Experiment No 1

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>

Project Title: EZBOOK

Project Description

EZBOOK is an online hotel booking website that provides the facilities for booking hotels. EZBOOK website contains Booking Search, Currency Converter, Sign In, Sign Up, Manage Booking, Gallery, View Booking, and Log Out. The site also contains the news of the latest promotions available for customers. The Currency Converter is for those customers who wish to see the currency need to be paid in their own country's currency. Below is the company's social link (Facebook, Instagram & Twitter). Customers can give their feedback on our social site also. From the signup page, customers can register to the system by providing their necessary details (Username, First Name, Last Name, etc.). On the left of the interface, users will see the flash motion of upcoming promotions. Customers will see some third-party promotions like Zalora, Agoda, and Air Asia.

We will create Log In interface as a general for both customers and staff. Although it is shown that there is no security level maintenance for staff's login, the login form is indirectly connected with the database. So, whenever anyone wants to key in the Username and Password, it will read the data from the database for matching purposes.

ONE PAGE BUSINESS CASE TEMPLATE

DATE	15/03/2022
SUBMITTED BY	SHUBHANKAR BHOSLE (RA2011027010057) PRATYUSH KASHYAP (RA2011027010064) GOPALAKRISHNA VS(RA2011027010046)
TITLE / ROLE	EZBOOK

THE PROJECT

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

The aim of this project is to make the hotel booking experience easier and more comfortable for the customers and to make the process more flexible and transparent.

- It reduces manual labour.
- It increases efficiency.
- Reduces time.
- Easy to use.
- Convenient for customers.
- Provides Storage functionality.

THE HISTORY

In bullet points, describe the current situation.

The online hotel booking sites were established to make the process of bookings more convenient. There was a need of Online Booking websites because:

- Miscalculations happens frequently.
- Takes more time.
- Harder to maintain records.
- Not very reliable.

Features which make Online Bookings easier:

- We can get the exact images of the hotel rooms before booking.
- We can make our decisions on the reviews which had been given by customers.
- We can get the hotel location easily.

LIMITATIONS

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

- Mishandled reservations and double bookings.
- Incorrect Guest Preferences.
- Third Party Scams.
- Booking Cancellation options is not profitable for booking websites.
- Operating Costs are high.

APPROACH

List what is needed to complete the project.

What we need to complete the project:

- We'll be using react for front end, node js and bootstrap for backend.
- And for UI design, Figma will be used
- Software management and development skills.
- Basic knowledge about current billing system.

BENEFITS

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

- Hassle free management of bookings.
- Increase revenue by upselling.
- Decrease physical workload.
- Payments are easier and faster.

Result

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

Experiment No 2

Aim

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

Project Title:

Selection of Methodology

The Waterfall Model was the first Process Model to be introduced. It is also referred to as a **linear-sequential life cycle model**. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases.

The Waterfall model is the earliest SDLC approach that was used for software development.

The waterfall Model illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete. In this waterfall model, the phases do not overlap.

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

Stakeholder Name	Activity/ Area /Phase	Interest	Influence	Priority (High/ Medium/ Low)
SHUBHANKAR BHOSLE (PROJECT MANAGER)	LEAD THE TEAM IN EVERY ASPECT	HIGH	HIGH	2
PRATYUSH KASHYAP (ADVISOR)	SETTING TARGETS, TAKING REGULAR MEETINGS, ADVISING FEATURES	HIGH	HIGH	2
GOPALAKRISHNAN VS (FRONT END DEVLOPER & UI DESIGNER)	DESIGNING UI , DEVELOPING FRONT END OF THE WEBSITE	HIGH	HIGH	1

Stakeholder Name	Activity / Area / Phase	Interest	Influence	Priority (High / Medium/Low)
Regional Head of Sales & Marketing	Subscription using mobile App	High	High	1
Finance Account Receivable consultant	Multiple Currency Payment	High	Low	3

. Interest and Influence matrix

Interest	Influence
High	High
Low	Low
Low	High
High	Low

Stakeholder	Interests	Estimated Project Impact	Estimated Priority
Owner	Achieve targets, Increase sales margin	High	1
Sponsor	Provides new market to expand ventures Negotiate funding for project Reviews changes to project environments.	Med	3
Team members	Demand incentives Retain and upgrade skills New product excitement	High	2
Project Manager	Lead the team in every aspect. Accountable for entire project scope, team, success & failure	High	2
Investors	Promoter of the investment, Provides necessary financial resources	Low	5
Resource Manager	Resource planning and allocation. Ensuring adequate resource according to project needs and budget.	Med	4
Suppliers	Ensuring feasible and realistic in every aspect Managing divergence from budgeted cost.	Med	6
End Users	Provides feedback	Low	7

Result

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

Experiment No 3

Aim

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

Project Title: < EZBOOK(Online Hotel Booking) >

System Requirements :-

Win98 / XP / Linux

MySQL

Python

Windows 8 or later
Intel Pentium 4 or later
2GB Minimum
1280*1024 or later(Application Window Size)
1280*1024 or later(screen resolution) Required

Functional Requirements :-

Associate every online booking with an account
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 utility
Cancel bookings
Display and change records of guests
Change rooms

Non-Functional Requirements :-

Use encryption to avoid bots from booking
Search results should populate within acceptable time limits
Users should be helped appropriately to fill in the mandatory fields, in case of invalid input

System should accept payments via various payment methods
Easy to use, efficient, and accessible
Keep track of documentation, activities, and responses

Result

Thus the requirements were identified and accordingly described.

