

Project Report

on

**Real Estate**

B. Tech. CE Semester – V

Subject: Advanced Technologies

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**CERTIFICATE**

This is to certify that Advanced Technologies project entitled “HomeDome Real Estate Project” is the bonafied report of work carried out by

**1) DEVANG PAREKH(18CEUOD019)**

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Of Department of Computer Engineering, Semester V, academic year 2019-20,  
under our supervision and guidance.

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# INDEX

No.	Content	Page No.
<b>1</b>	Overview	<b>1</b>
<b>2</b>	Introduction	<b>2</b>
<b>3</b>	Software Requirement Specifications	<b>4</b>
<b>4</b>	Design Documents	<b>9</b>
<b>5</b>	Implementation Details	<b>1</b>
<b>6</b>	Testing Details	<b>18</b>
<b>7</b>	Screen-Shots	<b>19</b>
<b>8</b>	Conclusion	<b>23</b>
<b>9</b>	Limitations and Future Extensions	<b>24</b>
<b>10</b>	Bibliography	<b>25</b>

## Overview

The real of World Wide Web have spread across millions of household, so naturally, Internet has become by far the best platform for real estate marketing today. There are lots of real estate companies who advertise their property online so idea behind developing this application is that their property can also sell, or buy. These applications are not widely popular but in future, they have large scope of growth.

This website is mainly used for purchasing residential properties and estate such It gives users select desired property and make a payment for it. After user selects the desired property, it shows the all the information about property, so user can easily know the information of the desired property.

In more, we have implemented client-side (By Angular), server-side authentication and authorization. For any further query and help we have provided our email addresses, contact details and social media tags so that they can contact us any time. We thrive for user interaction and user satisfaction.

# Introduction

As mentioned above this website is mainly implemented for online real estate.

Users can login through their username, email and password with encrypted secure channel.

Users can see and select their desired property. They can also contact us through social media platforms like instagram, facebook. They can also call us for any type of query.

## Technology Used:

1. Cascading Style Sheet & Bootstrap Studio for styling the HTML pages.
2. JavaScript for providing dynamic content for the HTML pages.
3. J-Query to provide dynamic data to the request pages.
4. Smart-Forms JS for contact us module.
5. Bootstrap v4 for styling the HTML pages using predefined classes of bootstrap.
6. Angular 6 for component division of our website.
7. Node.js for back-end purposes.
8. MongoDB as a database manager to save and fetch data from the database using Node.js mongoose module.
9. Typescript used in Angular 6 for accessing all the components of the same.

## **Technologies Used:**

1. We have used Visual Studio Code(Microsoft Corporation) as a Editor of the whole project development.
2. We have used Bootstrap studio for better, clean and quick front-end designing.

# Software Requirement Specifications

## R.1 Client:

### R.1.1

#### **Registration**

Input: Username,email,password.

Process: Save the data in collection and encrypt the password  
And generate new JSON Token and store in  
Browser's Local-Storage and Back-end.

Output: Registered and Redirection => Home

Exception: Invalid Details and page reloaded

### R.1.2

#### **Login**

Input: Registration Credentials.

Process: Validate the supplied credentials with database  
credentials and decrypt the password.

Output: Redirection => Home and Navigation Bar link  
changed to Logout

Exception:Invalid Details and page reloaded

### R.1.3

#### **Logout**

Input: Click Logout.

Process: Remove the JSON Token from Browser Local-Storage.

Output: Navigation Bar link changed to login.

### R.1.4

#### **Property Selection**

Input: Select the property from the Property Gallery.

Process: Finding the appropriate method for response.

Output: Redirection=>Property Details page

### R.1.5

#### **Purchasing Property**

Input: Tap the Buy-Now Button.

Process: Process and redirect to Payment Page.

Output: Redirection=>Payment Page



### R.1.6

#### **Payment**

Input: Payment Information and Credentials

Process: Process and saving the record in database.

Output: Success, Redirection=>Home

### R.1.7

#### **Contact-us**

Input: Personal Details with subject and by-pass Captcha Process.

Process: Compose Mail to the Project Administrator.

Output: Success.

## R.2 Non-Registered Users:

### R.2.1

#### **Property Selection**

Input: Select the property from the Property Gallery.

Process: Finding the appropriate method for response.

