

HOTEL BOOKING WEB APPLICATION

Project report submitted in fulfilment of the requirement for the degree of

Bachelor of Technology in

Computer Science and Engineering by

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Under the supervision of

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to

Dr Yugal Kumar



Department of Computer Science & Engineering and Information
Technology

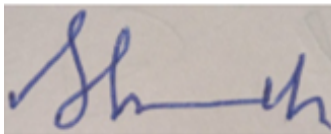
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Certificate

Candidate's Declaration

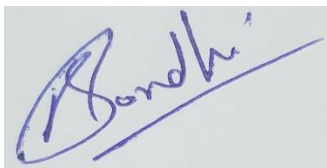
I hereby declare that the work presented in this report entitled **HOTEL BOOKING** in fulfilment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering submitted in the department of Computer Science & Engineering and Information Technology, Wagnaghat is an authentic record of our own work carried out over a period from February 2021 to May 2021 under the supervision of Mr. Bobin Sondhi.

The matter embodied in the report has not submitted for the award of any other degree or diploma.



Shivansh Shekhar

This is to certify that the above statement made by the candidate is true to the best of my knowledge.



Mr. Bobin Sondhi

Dated

Acknowledgement

It was great pleasure to work on this project. Working on this project was a immense learning experience.

We are thankful to Mr. Bobin Sondhi and for his support, cooperation, and motivation provided to us during the training period.

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ABSTRACT

Hotel bookings have become an important industry due to the drastic increase in visitor numbers in most major cities. Hotels are also facing unprecedented competition with online travel agencies using every trick in the book to attract customers. In this project I have tried to solve the problem of increase in demand of hospitality industry.

In recent time there have been boom in sites like Airbnb, Oyo, Hotel Trivago. All have them exploded in term of site traffic. SF based company Airbnb reported a revenue of 337.8 crore USD in times of global Pandemic.

This Project utilizes Node.js to power the backend of site.

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CHAPTER-1 INTRODUCTION

(1.1) What is Hotel Booking site?

Booking your hotel online is a popular option. You can use online security to protect your privacy and financial information, and research, Travelers can use a travel agent or a travel website to make reservations because the Internet has made it easier to find information about. Making travel arrangements through the Internet is also convenient for last minute flights and hotels. Hotels may drop the price of a room.

Since hotel reservation systems are becoming increasingly similar, companies have to either negotiate with each chain individually, which is expensive and time consuming

These websites effectively act as travel agents for the hotels. If a travel site sends the hotel's information and rates downstream to thousands

(1.2) Increase in Hotel booking sites

India is indeed a picturesque place known for its high potential. The country's currency situation has improved year after year. , various overlapping phenomena have been improved, and India has gradually become one of the top countries on the world map. Also, if the population exceeds 1.5 billion and the speed of advance exceeds 6%, the situation may be different. From now on, why online booking in India will continue to grow at a rapid pace, there are generally many options. With the expansion of development work to remote cities, countless job opportunities have familiarized the unemployed youth, more and more people are being cared for and have money to buy expensive and expensive on the surface.

(1.3) Online Shopping

Online hotel booking is a method of reserving accommodation over the internet which allows the guest to communicate directly with the hotel. This website will enable users to buy and sell hotel rooms quickly, easily, and in a way that is more convenient than traditional methods

Which organization flashes in your psyche first? Airbnb, Oyo .

CHAPTER-2

LITERATURE REVIEW

Understanding the psychology of online buying is important for any company that wants to succeed in the online marketplace. Our approach for a single page online shopping cart involves the customer making most of the choices. Develop a single web page application using AngularJS framework which is customer-responsive and uses CRUD database operations.

(2.1) Merit

1) Less Wastage of time:

By purchasing online, we save a lot of time. We can buy any of our preferred things from home and need not visit

2) Increase in revenue

You can buy any product online at any time. It's because shops give huge discounts and rewards when you buy a product.

3) Additional Profits:

We can send these items to your homes without having to pay any delivery charges. If you find that the items are not suitable

4) Use from anywhere:

People can buy products from anywhere in the world, even though the company doesn't have a physical storefront in every city.

5) Sell blessings legitimately:

With the websites that offer express delivery, you can get your gift delivered in less than 24 hours to any state in India. With gift cards and blessing crates, it's possible to send a present to somebody without needing to go to the store.

6) Hunt niche items

Online shops have virtually no limitations on space, so they can offer more products than traditional shops can. Brick and mortar stores often have limited space, which makes it difficult for them to display a full range of products.

7) Web server all day all year

You can make your purchase from any time of the day. The site will never shut down, so there is no worry. With a view to comprehend the vital part of web application development, today we're going to explore how the web application development process

The BBC story has markedly extended after a time in the Indian subcontinent. There are numerous shopping areas, which are by. With a huge number of individuals visiting these locales, they have furthermore become ideal stages for advancements and announcements of different brands.

Worldwide, the electronic buying industry is growing rapidly. This growth is in large part being driven by rising numbers of online buyers. There are many different places to buy a phone, including online. Online shops often have lower prices, but also offer less information. All the companies that sell snacks to grocery stores are doing very well with the hardware they buy from this server.

A number of the organizations give the clients crucial gives with each buy while some give uncommon offers that are cost-effective and reasonable

(2.2) Study of increase of hotel and ecommerce

. Indian online businesses are created at the worst annual rate of improvement of 40% AZ09, which vary to \$ 36 billion in progress of \$ 38 billion.

Indian E Commerce is currently 1% of the general retail market, but it is growing up at a percentage of 40 years. India has more than 300 million Internet users, and the number is growing. India has a large market, and electronic commerce is still in the early stage of soba.

"Indian Web Business Industry remains the last arrangement of the Indian website business industry. Although the electronic business does not contribute to a contribution of 1.6% of 1.5% of the countries of several countries, 15% of Indian networks were found with up to 54% from China and half of China ", he said: "He says:" In Atula and Survey of Nitina, the Association is moving towards the opening. In India, two main organizations of web organizations are directly as they start. The possibility of an Indian business online is also unusual. 77% will be ideal for traveling. Indian web business. The online business of India is developing soon. It is the fastest growing segment of the Indian web business. Immediately we recognize that India is one of the largest retail markets in the world, and

CHAPTER-3

METHODOLOGY

(3.1) Design of Site

The approach in which we did this project was meta-analysis. Meta-analysis is an approach for gathering and analysing. Meta-analysis is a method for combining the results of several studies. In this way, you can increase the sample size. Meta-analysis is a type of statistical analysis that combines data from different experiments in order to increase the size of the sample being. This is a type of study that incorporates the results of several other studies in an effort

(3.2) Tackled Problems

To Solve the problem of hotel booking without going to physical site. Provide a service where people can easily decide to book hotels without going through the hassle of visiting the hotel. Making website simple to use and ease the whole process. In doing this also help hotel owner to increase there revenue

(3.3) Aim

1. To build a single page internet business application that will utilize Angular Architecture, which will move most of the work to the front-end. To enable the client to alter the substance of a page easily.
2. Make a robust backend of a site using Node.js which can handle large traffic with ease.
3. When you implement login using the Hub JSON Server, you can add, change and remove your application's data..
4. Implementing a login system will make it easier for people to visit your website or application and get the information they need..
5. Implementation of RESTful API

(3.4) Challenges

1. Finding shortcomings of hotel booking app.

2. Locating quantity of future buying.
3. Collecting data on consumer loyalty.
4. Finding customer patterns.
5. To get a better picture of our application, let's do some research and take a closer look at what the customers

CHAPTER-4

WEB-DEV

Web development is a diversified line of work for the more complex programming activities involved in creating internet based software. Web development is the art of creating web applications. It can range from simple static pages to complex web applications. People don't think they need website design and development until they realize the crucial role a website plays in their organization. Website development is a multifaceted phenomenon that involves web design, website organization, web content creation, client/customer communication. Web specialists are generally concerned with two aspects of a website: content and appearance. The content team is responsible for the actual creation. These systems generate a single-page application that allows customers to add and change information as they need. Purchasing and selling items on the Internet is a great way to make money, but you need to have your finances in

Front-end developers are the face of a website. They design and develop the user interface that users interact with. Front-end development is a term used to describe all of the aspects of a website that the end-user interacts with. Back-end development is used to describe the parts of the website that users don't see, such as server communication, database. The back-end is the invisible part of the website — how it communicates with the server, encrypts data, connects to server

Every software and web development project should culminate with a thorough QA testing stage, which will look for broken links and pathways. Each website and software project should culminate with a thorough QA testing stage.

(4.1) Website/ Webapp

A webpage is a combination of related webpages and including text and multimedia content, usually identified by a domain name. A website is a collection of related web pages including multimedia content. Usually, the website is identified by the domain name, the target has multiple restrictions, and it can be used in multiple structures.

The site can be a personal site, a commercial site of an association, an organization site or an unprofitable affiliate site. Locals usually focus on a specific point of view or reason, from deception and casual communication to breaking news and preparation. All accessible destinations, all considered content include the World Wide Web, and private places (for example, the websites of the associations they represent) are always a kind of intranet. The page is the structure box of the destination, it is the report, usually composed of simple content mixed with the layout rules of the markup language from the hypertext markup language (HTML, XHTML). They can combine audience segments from multiple regions with

appropriately tagged captures.