Experiment No 4

Project Plan, Cost Estimation

Project Title: EZ**BOO**K

PROJECT PLAN

1. Creating a basic Layout of the whole software Model
2. Finalizing the Tech Stack to be used
3. Designing the Website
4. Working on the Frontend Part
5. Working on the APIs
6. Building up the Backend Part

EFFORT & COST ESTIMATION

Estimated LOC = 48000
Average Productivity of system = 400 LOC/month
Labour Rate = $4000/month

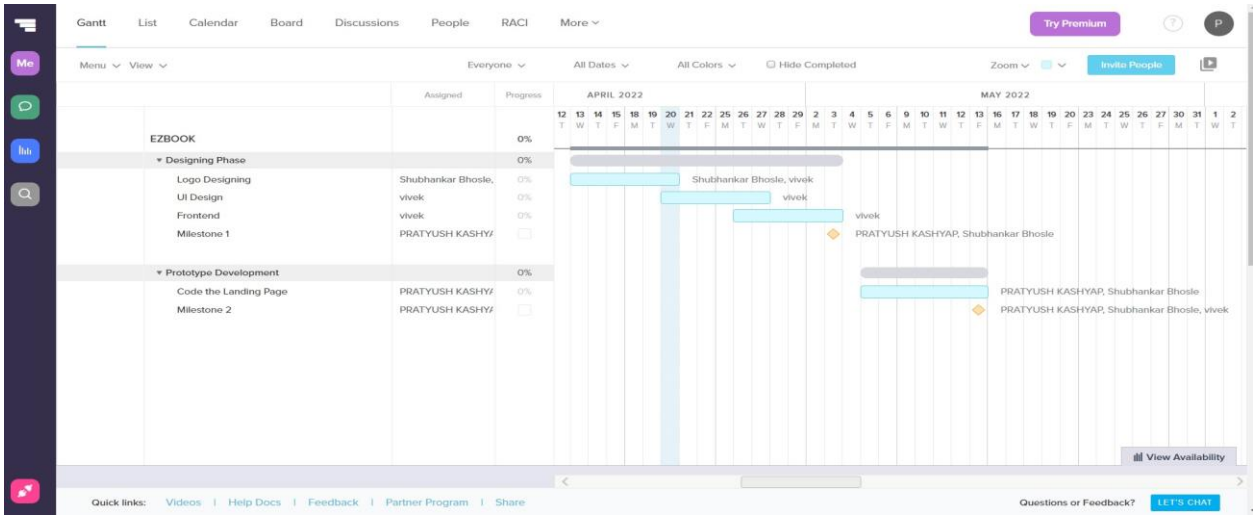
EFFORT
Basic Model
ab = 2.4 bb
= 1.05
KLOC = 48
Effort = 2.4(48)^1.05
= 139.8**COST**
ESTIMATION

Cost per LOC = 4000/400 = $10
Total Estimated Project Cost = Estimated LOC*Cost per LOC
= 48000*10
= 480000
Estimated Effort in pm = Total Estimated Project Cost / Labor rate per month
= 4,80,000/4000= 120 result :- project plan and cost estimated

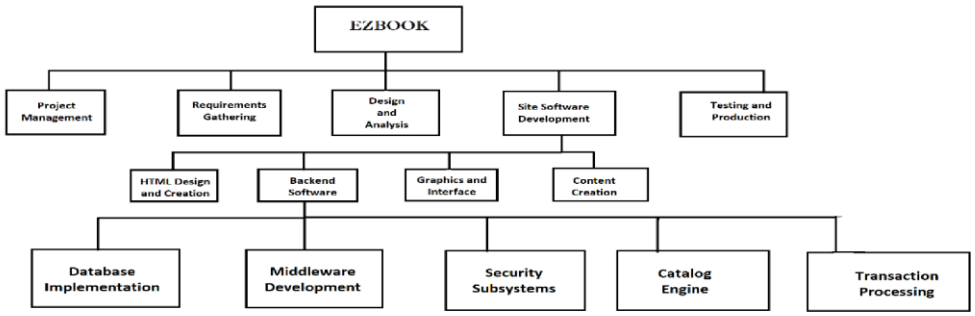
Experiment No 5

Project Title: EZBOOK

Gantt Chart -:

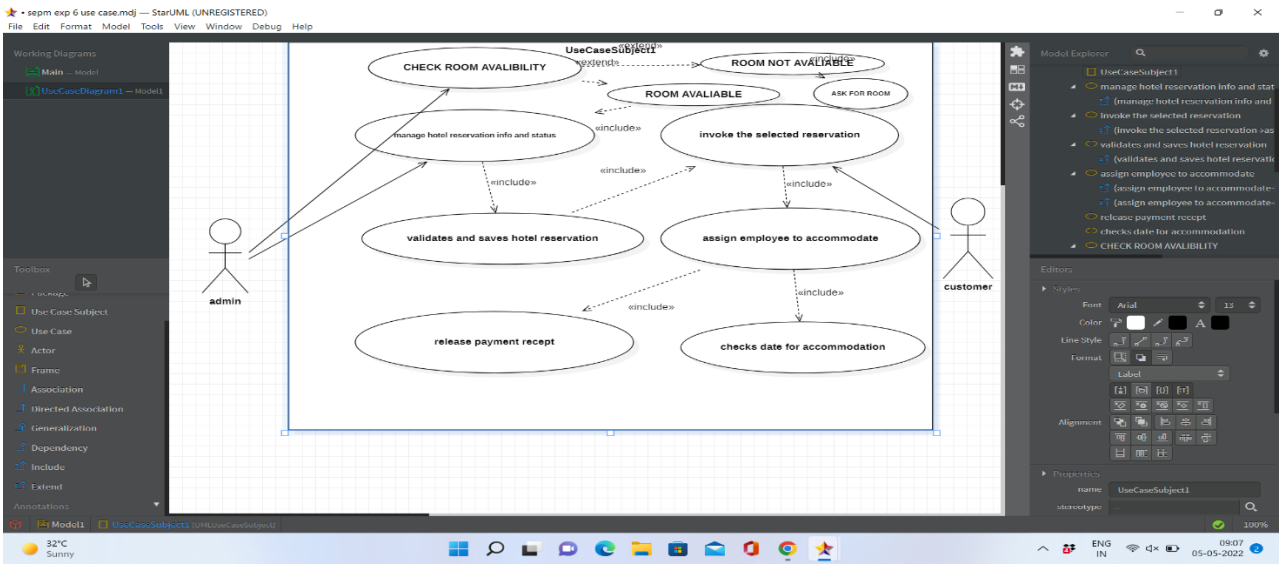


Work Breakdown Structure (WBS)-:

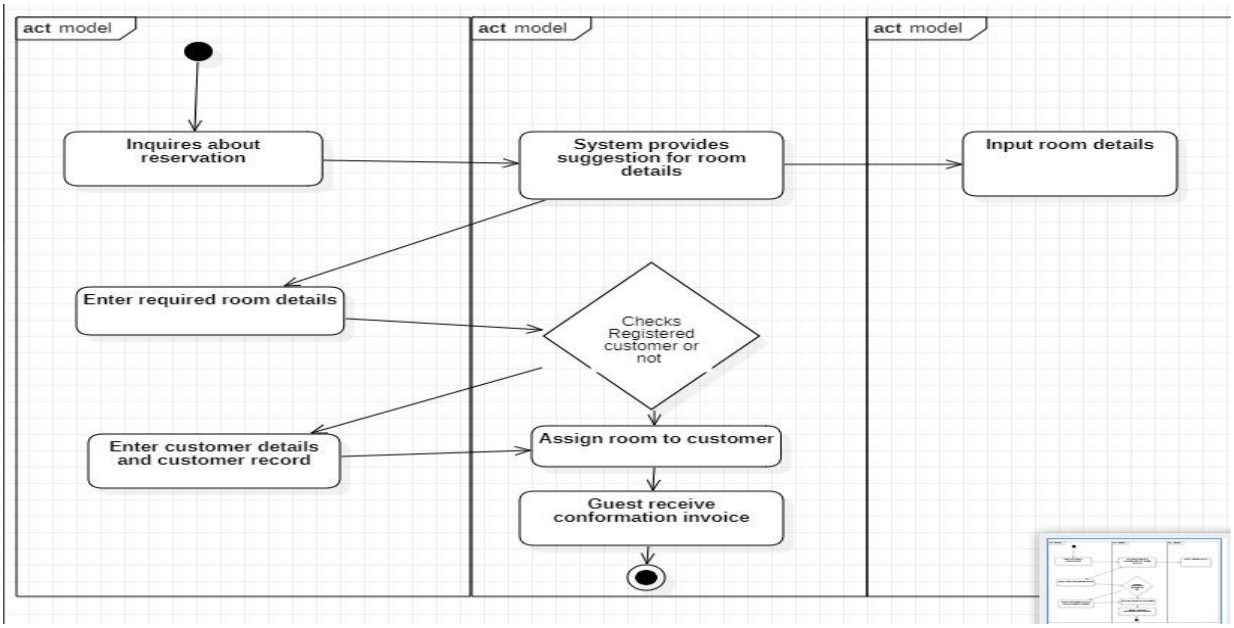


Experiment No 6

USE CASE DIAGRAM: -



CLASS DIAGRAM:



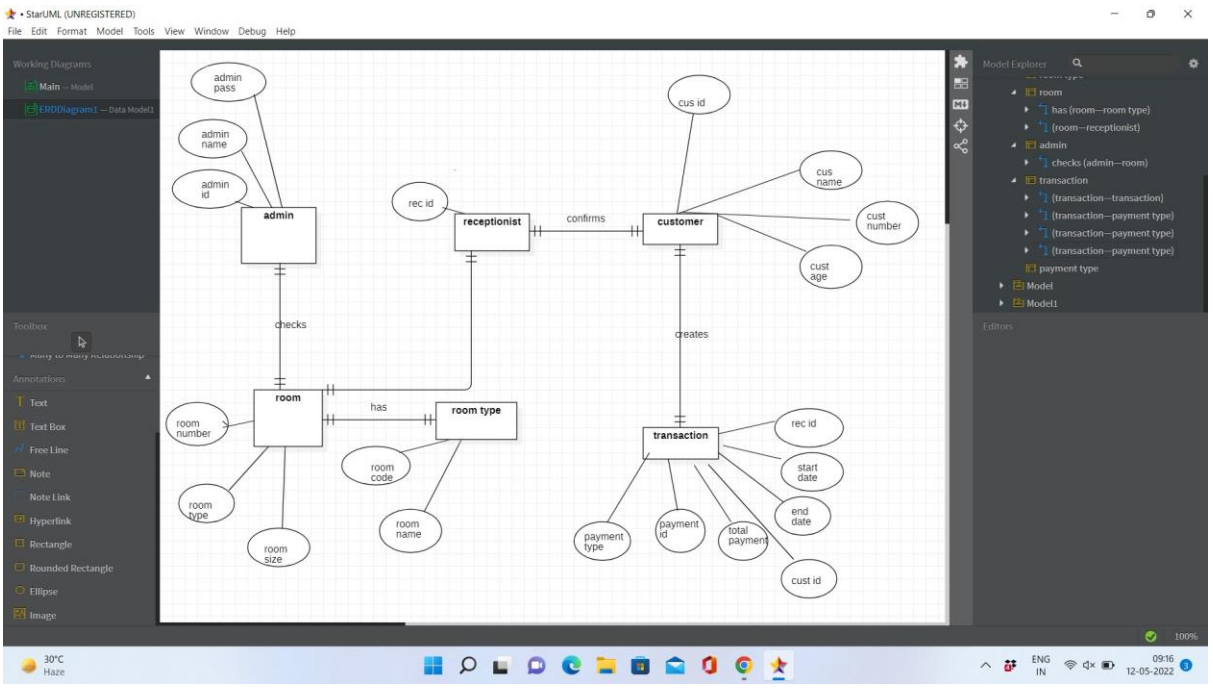
RESULT: - HENCE, THE CLASS DIAGRAM, USE CASE DIAGRAM, SYSTEM ARCHITECHTURE

Experiment No 7

Aim

To create the Entity Relationship Diagram

ER Diagram:-



Result:

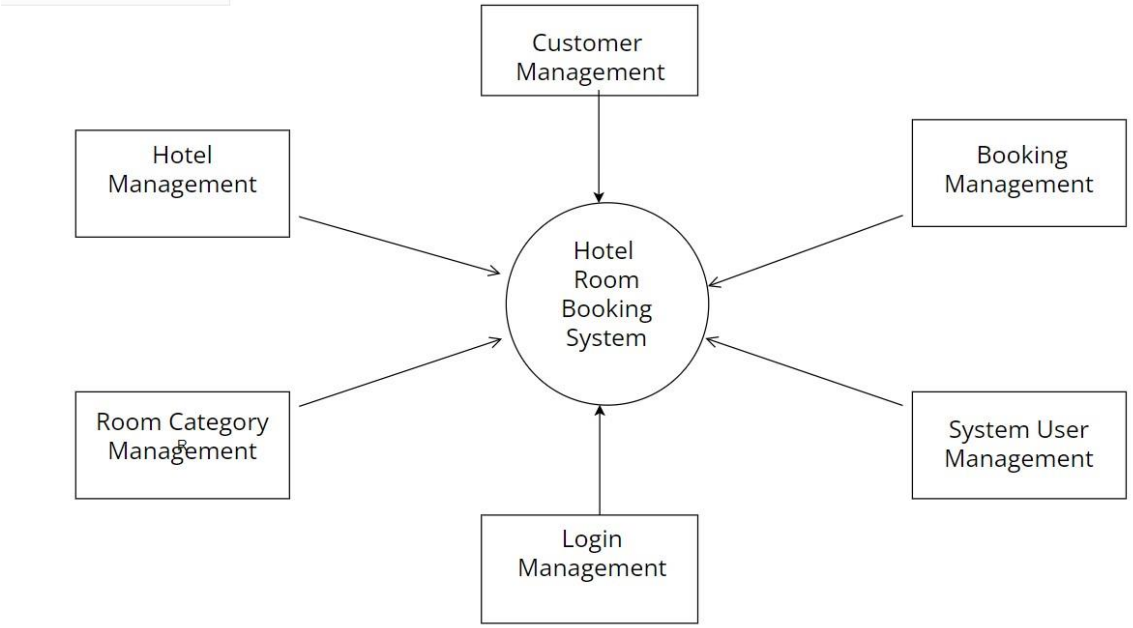
Thus, the entity relationship diagram was created successfully.

Experiment No 8

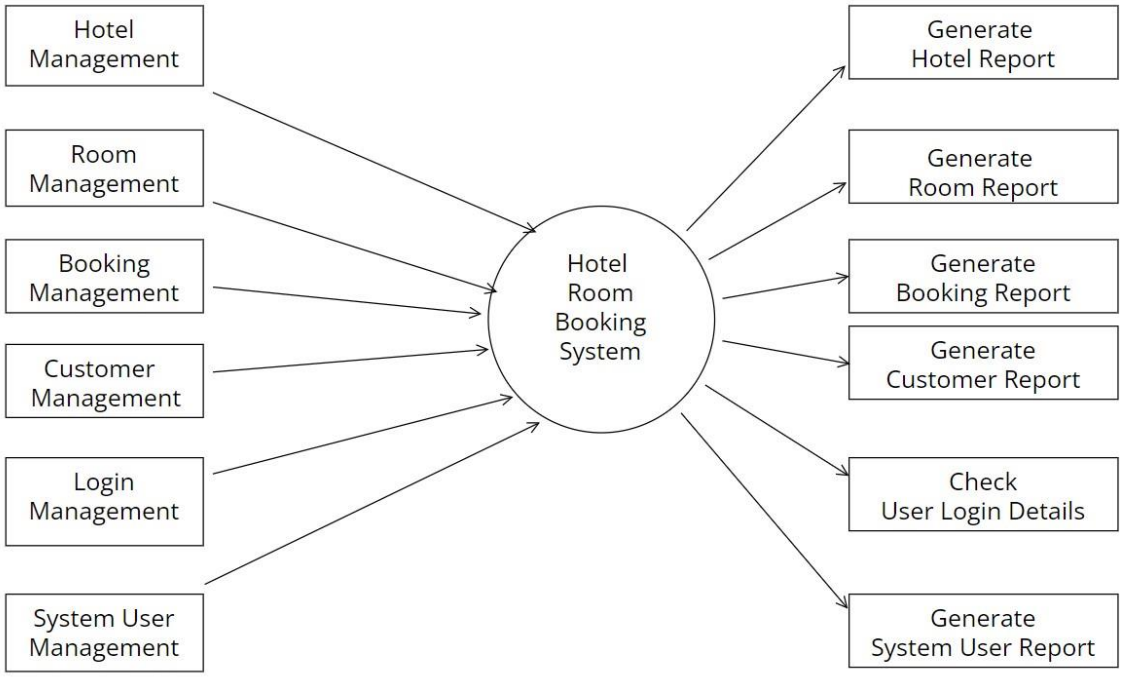
Aim

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

ZERO LEVEL DFD:-



LEVEL 1 DFD:-



Result:

Thus, the data flow diagrams have been created for the Hotel Booking System.