Output: Redirection=>Property Details page

### R.2.2

#### **Purchasing Property**

Input: Tap the Buy-Now Button.

Process: Process and validation of JSON Token.

Output: Redirection=>Payment Page .

Exception: Redirection=>Login Page if Token is not present

### R.2.3

#### **Payment**

Input: Payment Information and Credentials

Process: Process and saving the record in database.

Output: Success, Redirection=>Home

#### R.2.4

##### **Contact-us**

Input: Personal Details with subject and by-pass Captcha Process.

Process: Compose Mail to the Project Administrator.

Output: Success.

### **Specific Requirements:**

#### **Software requirements:**

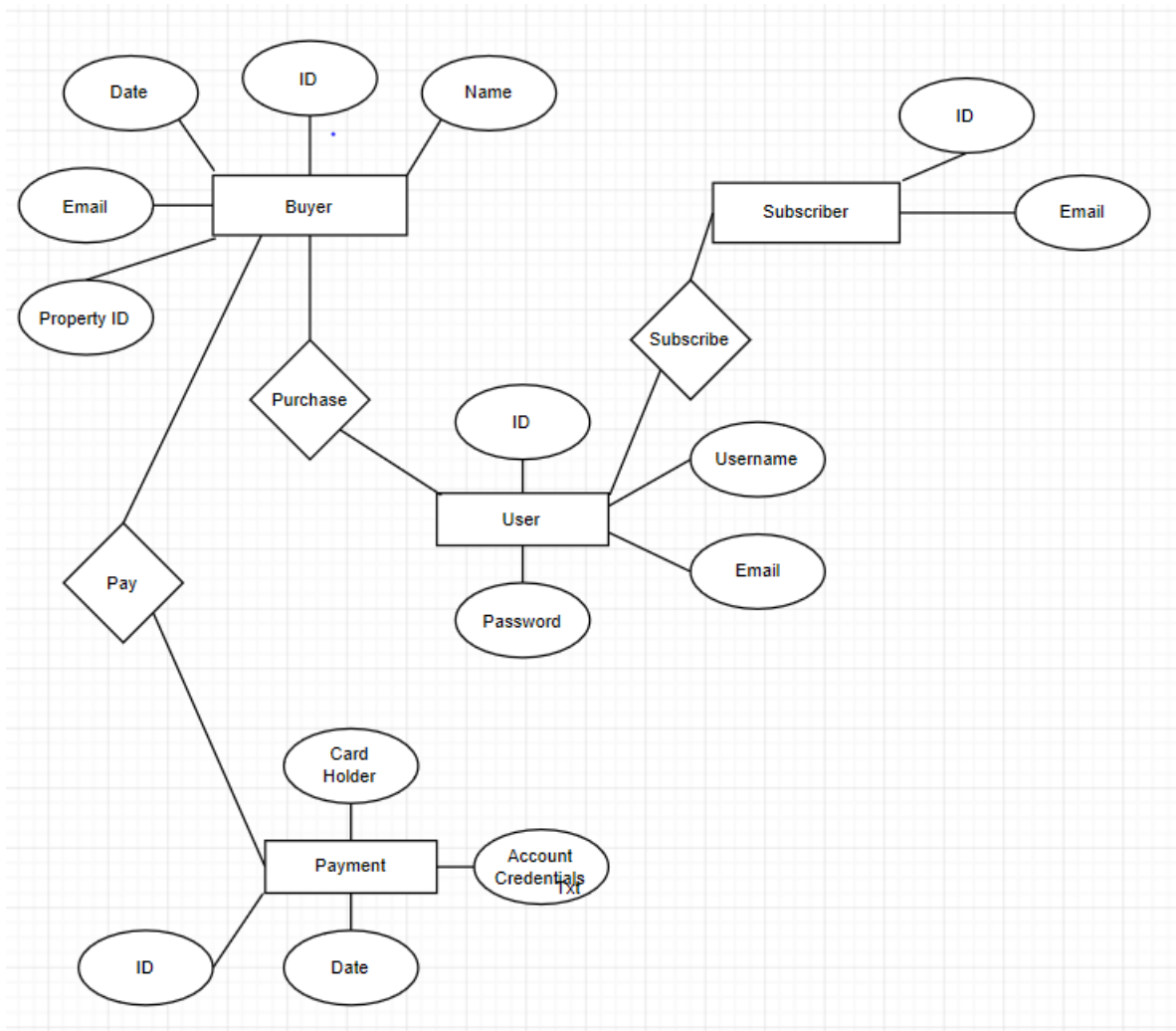
1. Any Version of browser after Mozilla Firefox 4.0, Internet Explorer 6.0 e Adobe Flash Player 10.0.
2. Must have a active LAN connection.
3. Compatible resource configurations.