Therefore, use the Angular architecture to create a single page business Internet application that shifts most of the processing work to the client side, allowing the client to stack a single HTML page and gradually update the content of the page. By having to restore the page, the customer collaborates with the application and helps people to buy and sell products online. They used the Angular architecture to create a single page business internet application that moved most of the processing to the client side, allowing the client to stack a separate HTML page and gradually update the content on that page without having to restore it. For example, customers collaborate with applications and help people buy and sell products online.

(4.2) MPA/SPA

SPA creates a dynamic data without reloading the entire page.

They **inadvertently replaced the old workspace application because of its growing advantages, almost no updates, and it has nothing to do with the device. In addition,** despite the **customer's gentle versatility,** interest in 's **amazing and exquisite** application is **still evolving and continues to evolve. If you plan to set my application to Angular , you may have** heard that **MPA and SPA** web applications **have backbone layouts. In addition, these two methods obviously have their own advantages and disadvantages.** Before began to **transform its thinking into a real business application to make a single web page using the angular architecture, the architecture moved most of the processing work to the client, so that the client could stack pages of HTML separately and gradually** When the update client **cooperates with** the application and helps **people buy and sell goods on the Web, there is no need to reactivate the content on the page. The singleton application and the multidimensional application have many advantages and disadvantages. Most of the management work on the client allows you to stack a single HTML page with the and gradually update the content on the page. , Without having to rely on , because the client can collaborate with applications, and can help people buy and sell goods on the Web.**

(4.3.1) SPA

SPA is not a native strategy for all stacking of the program to stack the different pages, but uses new web server data to cooperate with the Web program with the Web program in cooperation with the QUELLY site page. Native application

. The objective is a rapid progress that slows the site at gradually as a nearby application.

All basic concepts and HTML principles, JavaScript and the CSS code are recovered by program using a single page load. Alternatively, the appropriate resources are fully stacked and generally added to the page, considering the exercises of the clients. The page was not recharged at the same time, regardless of how to use the Hash or Historiexapi territory to give a free awareness and navigation in the application. Since then, the Singleton application is an

application similar to a program and does not require recharge from the page during navigation. You use this type of employment daily.

They are connected to provide an incredible UX by making efforts to imitate the "marked" environmental construction program. It is a single site page you visited. Use JavaScript to stack all other substances: they are seriously dependent.

Spa requires marks and data essentially, using a single architecture to move most of the adoption work, using an isolated angle architecture to stack an isolated HTML page, and can update the substance gradually. The client collaborates with the application and helps to buy and sell items on the web, without avenging it.

Plus:

- It's literally impossible to generate code for every single language. Therefore, one language should be used as the general universal language
- It is architected so that client-server data transfer is done on a cache-friendly binary object
- It is fast, as there is no need to re-compile the code every time it is run.
- It's easier to adapt an application if you can reuse the same backend code for web applications and mobile applications.
- It's easier to make an application for both iOS and Android devices if you can reuse
-

the same backend code for both web applications. Local business application programming interfaces (APIs) enable you to reuse the backend code for web applications.

- Applications can hold (or cache) data from remote servers and display that data without needing the remote server to be online or available.
- Applications can make requests to one location, storage all data, and then gain access to it in a disconnected fashion.

Minus:

JavaScript is particularly unsafe and not a straightforward task to make search engine optimization improvement. A web application can exchange data and update. Search engine

optimization is a tricky and complicated process that can be difficult to improve by yourself. However, there are SEO services out

If you're not able to display JavaScript, it will be difficult to present application and its exercises.

All JavaScript code should be written in a way that it will work even for customers who have disabled JavaScript.

If your customers can't access your application, they will not be able to interact with it.

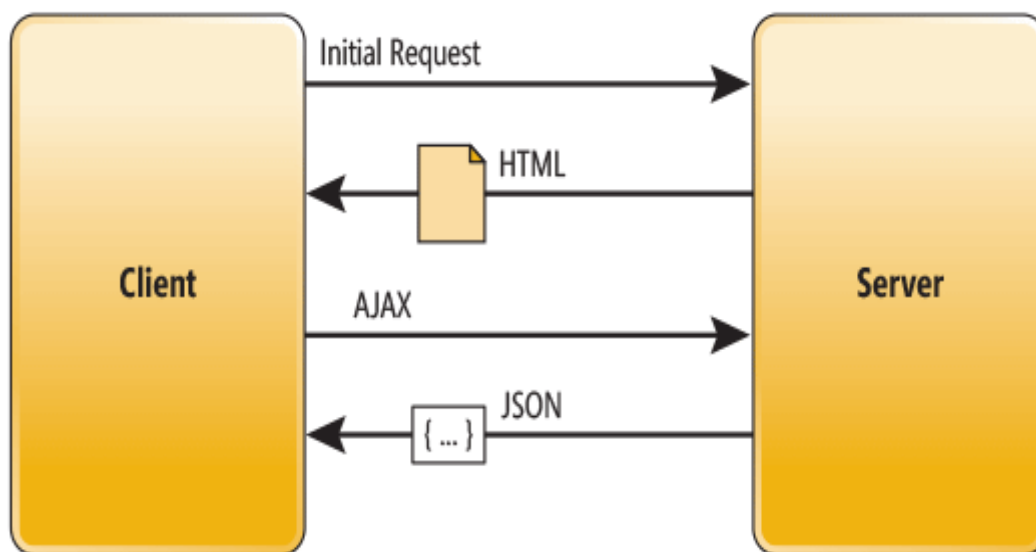


Fig – Working of SPA

(4.3.2) MPA

Multi-page applications are normal web applications that can reload the full page and display enhanced pages when the client is associated with the web application. Every time information is exchanged, the server will mention another page to display in the Internet browser. This process puts some work aside to create the page on the server, send the page to the client, and display it in the program, which can affect the customer experience.

Despite this, AJAX allows to present only specific parts of the application, but this makes the update process more and more cumbersome and complicated.

These applications are very large, larger than the SPA should be. Due to the nature of the content, these applications have many user interfaces. Fortunately, it is no longer a problem. To use an Angular architecture to build single page business Internet applications, the architecture will move most of the processing to the client side, allowing the client to stack a single HTML page and gradually update the content on that page. Without having to give it back to customers who work with apps and help people buy and sell products online.

Plus:

This is ideal for people who aren't familiar with your app and need a detailed onboarding. MPA are different from native apps because users can navigate around the app in a variety of ways.

They are great as well as simple for legitimate search engine optimization. They give better opportunities to rank for various catchphrases

Minus:

There is no alternative to using the same backend with third-party components because they are too unstable.

The work involves creating a system that connects an engineer's program with a customer's database. Engineers have to think about both the



Fig – Pro and Cons of SPA

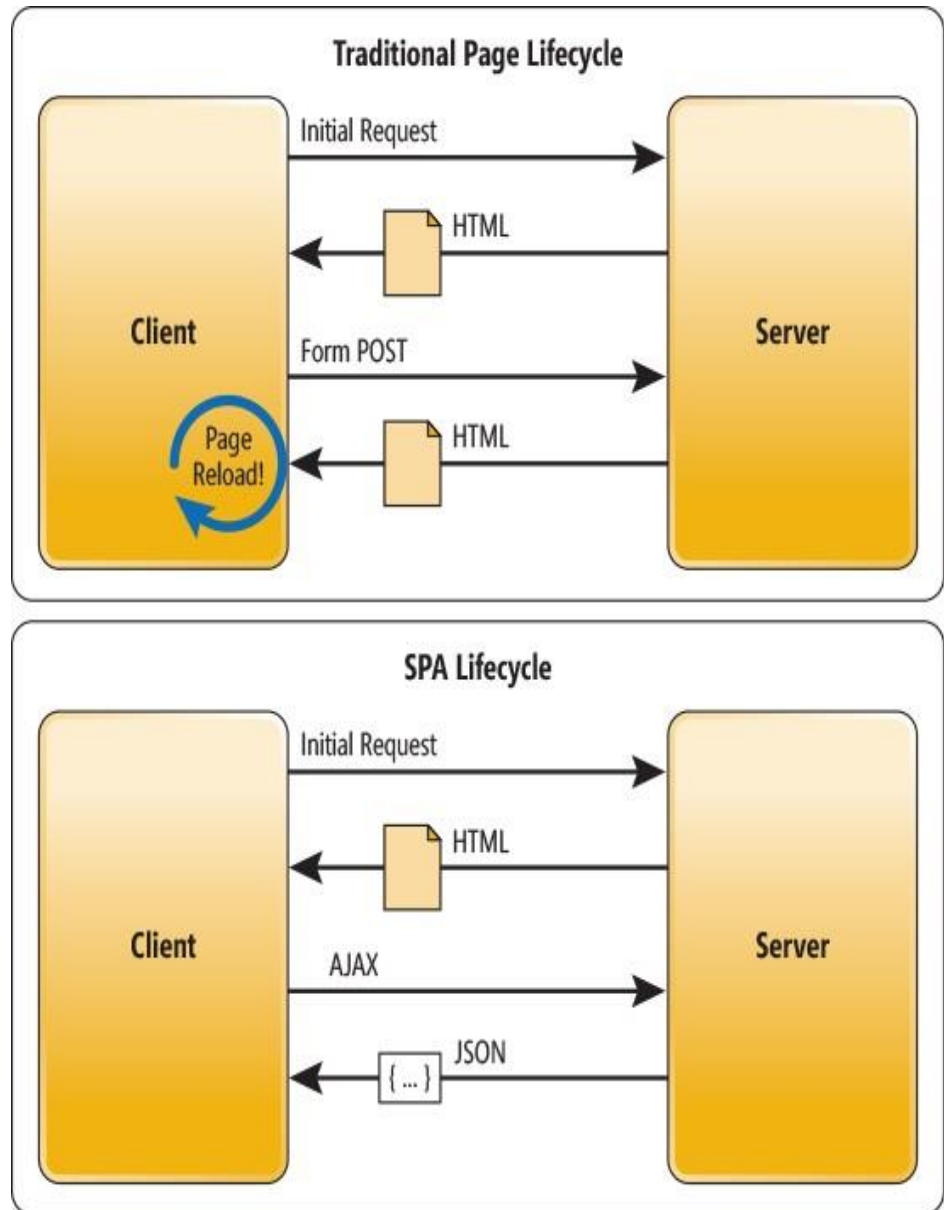
(4.3.3) Which do you prefer?

