Simon Fraser University

Group Project Proposal

Project Group 6

CMPT 276: Introduction to Software Engineering

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Abstract

Realtorest is a real estate web application that is created for Aman, a realtor located in British Columbia. The application displays a list of properties that can be sorted based on price, location and room features, and the available map feature can assist users to explore properties in different locations. From general users' perspective, users can create an account, manage their basic information, control their property choices with features such as 'Save as Favourite', and connect with Aman to discuss or set up an appointment. The application is specifically tailored for our client Aman, who is the middleman that helps property sellers and buyers connect with each other. This application focuses on helping Aman upload and display information of properties that are being sold and help potential buyers who are interested in those properties to make the purchase.

Group Members

The development team includes five members: Drishty, Kevin, Nam, Malaika, and Amrit. Aman, who is the client, will also be contributing by providing advice and opinions for this project.

Nam has experience with HTML, CSS, and JavaScript. He can help with the design and layouts of the web application. Drishty has experience with Java, C++, HTML, CSS, Spring, Spring Boot, and object-oriented programming. She can help the group navigate with the framework used to build for the project. Amrit has experience with HTML, CSS, and Javascript, and can help with the front-end and back-end development of the web application. Malaika has experience with Python and C++, which is an object-oriented programming language, that can help with the development of the web application. Kevin has completed a Web Development Bootcamp diploma offered by Lighthouse Labs in 2020, which includes experience with web app development workflow, GitHub productivity tools, setting up automated testing, technologies like Javascript, HTML, CSS, React, jQuery, Node.js, Ruby on Rails, Postgresql, and using external APIs like Google Maps, Mailgun, Twilio. In the process of programming studies and contributing to open source projects, he also gained experience in languages including Java, Python, C++, C, QuickBASIC, C#. For this project, he plans to contribute by managing the documentation and organising the workflow with GitHub, setting up the automated testing components, refactoring the code between iterations, and leading the last minute crunch hours if anything goes wrong.

From the course, every group member should gain experiences with HTML, CSS, JavaScript, Spring, Spring Boot, SQL databases, Git, and deploying to Render.com. Those will be the core components of the project and be heavily utilised.

Project Description

Aman is a realtor in British Columbia who does not have a personal website for his real estate business, and due to the competitiveness in the industry, a personal website can benefit Aman a lot by helping him connect with potential clients and widening his business scope. Hence, the web application **Realtorest** is created to help Aman connect to property buyers and sellers. The description will outline two types of users that will use this software: Aman, the project's client, who will be the admin of the website. And the general customers, who are home buyers, real estate investors, renters, and real estate professionals. Detailed below are the high-level descriptions of the features that **Realtorest** has to offer.

General customers can explore properties without the sign in but must register to contact the client or to save the properties to the favourites. Sign up/sign in can be done using email or through third party accounts like Google. This process will save log in details in the database to avoid scam and enable property tracking. The website will also offer filters for location, room numbers, and sorting by price or distance.

Realtorest also utilises application programming interface (API) for property listing view, which allows customers to view properties as markers on a map; this process requires an external API, for example Google Maps, in order to function. Moreover, customers who wish to get updated frequently about real estate news by Aman also can sign up to be in the automated mailing list that uses an external API allowing the admins, Aman, to send the update emails automatically.

As for the client, Aman, will be able to login to his website under admin login, which allows him to manage the property listing, by uploading new properties information or removing any properties that he wishes to. In addition, Aman can get notified by any customers who are wishing to contact him regarding a property.

Project Competitiveness

There are many personalised websites tailored for realtors similar to Aman, hence it is very competitive for the project to have its own distinctive features that stand out from the rest of the other websites. However, **Realtorest** is different from many other realtor websites in which it does not have any advertisements, because the project is focused on the client, rather than profit like the others. In addition, under UI perspective, most of the realtors websites that the team encountered are usually very hard to navigate and not user friendly, since there are many website features and interactions that all appear at once. Hence, to avoid this problem, **Realtorest** will focus on the customer interaction experience by creating a minimalist layout that can help the user to navigate with ease, while also providing sufficient features.