#### **Hardware requirements:**

1. Any processor above Intel Pentium 4.
2. Version of Windows XP or above.

# Design Documents

## 1. E-R Diagram :



## 2. Data Dictionary

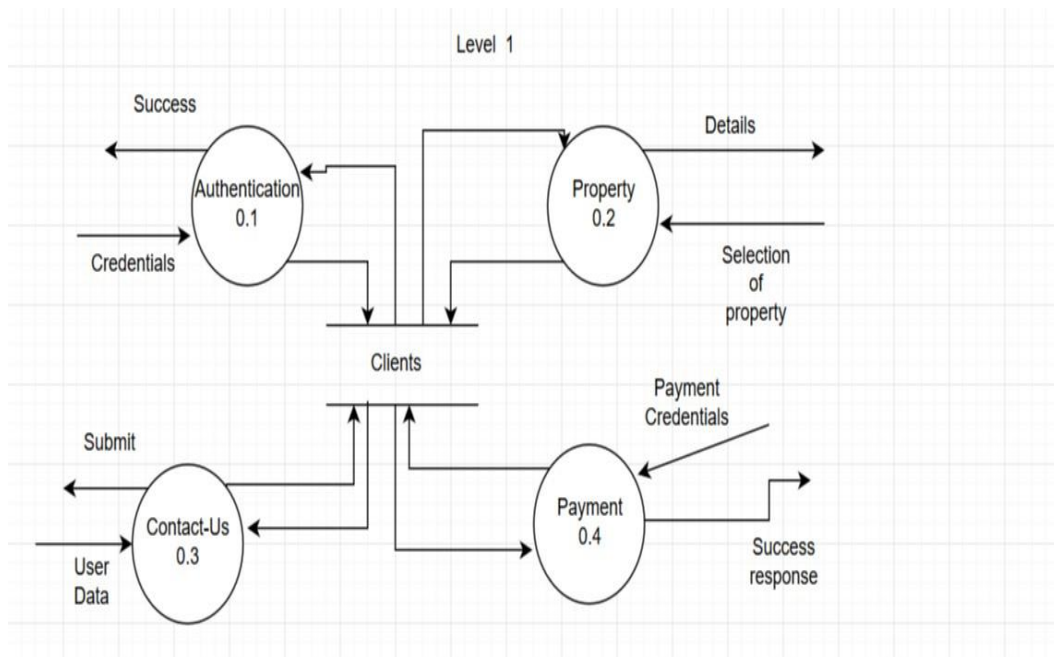
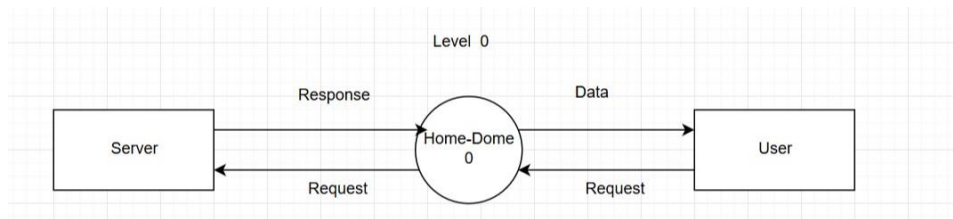
USERS								
Sr. No.	Field Name	Data Type	Width	Req	Unique	Key	Ref- Table	Desc
1.	Id	Var-char	30	Yes	Yes	PK	-	-
2.	Username	Var-char	50	Yes	Yes	-	-	-
3.	Email	Var-char	30	Yes	Yes	-	-	User Email
4.	Password	Var-char	100	Yes	Yes	-	-	-