Even though you can use it to manufacture any web application using a single page application approach, some of them should consider before allowing everything you can.

The first important problem should list the elements and capabilities required for its web application. Does the Spa provide capital to all volumes and emphasize the most outstanding aspects you need? For example, your site is progressively in content, is it concentrated in illustrations? Or are both? Can all design and matter can fit per page per page?

Does your company manage explicit items or administration, and you offer varieties and food management? Your business can manage lonely items, but you can not do it at all about solitary page applications. On the other hand, if your company is assigned or item, you must provide your own individuals by ramifying them in a multi-pages application on a variety of pages. This has the advantage of the deep connection of each page.

(4.3.4) SPA Lifecycle



(4.4) ANGULAR

Angular is an typescript framework based on typescript, which encourages the use of client-side code in Angular UI. It provides a declarative programming model that allows you to create a functioning site without relying on a back-end server. Angular is an MVC framework and MVVM pattern. The event-driven architecture is similar to Rails and Sinatra, but Angular UI and its directives and pipelines make it more flexible overall.

Prior to this, AngularJS revolutionized web rendering and helped designers create high-quality UI (user interface) for their applications.

It was created by Andy Baize, and Angular was open source in 2012. Angular is developed by Google, and its core team consists of many people from various companies, including members of the Angular core team, the AngularJS maintainer and Facebook Angular employees.

Pre Knowledge

You must be comfortable with

- JS/ES6/ECMAScript
- Hyper text markup language
- Simple Cascading Style Sheet

Prior info about TS can be helpful

Step 1: Install the Angular CLI

1. Angular CLI
 - [Download Angular CLI](#)
2. NodeJs
 - [Download Nodejs](#)
3. Package Manager - NPM / Yarn
4. Clone the repository and run `npm install` if you use **npm** as package manager or `yarn install` if you use **yarn** as package manager.

Build

Run `ng build` to build the project. The build artifacts will be stored in the `dist/` directory. Use the `-prod` flag for a production build.

(4.4.1) Structural of Angular application

Every Angular application consist of:

