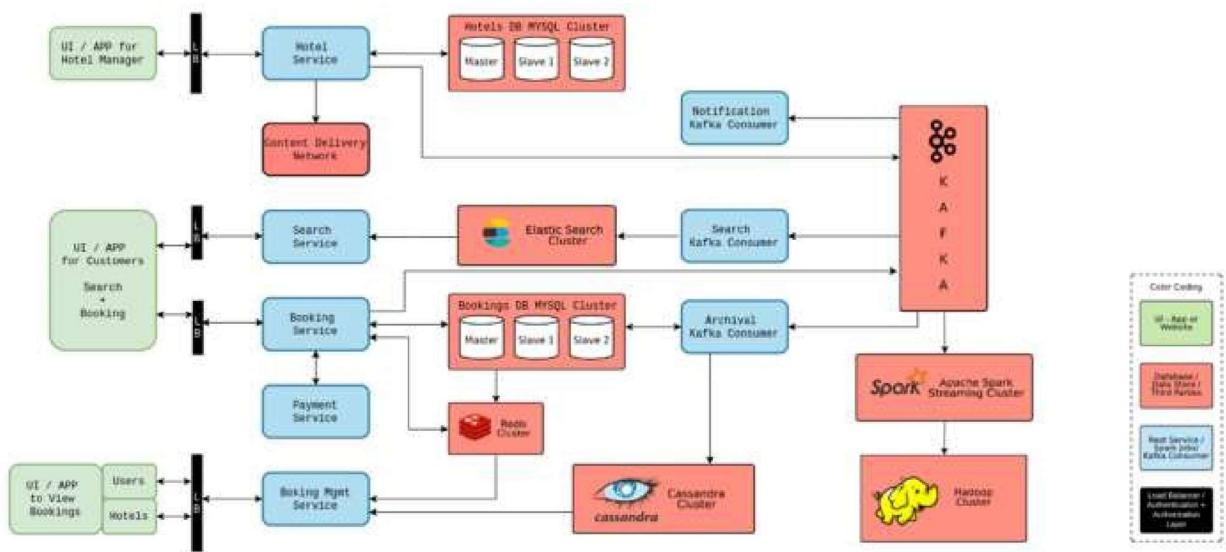
## Aim

To provide the details of architectural design/framework/implementation

## Team Members:

S No	Register No	Name	Role
1	RA2011028010133	MANTHURI HRITHIKESH	Rep/Member
2	RA2011028010140	NUNE NITESH	Member
3	RA2011028010111	KOLLI LOKA PRASHANTH REDDY	Member

## ARCHITECTURAL DESIGN



## Result:

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

## **CONCLUSION:**

Our “bookmystay project ” is more affordable and suitable to the masses than the current various applications which are being used. Our application is user friendly and convenient to use. Also we tried to overcome most of the existing problems in the current system. The integration effort Comprises not only the design and realization of interfaces.*It was a wonderful learning experience for me and our team while working on this project. This project took me through the various phases of project development and gave me real insight into the world of software engineering. The joy of working and the thrill involved while tackling the various problems and challenges gave me a feel of the developers' industry.**It was due to this project I came to know how professional software is designed.*

References:-

[1] Roger S.Pressman, Software Engineering, A Practitioner Approach, McGraw Hill, 2005

[2] Jim Smith Agile Project Management: Creating Innovative Products, Pearson 2008

[3] Walker Royce, Software Project Management, Pearson Education, 1999

[4] <https://www.pmi.org/>

[5] <https://www.projectmanagement.com/>

[6][Project management plan template - project management plan Introduction - Full - project delivery stage - Intro Page « Full » - IT-Enabled Projects - NPMS - Real Property - PSPC \(tpsgc-pwgsc.gc.ca\)](https://www.pwgsc.gc.ca/tpsgc/project-management-plan-template-project-management-plan/introduction/full-project-delivery-stage/intro-page/full-it-enabled-projects-npms-real-property-pspc)