BUYERS								
Sr. No.	Field Name	Data Type	Width	Required	Unique	Key	Ref	Desc
1.	ID	Var-char	50	Yes	Yes	PK	-	-
2.	Card_Holder	var-char	50	Yes	No	-	-	-
3.	Payment-Info	var-char	50	Yes	No	-	-	-
8.	Email	Var-char	50	Yes	Yes	-	users	-

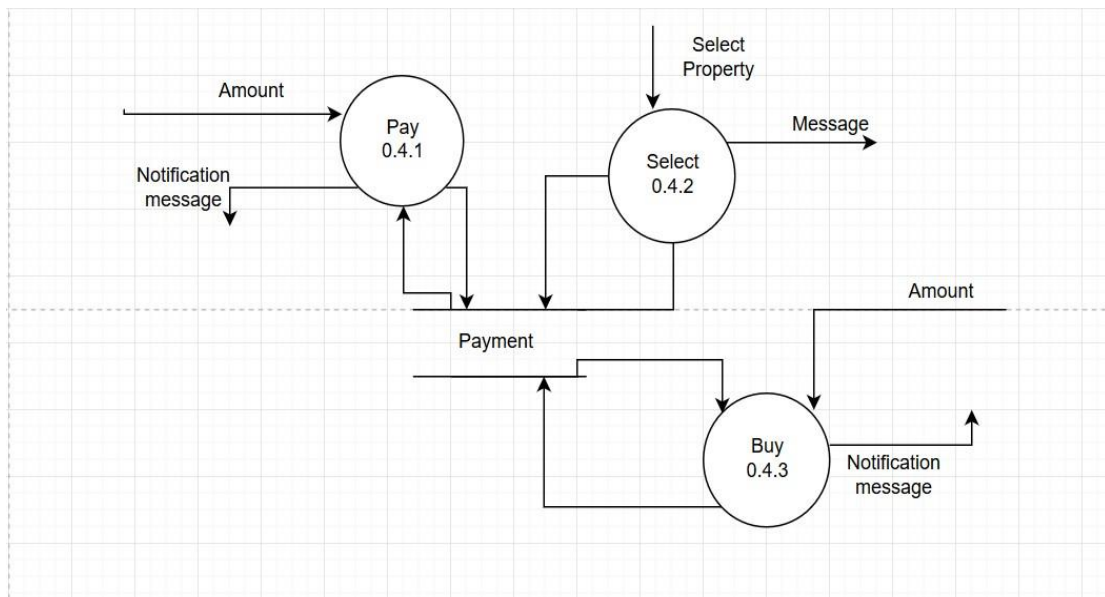
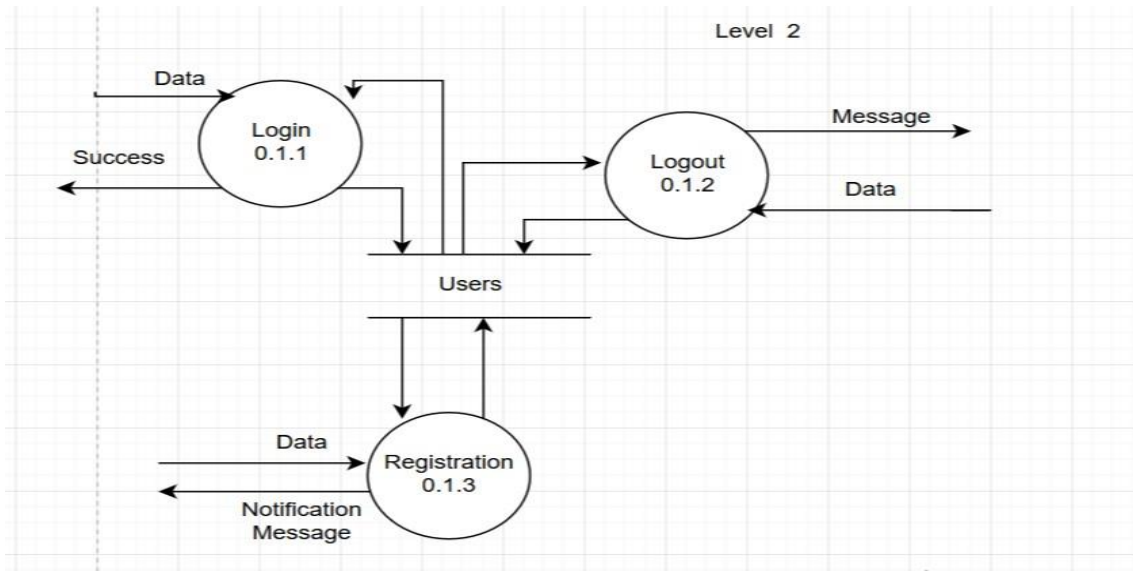
Payment								
Sr. No .	Field-Name	Data-Type	Width	Req	Unique	Key	Ref- Table	Desc
1.	Id	Var-char	30	Yes	Yes	PK	-	-
2.	Card_Holder	Var-char	50	Yes	Yes	FK	Buyer_ Table	Buyer_id
3.	Amt	Var-char	30	Yes	Yes	FK		
4.	Date	Double	100	Yes	No	-	-	-