1. AppModule:

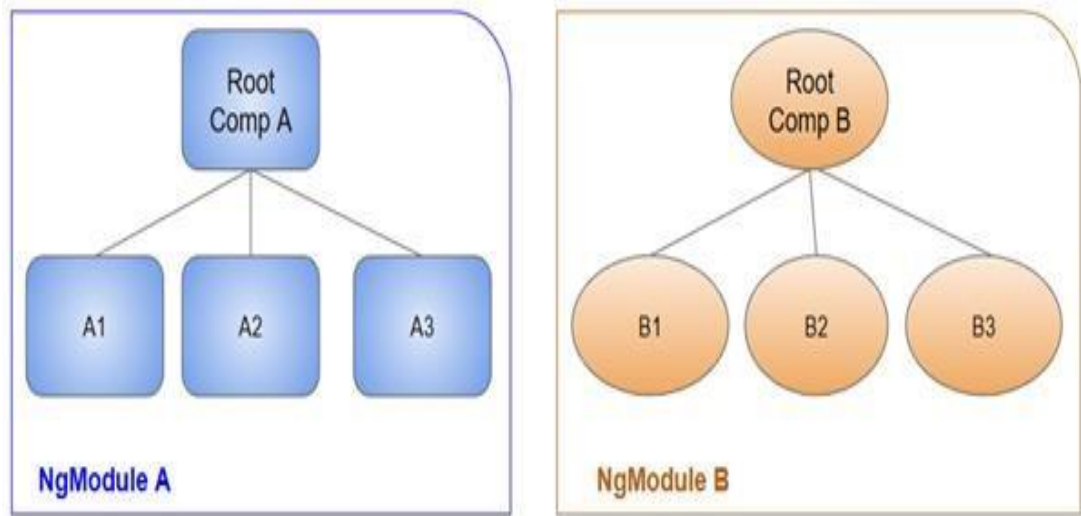


Fig 4.4.1 (a) Structure of Angular app

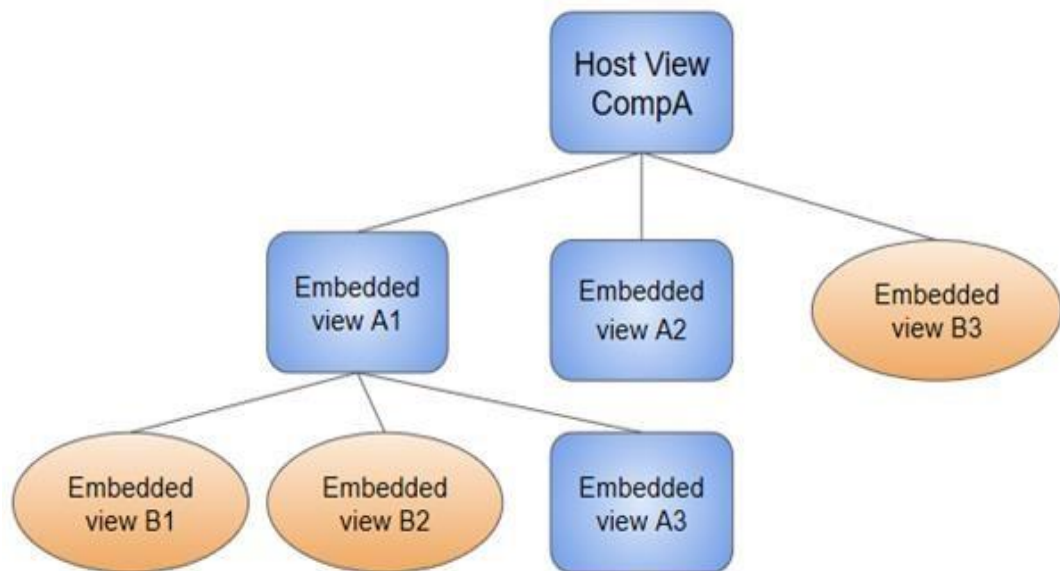


Fig 4.4.1 (b) Structure of embedded modules

2. AppComponent

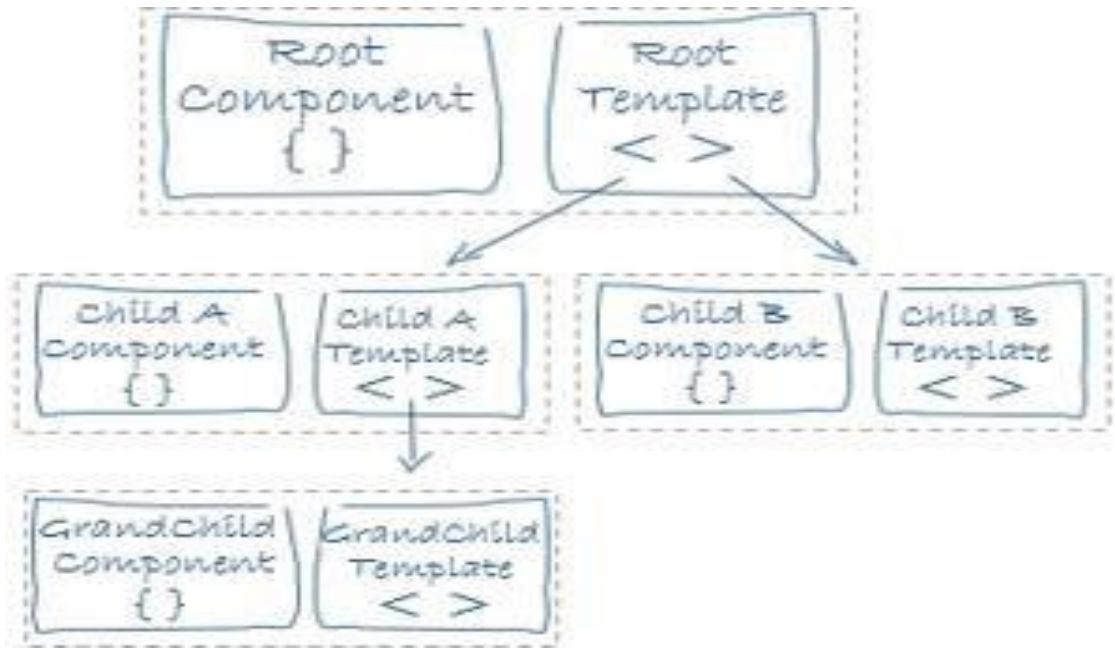


Fig 4.4.2 Hierarchy of root and child componets

3. DI System

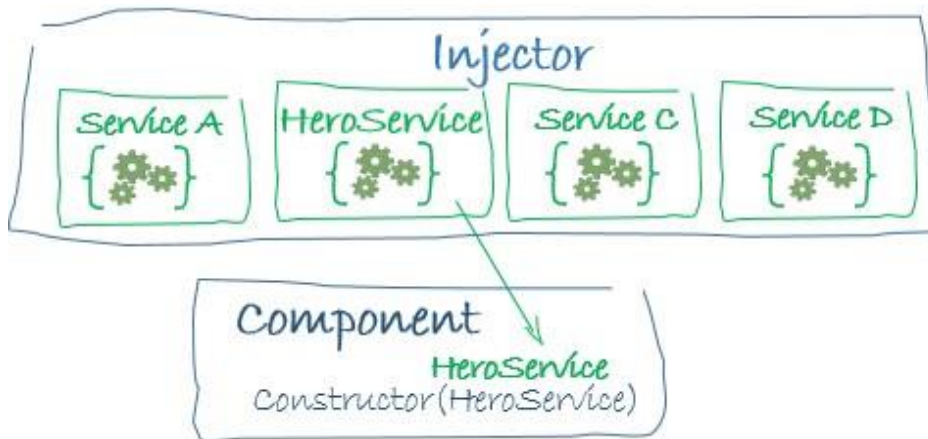
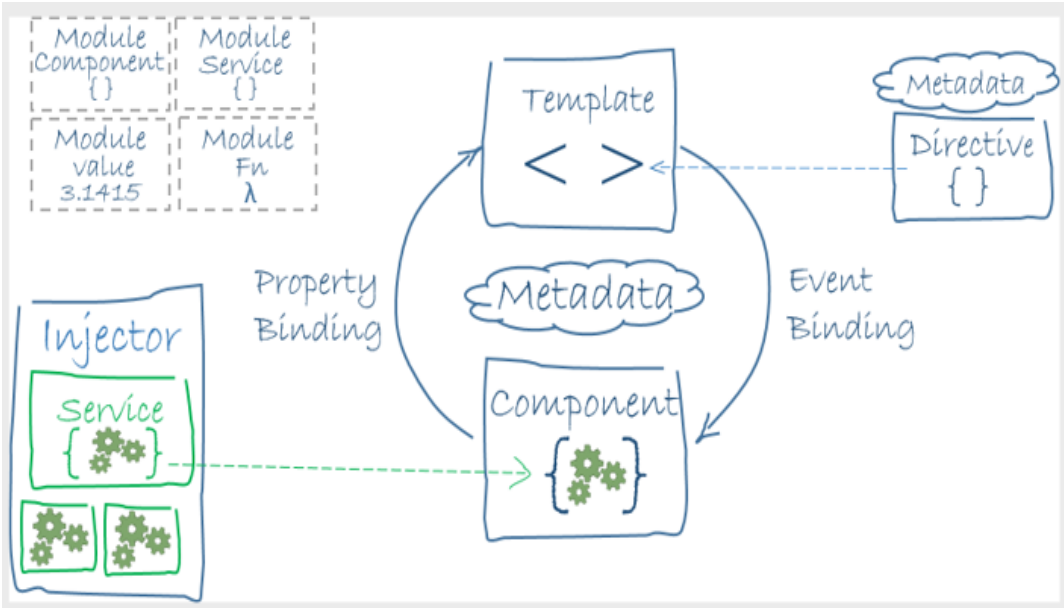


Fig 4.4.3 DI system

(4.4.2) Structure of Angular application



– Fig - Full overview of a angular app

(4.5)Node.js

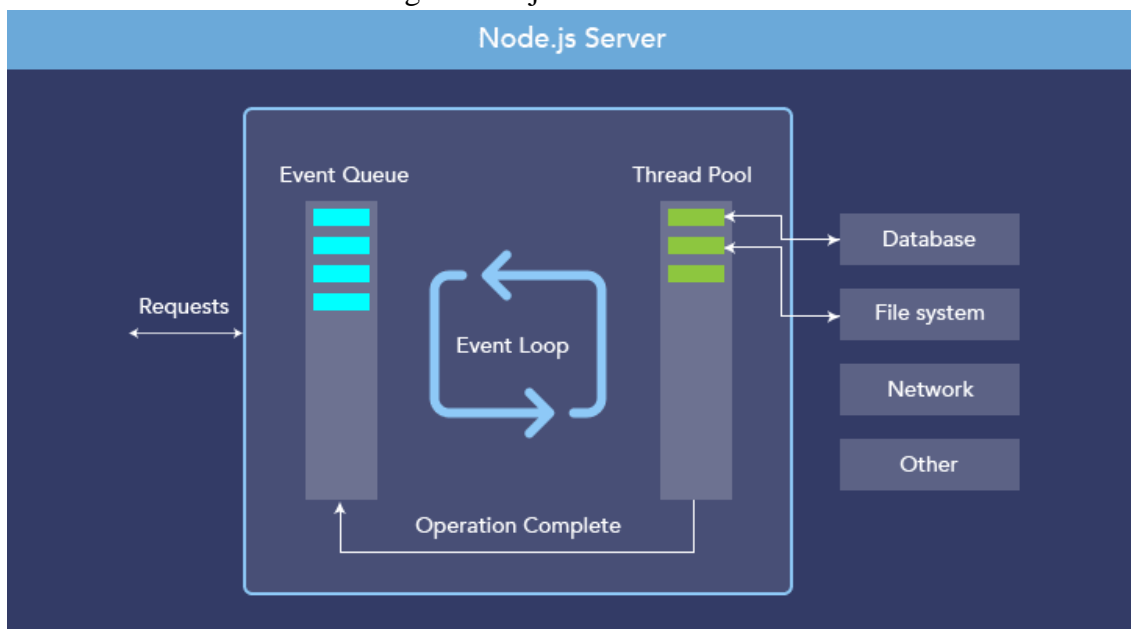
Node.js is a standalone runtime used to execute JavaScript code on the server. It provides JavaScript language engine and many APIs, many of which allow application code to interact with the underlying operating system and with the outside world. But you may already know it.

Take a look at JavaScript's single-threaded feature, and understand one of its biggest advantages and disadvantages of , as well as part of , explaining why it is so important to run Node.js in distributed mode. also contains a small couple of sample apps, which are used as a reference for , and only has been updated multiple times throughout the project.

The first iteration of these applications may be simpler than any product that you have previously delivered to production. If you find that you already know the information in the first sections of this , feel free to skip to the " Sample Application". The JavaScript language is moving from the single threaded language to the multi-threaded language. For example, the Atomics object provides mechanisms to coordinate communication between different threads, and the SharedArrayBuffer instance can perform reads and writes between each thread. That is to say, at the time of writing this , multi-threaded

JavaScript has not yet acquired in the community. Today's JavaScript is a multi-threaded , but it is still a single-threaded language and the essence of the ecosystem.

Fig – Node.js



Node.js fully embraces the Continuation-Passing Style (CPS) pattern throughout its internal modules by way of callbacks—functions that are passed around and invoked by the event loop

once a task is complete. In Node.js parlance, functions that are invoked in the future with a new stack are said to be run asynchronously.

Conversely, when one function calls another function in the same stack, that code is said to run synchronously. The types of tasks that are long-running are typically I/O tasks. For example, imagine that your application wants to perform two tasks.

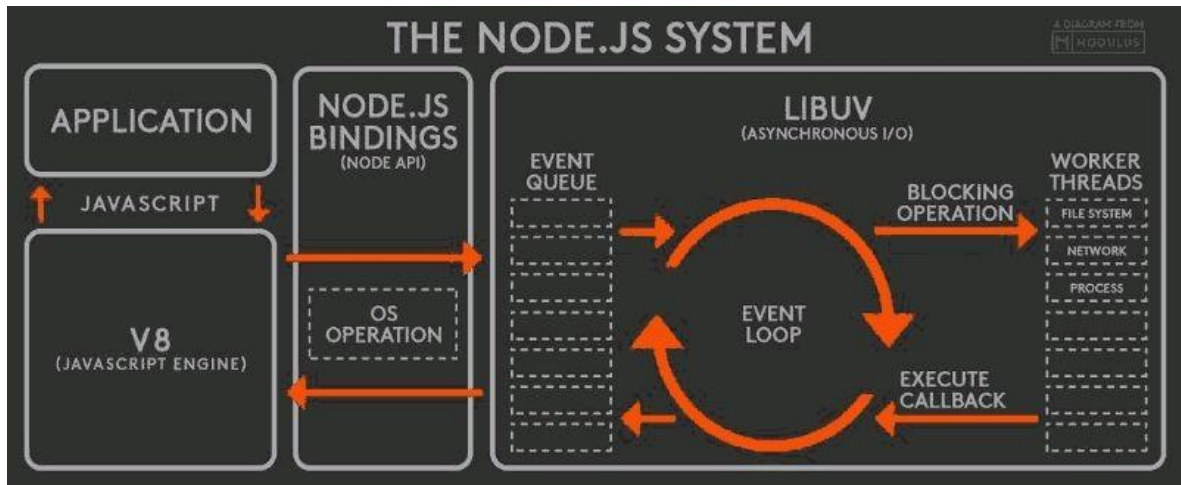


Fig – Node.js System

- Node JS Platform uses “Single Threaded Event Loop” architecture to handle multiple concurrent clients using a single thread.
- When Node JS development comes into the picture, a technology called ‘non-blocking I/O model’ is used
- The standard HTTP model for web applications is a request-response model in which the client sends an HTTP request and the server responds
- The majority of web applications are built using a client-server model. The client sends requests to the server

(4.6) Database

The database is a central location where you can store a lot of information related to your business or industry. It is a source of facts and information.

Database management software will help you improve operations. You can create custom columns and indexes to make information easier to find. Database software can simplify your workflow by allowing employees or contractors to obtain information when they need it.