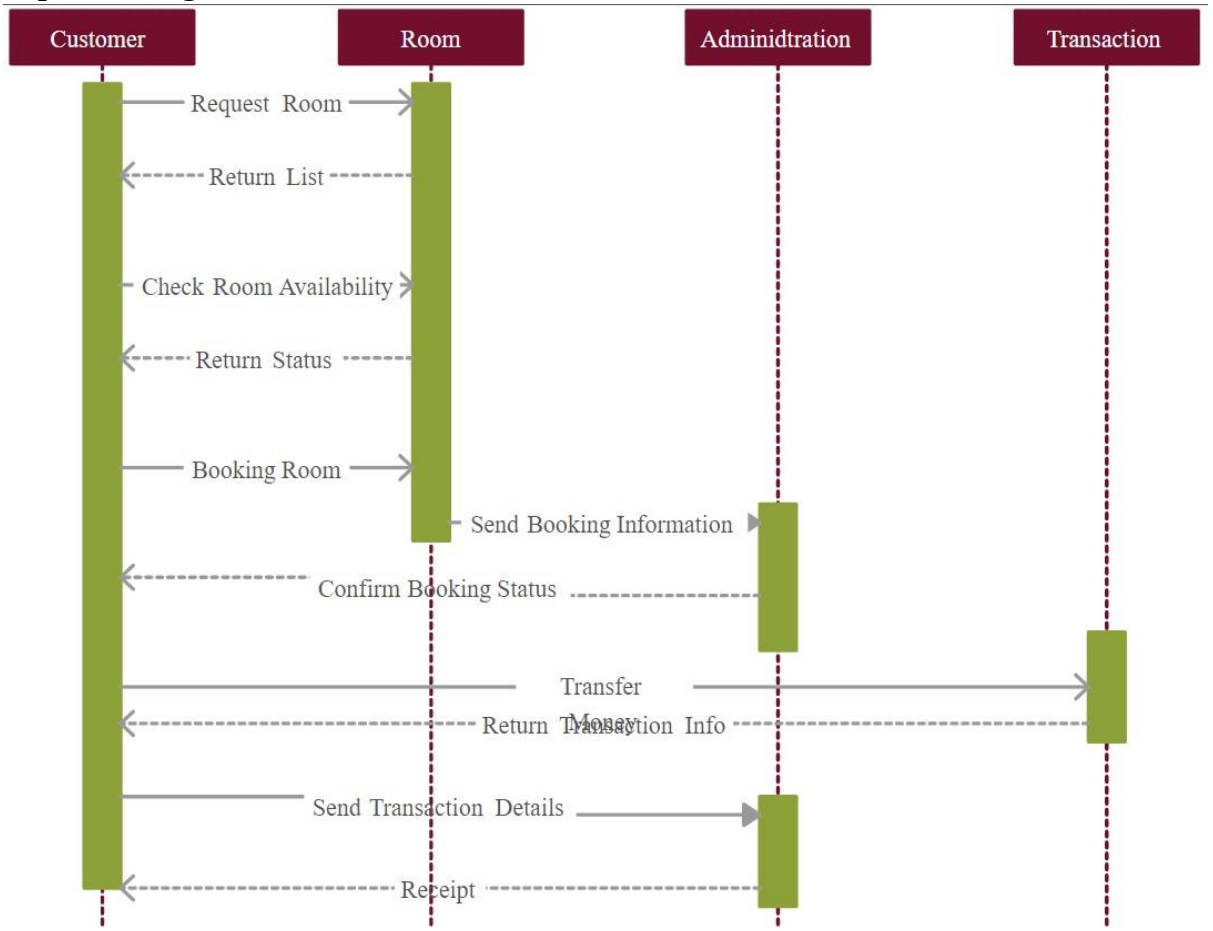
Experiment No 9

Aim

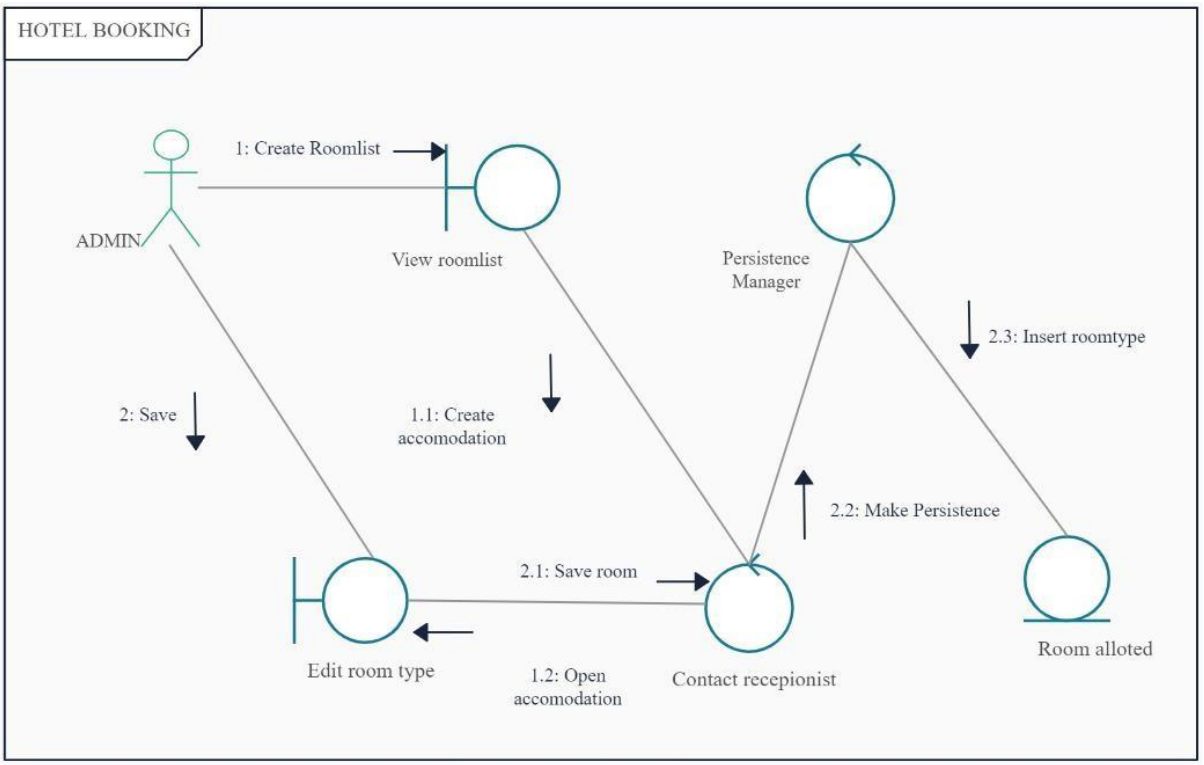
To create the sequence and collaboration diagram for the Hotel Booking System.