Subscribers								
Sr. No .	Field-Name	Data-Type	Width	Req	Unique	Key	Ref- Table	Desc
1.	Id	Var-char	30	Yes	Yes	PK	-	-
2.	Email	Var-char	50	Yes	Yes	-	-	-

## 2. Data Flow Diagram:







## Implementation Details

### Sign In And Sign Up Module:

1. We have used Angular features for authentication and authorization.
2. Whenever user registers the corresponding password gets encrypted with the help of **node** package called '**crypto**'. It hashes the password into **sha256-hex** format and save to the database.
3. For signing we require username, email and password the password is again encrypted and matched with the password saved in the database if valid then user is prompted to the home page.

### Property Detail Module:

1. After user clicks on his/her desired property ,the desired card opens on the different page with additional property details.We have statically displayed the information of the property on its details page.

### Home Module:

1. As the home page is unveiled, it starts off with a loading landing page and featured property via slider with navigation bar to go the desired location from the current page and the pro membership menu.

## About-us Module:

1. It comes with loading of card layout including 2 card having information about company's CEO and CTO and also include one section for the company's location map. We've designed with map component with is built in tool of Bootstrap Studio. User can navigate to main Google maps page where resolution of map is bigger and better.

## Property Purchase Module:

1. At this user have to navigate to Gallery page to select one property, after selecting the property they will be prompted to the details page of that property now as we have used JSON web token(JWT) user will not able to access payment module.

2. It will check for the user token in client as well as server's back-end if the token is not present then it means that user is not authenticated and end-user is prompted back to the login page where user can authenticate self.

3. This is achieved by using an Auth-Guard functionality of Angular that if requirements not full-fill doesn't allow the request and explicitly respond with appropriate response in our case Server will send login page.

## Payment Module :

1. At this users have to provide their card holder name, card credentials and for the future transactions card information is saved into the database as the user completes its payment the required information saved into the database and user is navigated to the Home Page.

**Contact-us Module :**

1. In case user want to contact for the feedback or have to provide some improvement suggestions they are provided with the contact-us forms in which we have used smart-forms JavaScript that take the user input details in the form => compose the mail with appropriate format and send to the assigned project developer email address.

# Testing

## Angular Testing Methods:

1. **Ng-serve** command for serving the angular application on concurrently node.js needs to be served for the back-end connection.
2. We have used **cors** node package for concurrent execution of both angular server and node server on different ports.
3. We used **nodemon** as a developers command for testing the condition of the node server.

# Project Snaps

[HomeDome](#)[Home](#) [Features](#) [About-us](#) [Pricing](#) [Contact-us](#) [Featured](#)[Sign-up](#) [Login](#)

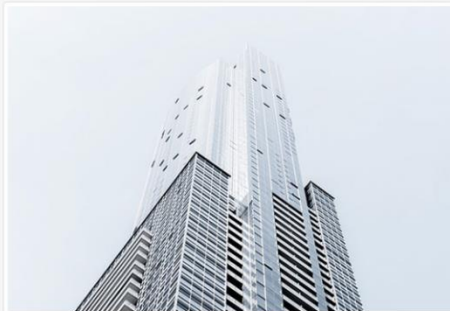
## See the good in the World

HomeDome Properties is one of the world's most valuable and admired real estate development companies. With proven competencies in properties.HomeDome shapes new lifestyles with a focus on design,excellence, build quality and timely delivery.