Database is a collection of tables and columns (called rows) that together provide access to facts and data stored in the database. A typical database table can have one or more primary keys (identifying rows in the table), and can also have auto-incrementing (tracking of the records that have been accessed) and foreign key references (stored as a set of logical labels in the same row).

There may be some columns (called fields) that are less common and sometimes specific to specific records in the database.

Procedure can help you select specific notes or content from the database. The process is divided into three steps: one step connects to the database, one step retrieves the relevant comments, and the other step writes the comments in the specified storage format.

Database Architecture

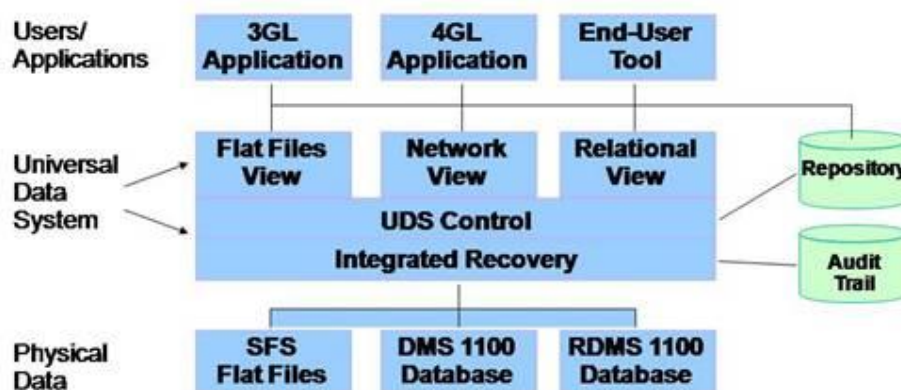


Fig – Database architecture

(4.7) SQL VS NOSQL

SQL	NO SQL
Data is stored in tables with fixed rows, cols	Data is stored in tables with JSONS
Developed in 1970s	Developed in late 2000s
Follows ACID model	Do not Follows ACID model
Preferred for complex queries	Preferred for simple queries
Vertically Scalable	Horizontally Scalable

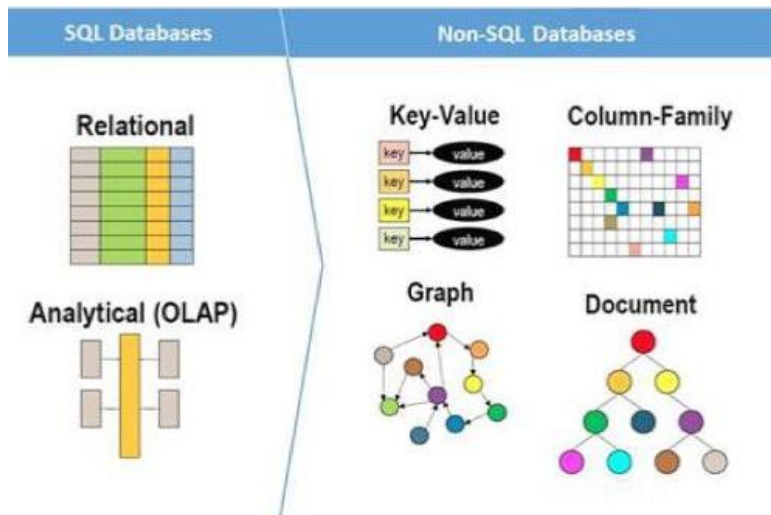


Fig SQL vs NO SQL

(4.7) Scalability

Scalability is the ability of a system, process, or network to grow and handle increased demand. Systems that are scalable to growth have the ability to remodel their components as more stress is placed on them. As your business grows, you'll need processes that can grow with it.

Horizontal scaling involves adding more machines to your fleet, whereas vertical scaling involves upgrading the existing servers to improve performance.

Cassandra and MongoDB are two examples of products that let you scale horizontally. A good example of vertical scaling is MySQL, which allows for an easy way to scale vertically by switching from smaller to bigger machines

Increase in scale of a project can be caused by increased in number of users, transaction. We try to scale the system without a minimum cost in speed and performance

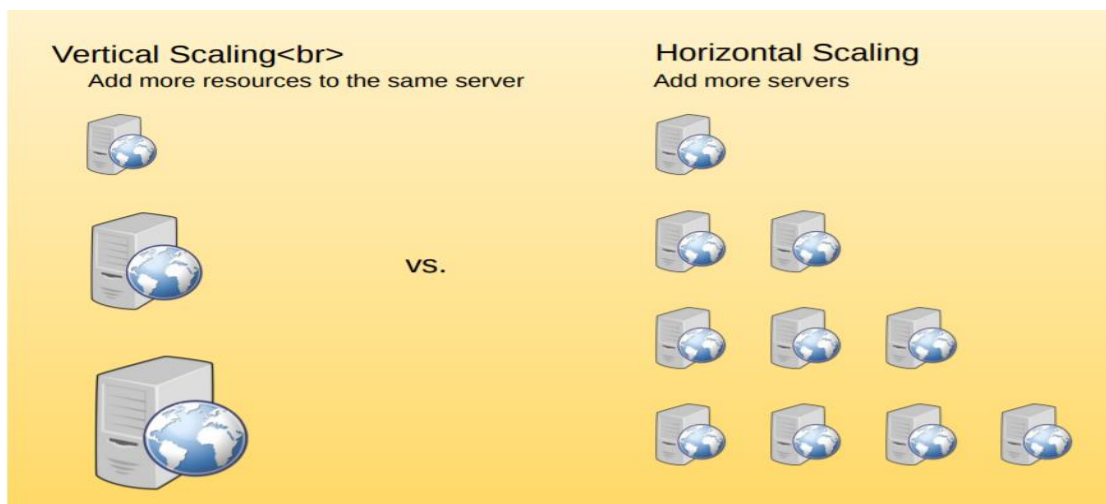


Fig Scalability

Scalability is a broad phenomenon that can be applied to different systems. The main point of scalability is generally increasing performance. If adding more resources to the service simply improves its performance, then it's scalable.

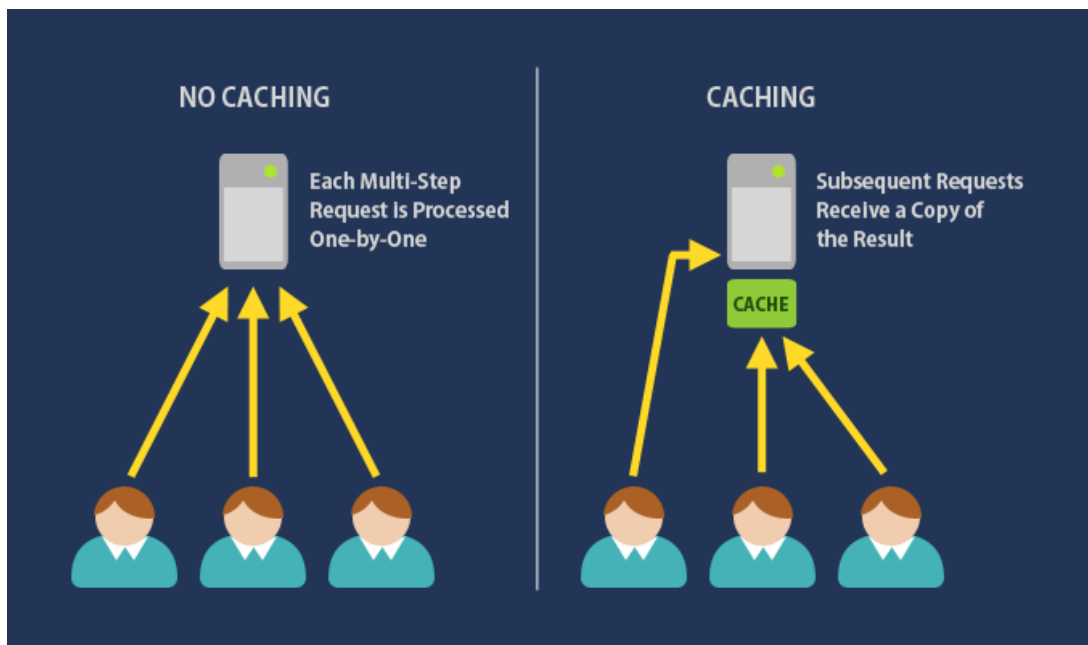
(4.8) Caching, System Design, Reliability

Caching is the process of storing copies of files in a cache, or temporary storage location, to be accessed more quickly. If you utilize caching, files that are accessed more frequently can be loaded from memory instead of the network.

System design is the process of defining the entire requirements for a system, including the architecture, modules, interface and design.

Software and hardware components can fail in a variety of ways; sometimes a whole block of software can go down, or hardware components could crash. Distributed systems, such as those in cloud computing, are supposed to be reliable if they can deliver their functions even when several of their components fail in ways that are hard to predict and undetectable. A piece of software distributed among a group of computers known as nodes in a distributed system is said to be reliable if it can deliver its services even when several nodes fail randomly and without notice.

Reliability represents one of the main characteristics of any distributed system, since in such systems any failing machine can always be replaced by another healthy one. When data communication uses reliable state transition protocols, a process achieved through a reliable network element, there will be no point in having such a network element in the first place.



(4.9) APIs

An API is a set of programming code that enables data transmission between one software product and another. It's the easiest way to make existing services work with new products. Developers build APIs directly into their software so they don't need to worry about development costs or custom integrations. There are many different kinds of APIs available but in this post we'll focus on how Industrial Revolution APIs that helped build email.

