

Blueprint for the real estate website - project for BEE endterm

Front-end used - React, Bootstrap

Back-end used - NodeJS, SQL/phpmyadmin), Axios

Real Estate website idea

- ☐ Website for viewing property listings for both buying and selling
- ☐ User authentication
- ☐ Admin account for managing user accounts and listings
- ☐ Chatbot assistance(demo based)
- ☐ Home loan emi calculator

Details for features

Listings - preview of the properties available for buy or sell in the form of cards, the page will contain options to search and filter based on number of bedrooms, price range etc.

There will also be provision for adding a property to the listings based on the category

User authentication - users allowed to login and save their favourite listings. For admin account, admin able to manage accounts and property listings. Password encryption and input field validation will be done.

Home loan EMI Calculator - calculates the emi on a principal value, for a particular timespan and rate of interest(anually)

Formula used:

$P \times R \times (1+R)^N / [(1+R)^N - 1]$ where-

P = Principal loan amount

N = Loan tenure in months

R = Monthly interest rate

The rate of interest (**R**) on your loan is calculated per month.

$R = \text{Annual Rate of interest} / 12 / 100$

Schema

Users table

Fields - email

Username

password

Property info table

Fields - unique id for property

Property name

Location

Number of rooms

buy/sale

Price

Sqft. area

Favourite properties for a user

Fields - username, property_id (users table and property info table mapped)

Website layout

Home page

- ☐ Single navbar with aboutus and login tab.
 - ☐ With about us, one can navigate to the about section of the website
 - ☐ Login tab with navigate to login page for existing user, which further navigates to register page for new user.
 - ☐ Login and register fields both have input fields validation
- ☐ Further 2 tabs Buy and Sell
- ☐ In buy section, property listings for buying, each card will contain an image with property details like price, location, number of bedrooms, sqft.area
- ☐ In selling section, property listings will be same as buy section but these listings are for selling

- ☐ Each property card will contain a contact provision so that the user who posted the listing can be contacted for further details of the property

Home Loan EMI Calculator

This page will contain fields for principal amount, rate of interest(percentage) and tenure(years), with a button for calculating the EMI value based on the formula

$P \times R \times (1+R)^N / [(1+R)^N - 1]$ where-

P = Principal loan amount

N = Loan tenure in months

R = Monthly interest rate

The rate of interest (**R**) on your loan is calculated per month.

R = Annual Rate of interest/12/100

Also, a circular chart will be depicting the pictorial representation of the ratio of principal amount and the total amount to be paid at the end of the tenure.

Login page

For existing user, login would require username and password, both fields validated and password encrypted. The submit button will stay deactivated till both the fields satisfy the validation

For a new user, email, username, password and confirm password fields are there, where email follows simple email validation and password and confirm password fields must match.

On creating a new user, the entry will be stored in the users table, and if an user already exists with same username, no duplicate will be allowed to create.