[Learn More](#)

## Info

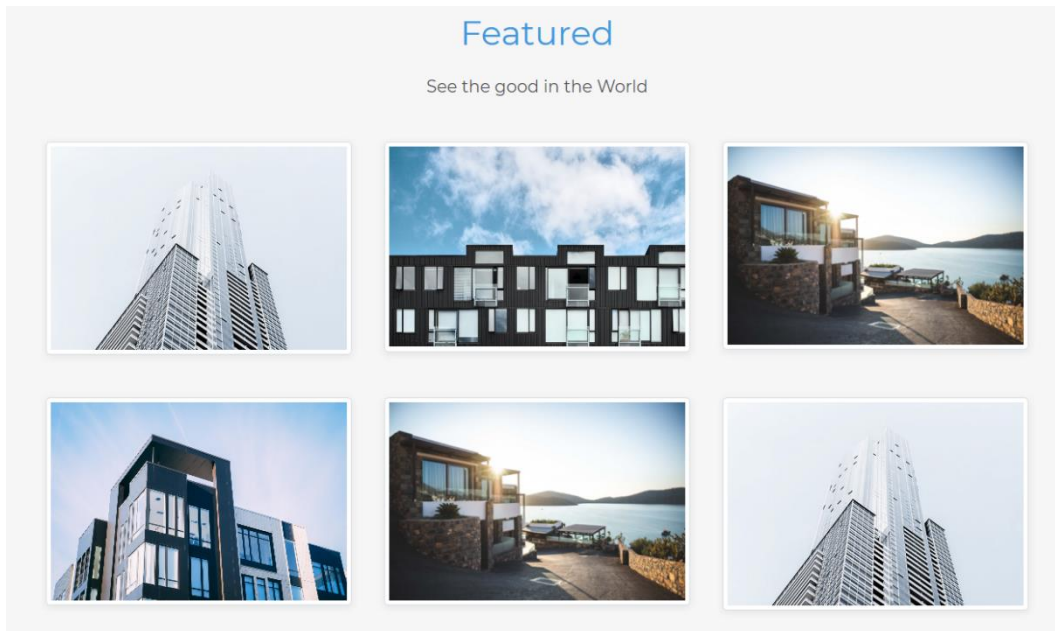
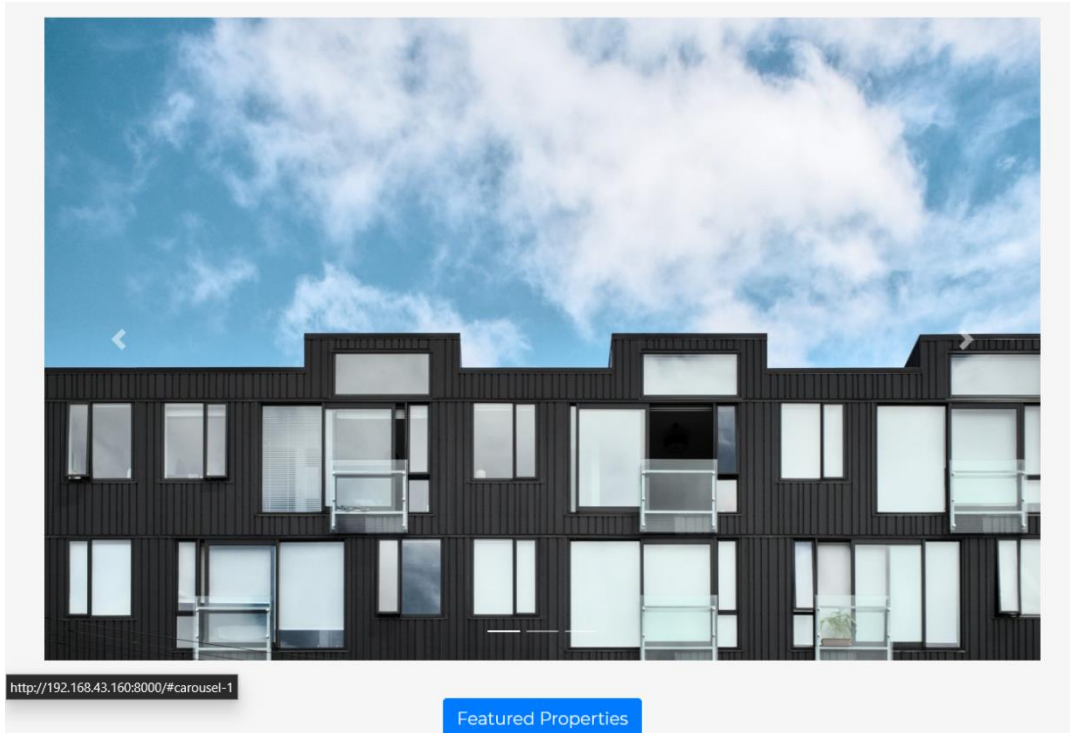
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc quam urna, dignissim nec auctor in, mattis vitae leo.