In short: an API is conceptually similar to a login for your website. They've been instrumental in enabling the birth of modern internet services such as search, social networking and email.

Example of APIs – Google map API, Stripe API, IMDB API.

STRIPE API – Used for payment services

The Stripe API is organized around REST. Our API has predictable resource-oriented URLs, accepts form-encoded request bodies, returns JSON-encoded responses, and uses standard HTTP response codes, authentication, and verbs.

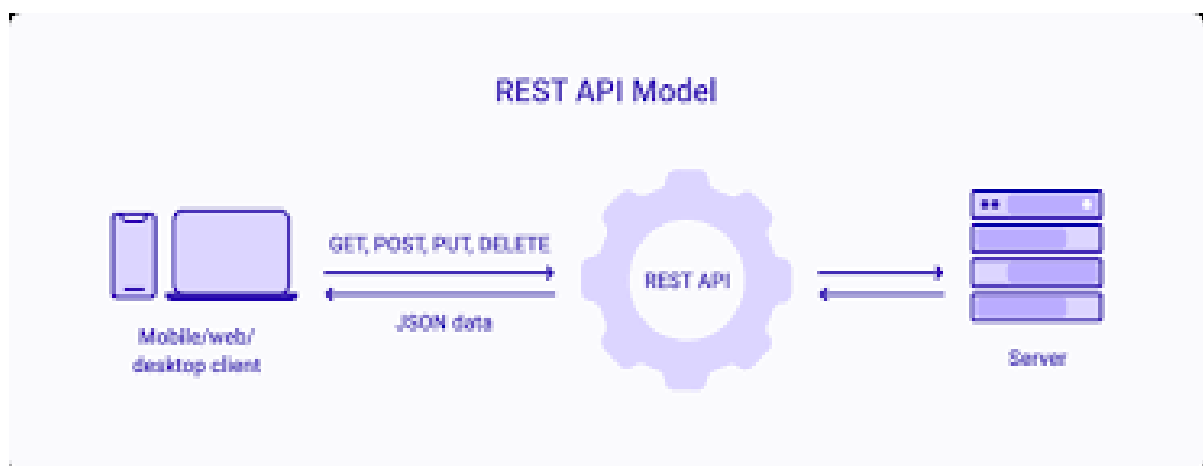


Fig – API model

(4.10) CDN

CDN is type of cache which is used to store mainly static data which will later be useful. CDN is stored in server. Browser first check if data is available locally if not then its request CDN to for data.

Content distribution network or CDN is a set of infrastructure used to deliver static files (such as HTML pages) to web servers. The idea is to move large files (including images and documents) from their original location to a server without having them become cached on the server and requiring the user to re-download the content.

Even though CDNs have been around since 2008, they started gaining popularity only in recent years due to their increased efficiency and scalability. Today almost every website uses at least one CDN in one way or another. A CDN is usually represented by a host name or a DNS server. Basically any computer with internet access can register domain names and access the internet using them (unless you use some kind of Tor network). You might wonder where exactly

Content distribution network (CDN) is like an umbrella term for a collection of services designed to improve how you retrieve and serve web content. The CDN can be used to improve performance as well as the speed at which cached web pages are downloaded and served to clients. The purpose of a CDN is to distribute static ("on-demand") web content (such as JavaScript, images, etc.) to multiple locations across the Internet, reducing download times for end-users while increasing delivery reliability for high-traffic applications and websites.

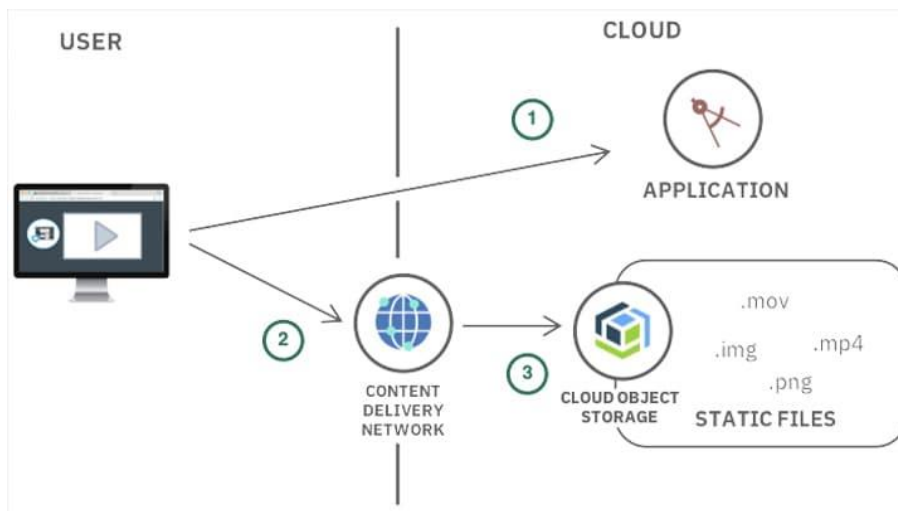


Fig – How CDN works

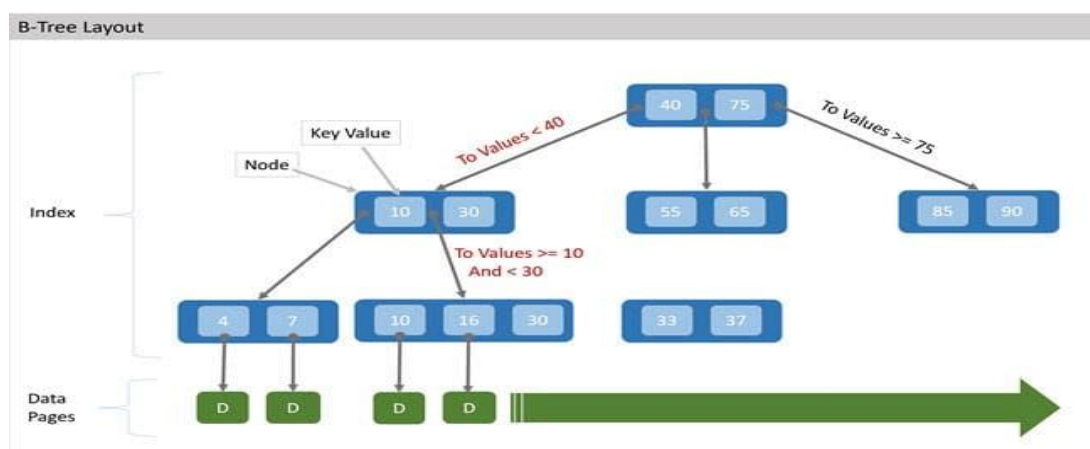
(4.11) Database Index

Indexing is the concept of resolving joins between tables in your database. By improving performance, you can improve the speed at which you retrieve data and reduce I/O (input/output). By using indexes with a sophisticated query optimizer, queries can be performed more efficiently allowing you to access the data quickly without having to fetch the entire table again. Indexing is commonly used in NoSQL technologies, but can also be applied to traditional NoSQL databases based on the processing power of your database.

When your website has a lot of content, it gets harder and harder to keep up with searching through it all. Indexes can help by providing generally relevant results immediately after the query is made. Indexes are also used as part of process server administration, such as managing indexes on a per-second basis. However, not all index are created equal and each type has its own merits.

(4.12) Data partitioning

Data partitioning is one of the most important steps you can take to improve the management of your Postgres databases. It isolates certain tables (and associated data) from the rest of your database so that you can delete out-of-date or irrelevant data as well as create a copy of deleted rows. It gives you a more coherent view of your database, allowing you check whether an action took place (e.g. created a record for a customer) or whether a query succeeded (e.g. returning 1 for all rows matching criteria). And most importantly, it can help you keep your Postgres cluster running efficient.



CHAPTER-5

SOFTWARE REQUIREMENT AND SPECIFICATION

Hardware Requirements

Processor	Intel core i7
RAM	16 GB
HDD	1TB

Software Requirements

Windows	7, 8, 10
UI development languages	HTML, CSS, BS4, Angular Material, MDC
Scripting languages	JavaScript, TypeScript
UI Framework	Angular 2+
Sever	node json-server
Database	JSON {key:value} collection pair
Tools	MS Visual Studio, Angular CLI, node package manager

Angular Modules Requirements

Module name	Installation command
Social login module	<code>npm i --save angularx-social-login</code>
Pagination module	<code>npm i ngx-pagination</code>
MDC module	<code>npm i @angular-mdc/web</code>
Material module	<code>ng add @angular/material</code> or <code>npm i --save @angular/cdk @angular/material @angular/material hammerjs</code>

CHAPTER-6

UNIFIED MODELING LANGUAGE

(6.1) Data flow Diagrams

DFD is a visual representation of the information flows within a system. A neat and clear DFD can depict the right amount. A Data Flow Diagram is an important tool in business for representing data in a visual way. It shows how data enters .The Data Flow Diagram shows how information flows both within and out of the system, where it changes, and where it is