Sequence and Collaboration Diagram

Sequence Diagram



Collaboration Diagram



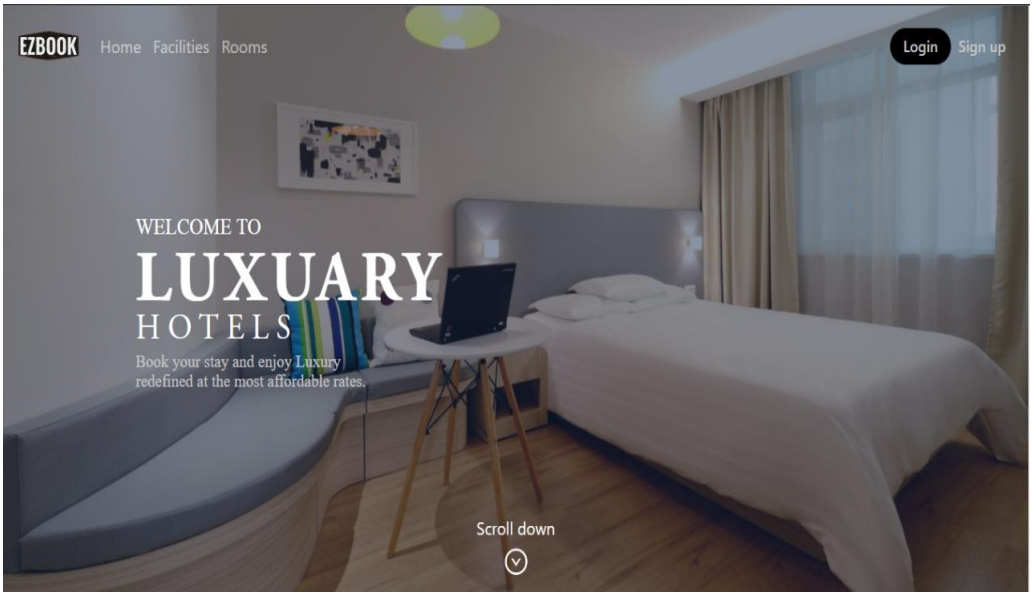
Result:

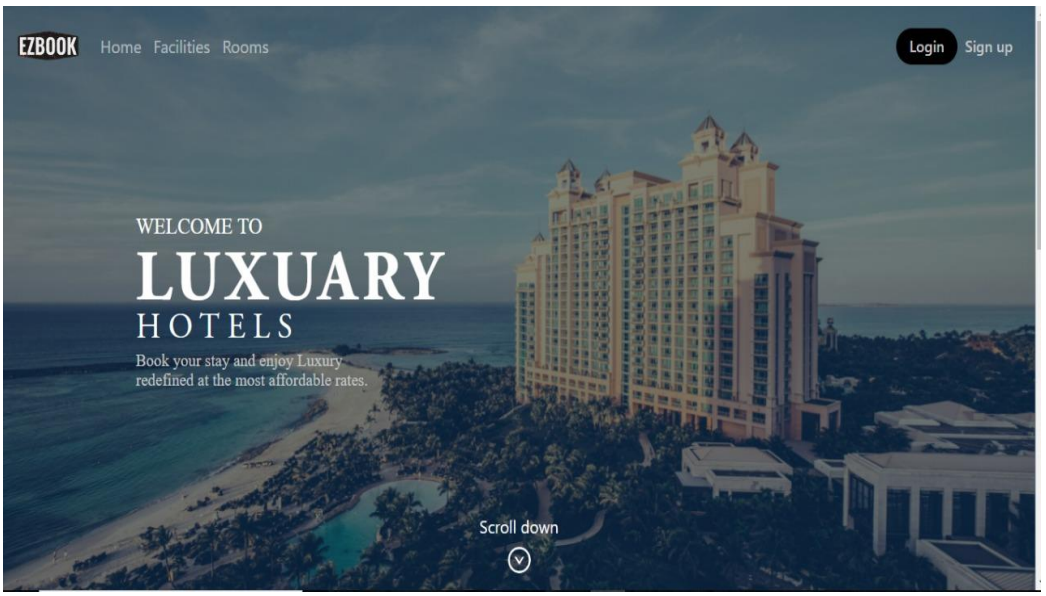
Thus, the sequence and collaboration diagrams were created for the Hotel Booking System.