## Explore

Warm golden sands. A plaza full of unique experiences. And a boutique Vida hotel. These are just some of the discoveries that will capture your heart at SURF. A magical place where family living feels like a never-ending holiday.

[Join Now](#)



## Contact Us

HomeDome Corporation  
See the good World

Name

Subject

Email

Message

Send

### Checkout

<b>VAT</b> HomeDome Corporation	<b>Rs.200</b>
<b>GST</b> See the good in the world	<b>Rs.120</b>
<b>Total</b>	<b>Rs.320</b>

### Credit Card Details

CARD HOLDER	EXPIRATION DATE
<input type="text" value="Devang"/>	<input type="text" value="12"/> <input type="text" value="2021"/>
CARD NUMBER	CVC
<input type="text" value="xxxx-yyyy-zzzz-qqbb"/>	<input type="text" value="xyz"/>

Proceed

## Membership

HomeDome Corporation  
See the good World

### BASIC

Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.

**Full Support:** No

**Duration:** 24 Months

**Storage:** 50 Properties

₹ 299

[Buy Now](#)

### PREMIUM

Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.

**Full Support:** Yes

**Duration:** 48 Months

**Storage:** 200 Properties

₹ 499

[Buy Now](#)



## About Us

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc quam urna, dignissim nec auctor in, mattis vitae leo.



**Devang Parekh**

Founder-CEO



**Ankit Parmar**

Co-Founder-CTO



## Location

We centralized all the bricks of the Corporation in City of Surat.



## Conclusion

Login functionality was successfully implemented by the use of Nodejs . Home page Slider, card-layout, footer was successfully implemented using css and Javascript and Bootstrap.

Property details page was successfully implemented by fetching the details the json file and displayed on the browser using CSS and javascript. User Edit Profile page was successfully implemented for updating user's details. payment page was implemented so users can choose multiple options.

## Limitation and Future Extension

### Limitations:

1. We displayed property additional details as static.
2. Admin page is designed but back-end not implemented so we have discarded from project.

### Future Extension:

1. Admin Page
2. Rent functionality will be added shortly.

# Bibliography

## Stack Overflow:

<https://stackoverflow.com/>

## W3School:

- **HTML5:** <https://www.w3schools.com/html/default.asp>
- **CSS:** <https://www.w3schools.com/css/default.adp>
- **JavaScript:** <https://www.w3schools.com/js/default.asp>
- **AJAX:** [https://www.w3schools.com/js/js\\_ajax\\_intro.asp](https://www.w3schools.com/js/js_ajax_intro.asp)
- **Jquery:** <https://www.w3schools.com/jquery/default.asp>
- **XML:** <https://www.w3schools.com/xml/default.asp>
- **XSLT:** [https://www.w3schools.com/xml/xsl\\_intro.asp](https://www.w3schools.com/xml/xsl_intro.asp)
- **XSD:** [https://www.w3schools.com/xml/schema\\_intro.asp](https://www.w3schools.com/xml/schema_intro.asp)
- **JSON:** [https://www.w3schools.com/js/js\\_json\\_intro.asp](https://www.w3schools.com/js/js_json_intro.asp)

## Bootstrap4:

<https://getbootstrap.com/docs/4.3/getting-started/introduction/>

## Icons:

<https://fontawesome.com/icons?d=gallery>

## Type-Script:

<https://www.typescriptlang.org/docs/handbook/basic-types.html>

<https://www.tutorialspoint.com/typescript/index.htm>

**Angular6:**

<https://angular.io/docs>

**Node.js:**

<https://nodejs.org/en/>

**MongoDB:**

<https://www.mongodb.com/>