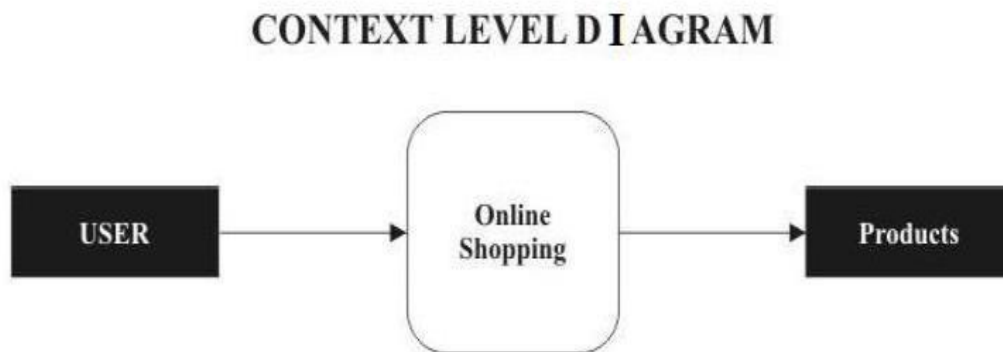


Fig 6.1

First Level DFD

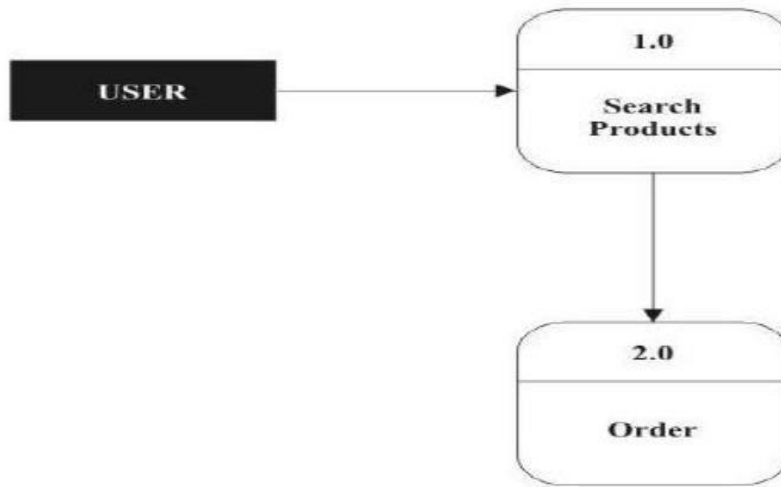


Fig 6.1.1

SECOND LEVEL DFD

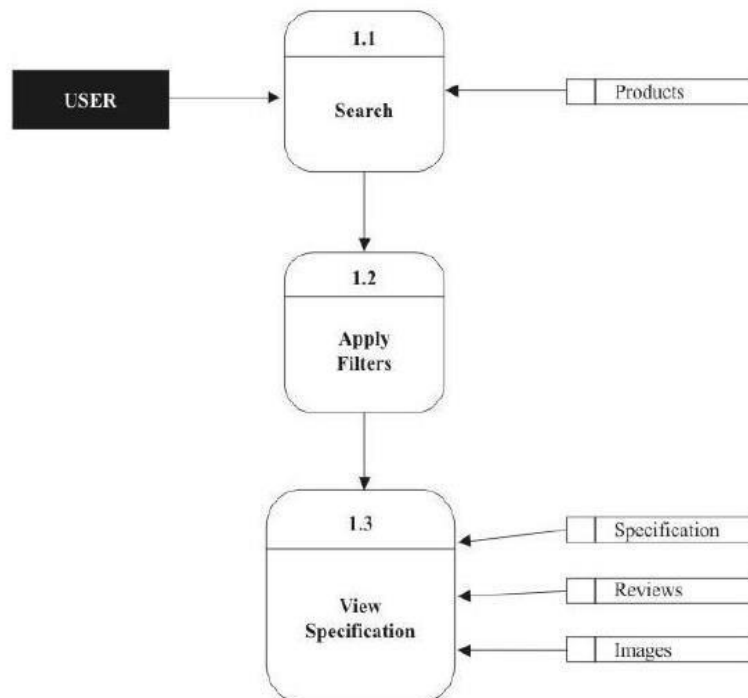


Fig 6.2.1

THIRD LEVEL DFD

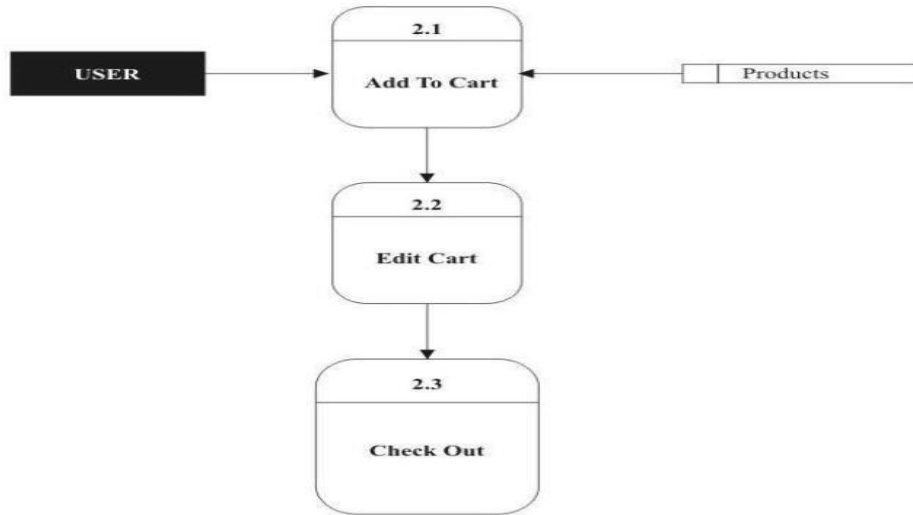


Fig 6.2.2

(6.2) Use case Diagram

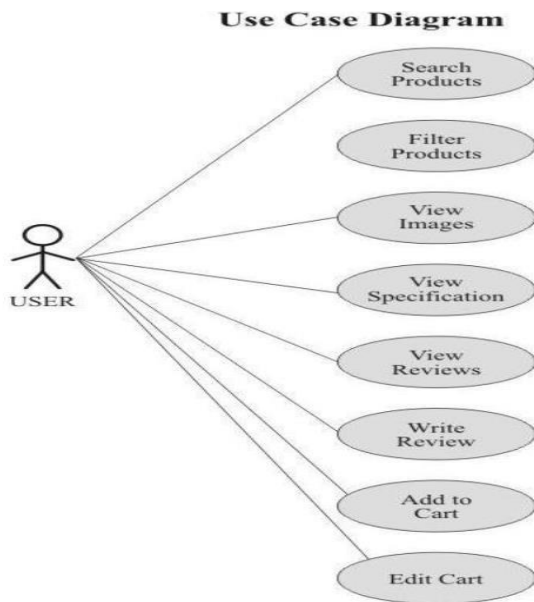


Fig 6.3.1

(6.3) Activity Diagram

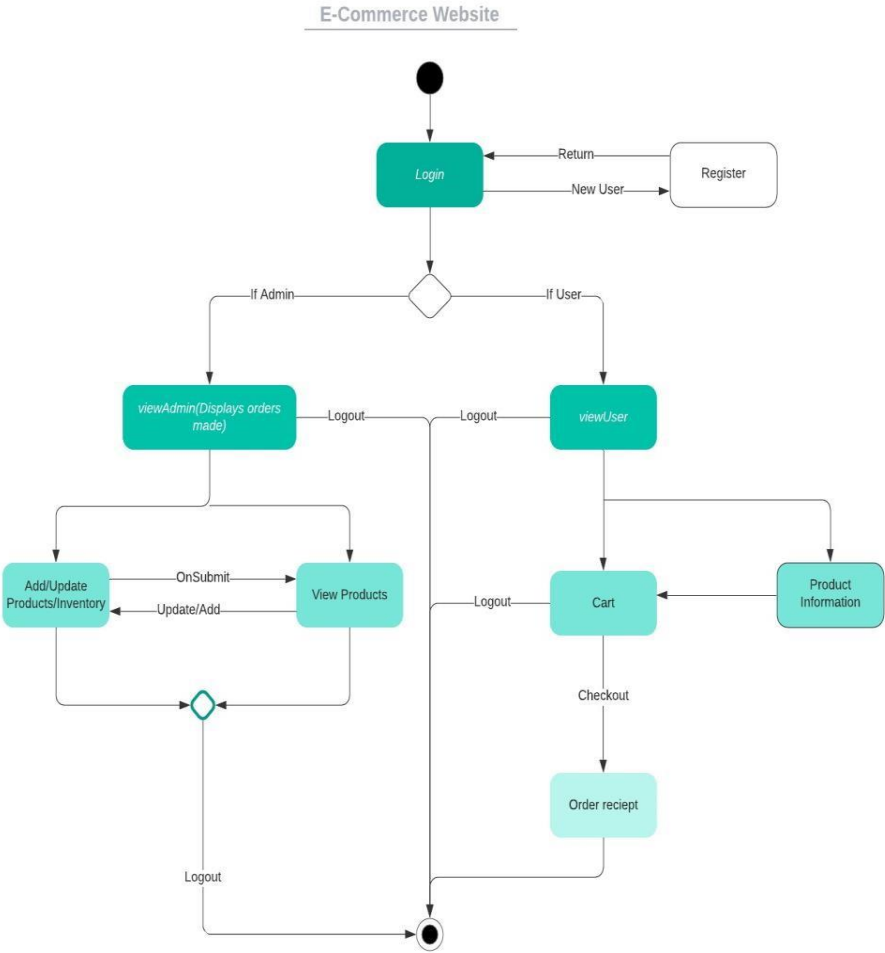
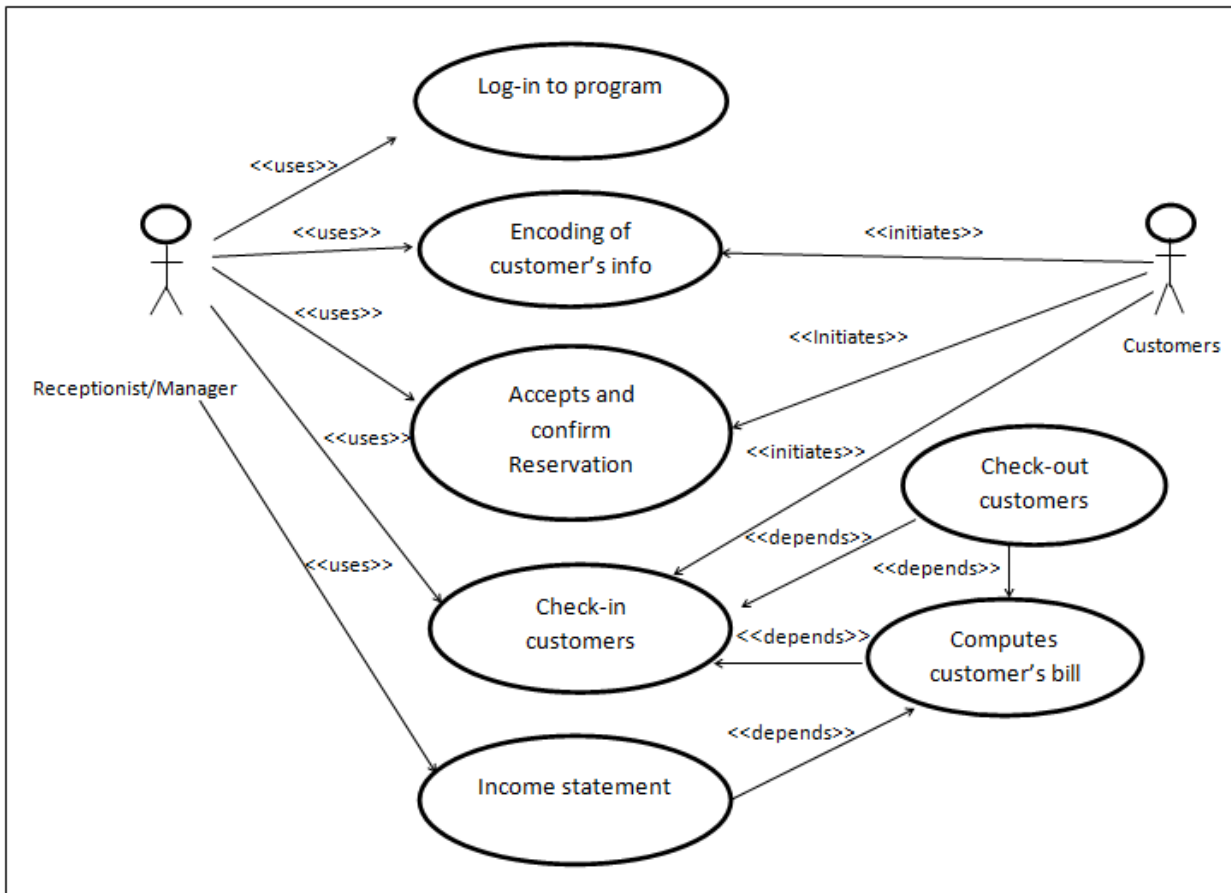


Fig 6.3.2

USE CASE DIAGRAM



CHAPTER-8

PROJECT

7.1 PROJECT DESCRIPTION

Name: Hotel booking web application

Technologies Used: MEAN Stack

Tools Used: NPM, POSTMAN, SUBLIME TEXT

Server: NODE.JS

Database: NO SQL

Operating System: Ubuntu

STEPS TO SET UP THE PROJECT










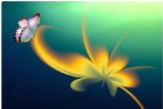

- Download node.js 8.8.11
- go in project directory and npm install and then npm run start-dev
- go in server directory and npm install and then npm run start
- go to localhost:4200

7.2 Project Screenshots

a) Homepage

BookWithMe Login Register

Your Home All Around the World

 <p>WHOLE CONDO - SAN FRANCISCO Nice view on ocean \$43 per Night - Free Cancellation</p>	 <p>SHARED APARTMENT - NEW YORK Modern apartment in center \$11 per Night - Free Cancellation</p>	 <p>WHOLE HOUSE - SPISSKA NOVIA VES Old house in nature \$23 per Night - Free Cancellation</p>	 <p>WHOLE HOUSE - SAN FRANCISCO Amazing modern place \$140 per Night - Free Cancellation</p>
 <p>WHOLE APARTMENT - SAN FRANCISCO Apartment in China Town \$89 per Night - Free Cancellation</p>	 <p>WHOLE HOUSE - NEW YORK House with Garden \$189 per Night - Free Cancellation</p>	 <p>SHARED CONDO - NEW YORK Cozy modern Condo \$68 per Night - Free Cancellation</p>	 <p>SHARED APARTMENT - NEW YORK beautiful apartment \$10 per Night - Free Cancellation</p>
 <p>SHARED APARTMENT - NEW YORK beautiful \$10 per Night - Free Cancellation</p>	 <p>SHARED HOUSE - DELHI hunderd one palace \$12 per Night - Free Cancellation</p>	 <p>SHARED APARTMENT - 123 123 \$12 per Night - Free Cancellation</p>	

b) Register

BookWithMe Login Register

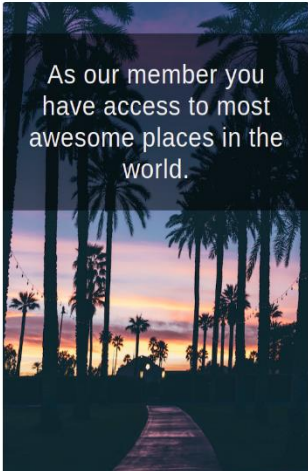
Register

Username

Email

Password

Confirm Password



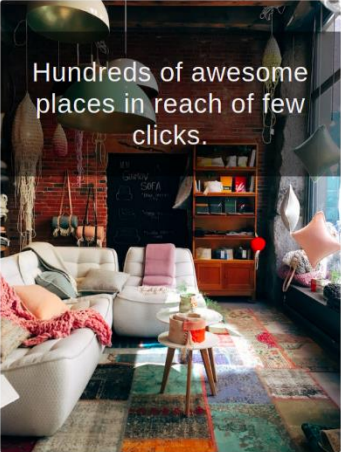
c) Login

BookWithMe abc [Login](#) [Register](#)

Login

Email










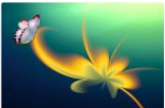

Password



d) After login


BookWithMe abc [Owner Section](#) [Logout](#)

Your Home All Around the World

 <p>WHOLE CONDO - SAN FRANCISCO Nice view on ocean \$43 per Night - Free Cancellation</p>	 <p>SHARED APARTMENT - NEW YORK Modern apartment in center \$11 per Night - Free Cancellation</p>	 <p>WHOLE HOUSE - SPISSKA NOVA YES Old house in nature \$23 per Night - Free Cancellation</p>	 <p>WHOLE HOUSE - SAN FRANCISCO Amazing modern place \$140 per Night - Free Cancellation</p>