Experiment No 10

AIM: - DEVELOPMENT OF TESTING FRAMEWORK/USER INTERFACE

USER INTERFACE: -



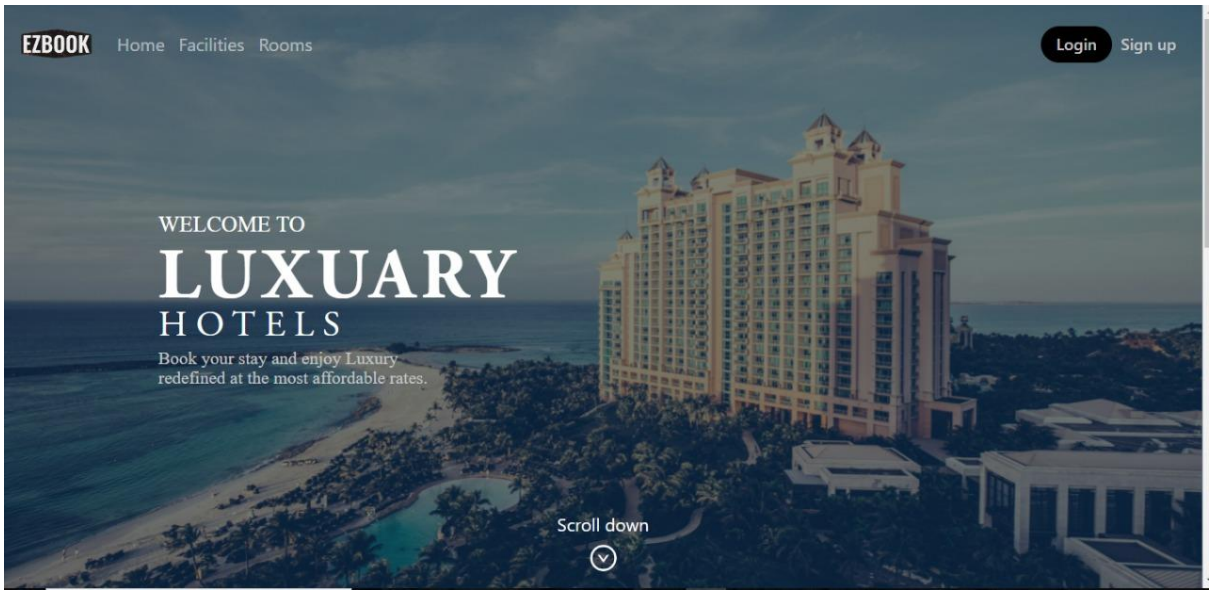


RESULT: - DEVELOPMENT OF UNSER INTERFACE HAVE BEEN DONE SUCCESSFULLY

Experiment No 11

AIM: - TEST CASES & REPORTING

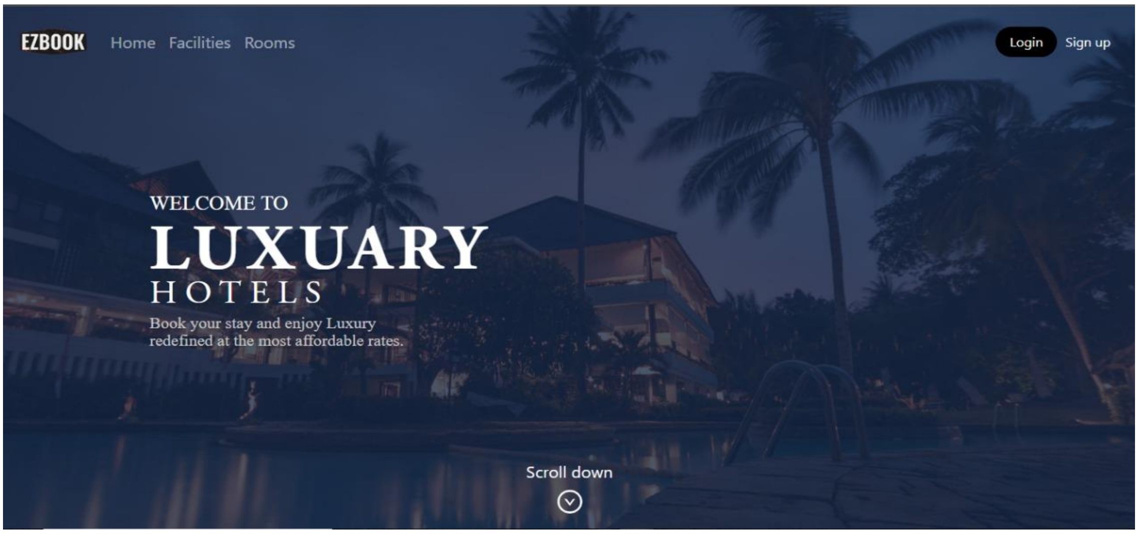
1) HOME

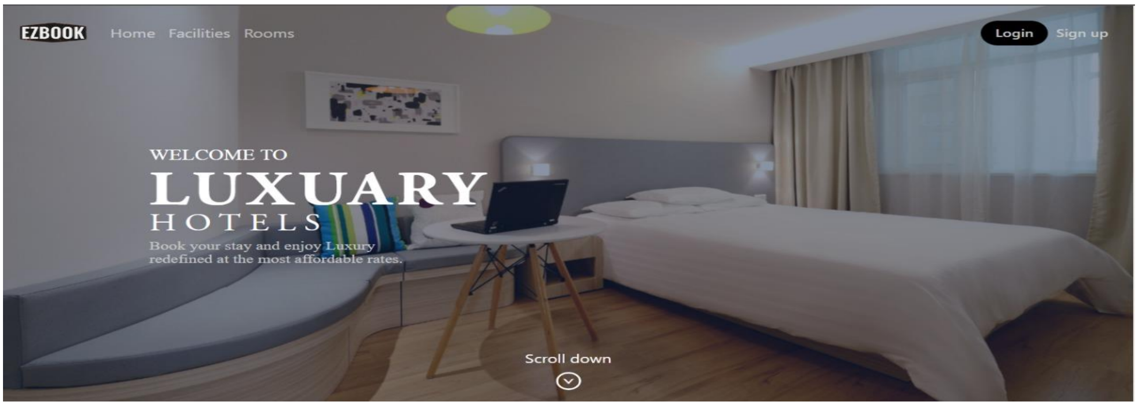


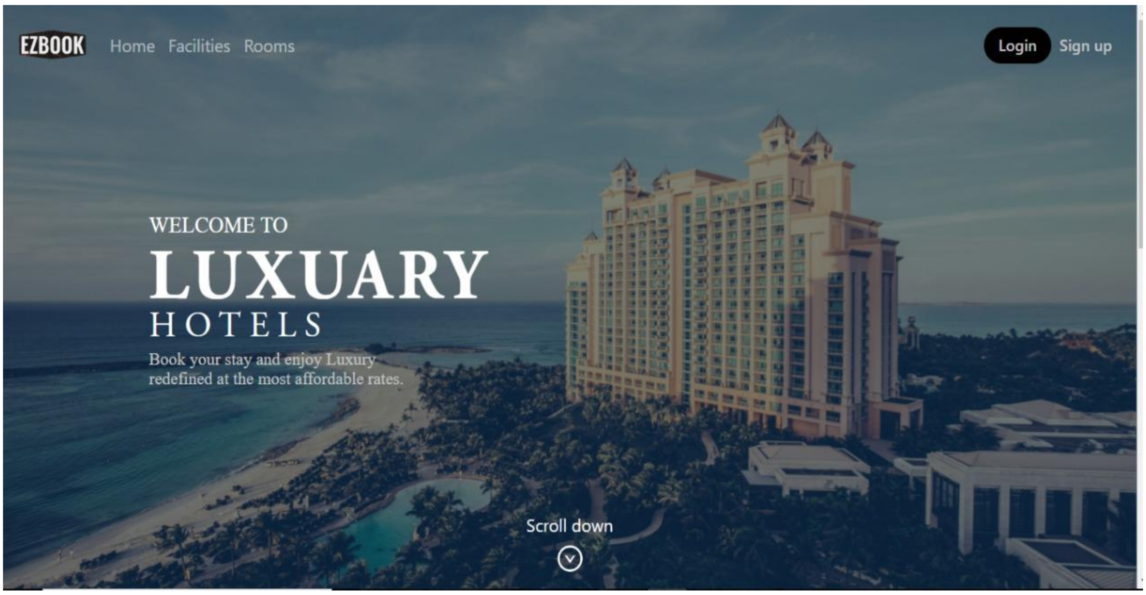
2) LOGIN

Experiment no 12

Aim: - Architecture design and framework implementation








EZBOOK
Ezbook
Login
Forgot Password?