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 <p>SHARED APARTMENT - NEW YORK beautiful \$10 per Night - Free Cancellation</p>	 <p>SHARED HOUSE - DELHI hunder one palace \$10 per Night - Free Cancellation</p>	 <p>SHARED APARTMENT - 123 123 \$12 per Night - Free Cancellation</p>	

e) Hotels

BookWithMe abc Owner Section Logout



WHOLE CONDO
Nice view on ocean
San Francisco

4 bedrooms 8 guests 6 beds

Very nice apartment in center of the city.

0 / 5

Assets

- Cooling
- Heating
- Iron
- Working area
- Washing machine
- Dishwasher

Reviews

\$43 per night

Test User

Dates

Guests

People are interested into this house
More than 500 people checked this rental in last month.

f) Bookings

\$43 per night

Dates

Guests

People are interested into this house

More than 500 people checked this rental in last month.

abc

Home Settings

Username
abc

Email
abc@gmail.com

Upload a different photo...
 No file chosen

Activity @	
Shares	125
Likes	13
Posts	37
Followers	78

Social Media
f t @ G+

g) Profile

h) Payment

Confirm Booking

2021/05/21 to 2021/05/26

5 nights / 43 per Night
Guests: 2
Price: 215\$

Card Number	1234 1234 1234 1234
Expiry Date	MM / YY
CVC	CVC

Do you confirm booking for selected days?

i) My bookings

\$43 per night

Dates

2021/05/21 - 2021/05/26

Guests



2

Reserve place now

People are interested into this house

More than 500 people checked this rental in last month.

j) My Rentals

BookWithMe  abc Owner Section  Logout

My Rentals

You dont have any rentals currently created. If you want advertised your property please follow this link. [Create new rental](#)

CHAPTER-9

FUTURE SCOPE & FUTURE ENHANCEMENT

Some modification for future

- Addition of Google maps
- Add OTP verification features
- Add more payment options
- Minor UI/UX improvements

CHAPTER-10

CONCLUSION

There is no doubt that there are lot of hotels booking website around the world but still there are some unique advantages of this website. One of the most important features which makes this website stand out from others is that it is designed to provide you with information regarding all essential functions which are required for comfort of stay and making it easier for your stay.

Project was in the end a huge learning opportunity for me.

CHAPTER-11

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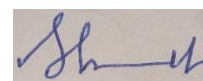
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