EZBOOK
Enter your username
Enter your email
Enter your password
Signup

CONCLUSION

After logical analysis and interpretation of data, these are the conclusions that can be drawn from the findings of the study:

1. All the difficulties encountered by the employees in the hotel were rated as moderately extent which means that they don't usually encountered such problems.
2. In the security, accuracy, and speed they rated it fair, which means, that they have to improve their manual performances into faster and effective way.
3. In terms of urgency of an automated booking system, majority of the respondents answered it yes, because they observed and realized that they need more reliable, efficient, and helpful system.

Features:

This system can help to provide convenient way of entering customer's data without any delay. It can have a more secure and private records or files from customers.

1. Encoding of User and their Privileges. Allows creation of user and administrative account to ensure the security of the system.
2. Encoding of Customer's Information. The system accepts the customers' information that is encoded.
3. Generate Billing. The system automatically generates customer's bill from previous transactions.
4. Income statement. The system updates the income of the hotel and records automatically the result of the transactions made.
5. Confirms and cancel reservation. The system will accept incoming reservation requests personally or through telephone and will cancel requests if the customer tells to do so.
6. Settings for the price of exceed persons. The system provides settings for inputting price for exceeds person and will automatically update the changes made.

REFERENCES

1)https://www.javatpoint.com/software-project-management

2)https://www.w3schools.com/nodejs/

3) https://www.teamgantt.com/

Appendix (code)

1)HOME

```
.home {

    height: 480px;
    width: 1000px;
    display: flex;
    flex-direction: column;
    align-items: left;
    justify-content: center;
    color: white;
    margin-left: auto;
    margin-right: auto;

}

.welcome {
    font-family: 'Montserrat';
    font-weight: normal;
    font-size: 25px;
    color: #ffffff;
}

.luxuary {
    font-family: 'Adobe Garamond Pro Bold';
    font-weight: 700;
    font-size: 80px;
    line-height: 90px;
    letter-spacing: 7px;
}

.hotels {
    font-family: 'Adobe Garamond Pro Regular';
    font-weight: 500;
    font-size: 40px;
    line-height: 10px;
    letter-spacing: 10px;
    margin-bottom: 20px;
```

```
.home-content{
    font-family: 'Montserrat';
    font-weight: normal;
    font-size: 20px;
    line-height: 22px;
    color: #c6c6c6;
}
.scroll{
    position:relative;
    margin:auto;
    display: flex;
    flex-direction: column;
    justify-content: center;
    align-items: center;
    color: white;
    font-size: 20px;

}
.scroll-down{
    color: #ffffff;
    font-size: 34px;
    line-height: 34px;
    border: none;
    background-color: inherit;
}
@media(max-width:768px){
    .home{
        width: fit-content;
        align-items: left;
    }


}
```

2) LOGIN

```css
.login{
    width: 100%;
    height: 100vh;
    display: flex;
    align-items: center;
    justify-content: center;
}
.signup{
    width: 100%;
    height: 100vh;
    display: flex;
    align-items: center;
    justify-content: center;
}
.margin{
    border: 1px solid #adaaaa;
    border-radius: 10px;
    padding: 40px;
}
.logo{
    width: 50px;
    height: 50px;
    padding-bottom:150px ;
}
.con{
padding: 10px;
}
.con button{
    background-color: #000000;
    color: #ffffff;
    border: 0px solid #000000;
    border-radius: 20px;
    padding: 5px 10px 5px 10px;
    margin-left: 60px;
}
.link{
    color: #888888;
```

3)ABOUT ROOMS

```css
.rooms-images{
    display: flex;
    justify-content: center;

}
.rooms-images img{
    height: 50%;
    width: 50%;
}
.description{
    margin-left: auto;
    margin-right: auto;
    text-align: center;
    margin-bottom: 20px;
    font-size: 30px;
    font-family:  'Montserrat';
    font-weight: 500;
    letter-spacing: 2px;
    background-color: #14274A;
    color: #ffffff;
    width: 50%;
}
.title{
    font-family:  'Adobe Garamond Pro Bold';
    margin: 100px 0px 50px 0px;
    text-align: center;
    letter-spacing: 5px;
    font-size: 44px;
}
.subtitle{
    font-family: 'Montserrat';
    font-size: 20px;
    font-family: 400;
    margin: 0px 150px 100px 150px;
    text-align: center;
}
```

4) ABOUT FACILITIES

```css
.facilities-content{
    display: flex;
    justify-content: center;

}
.facilities-content img{
    height: 500px;
    width: 60%;
    display: flex;
    margin-bottom: 100px;
}
.title{
    font-family:  'Adobe Garamond Pro Bold';
    margin: 100px 0px 50px 0px;
    text-align: center;
    letter-spacing: 5px;
    font-size: 44px;
}
.subtitle{
    font-family: 'Montserrat';
    font-size: 20px;
    font-family: 400;
    margin: 0px 150px 100px 150px;
    text-align: center;
}
```

```css
*{
  margin: 0;
  padding: 0;
}
@font-face {
  font-family: 'Adobe Garamond Pro Bold';
  font-style: normal;
  font-weight: normal;
  src: local('Adobe Garamond Pro Bold'), url('./assets/AGaramondPro-Bold.woff') format('woff');
}

@font-face {
  font-family: 'Adobe Garamond Pro Regular';
  font-style: normal;
  font-weight: normal;
  src: local('Adobe Garamond Pro Regular'), url('./assets/AGaramondPro-Regular.woff') format('woff');
}
```

```css
body {
  margin: 0;
  font-family: -apple-system, BlinkMacSystemFont, 'Segoe UI', 'Roboto', 'Oxygen',
    'Ubuntu', 'Cantarell', 'Fira Sans', 'Droid Sans', 'Helvetica Neue',
    sans-serif;
  -webkit-font-smoothing: antialiased;
  -moz-osx-font-smoothing: grayscale;
}

code {
  font-family: source-code-pro, Menlo, Monaco, Consolas, 'Courier New',
    monospace;
}
```