Meeting Notes with Client

The team contacted Aman and talked about the project on Feb 7, 2024. We have explained our need to make a small project for the course “Introduction to Software Engineering”, and we are looking for a client to build this project for. We’ve told Aman that the project will be small and will be done around mid April, and we’ve explained that this project will not cost any money during development for Aman. However, it will cost Aman money to find someone to maintain if he wants to continue to use this website in the future. Also we mentioned that the project will also have to be open source, at least everything that is done during this course will have to be shown publicly on our GitHub profiles. We’ve also shown Aman the Customer Commitment document provided by our Instructor. Aman has understood those requirements and is happy about it. Thus we have decided everything works perfectly, and we decide to proceed with the plan.

The website’s primary focus will be helping buyers find properties they like, which Aman can help them purchase, representing them in the process. Aman has shown us an example website that we can use as a reference point, and he also stated that the property listings can come from Realtor.ca if possible. Realtor.ca does have an external API system which the team can incorporate into the project.

Appendix 1: User Interface Mock-up

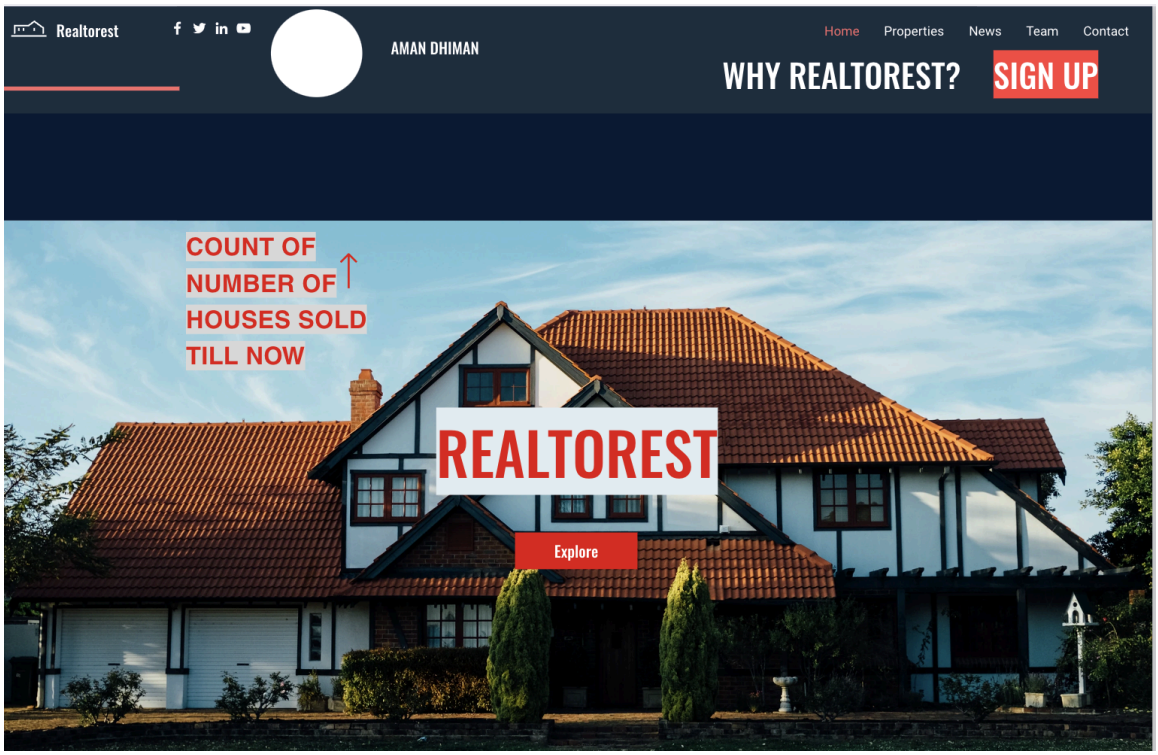

*Figure 1. Home Page of **Realtorest***

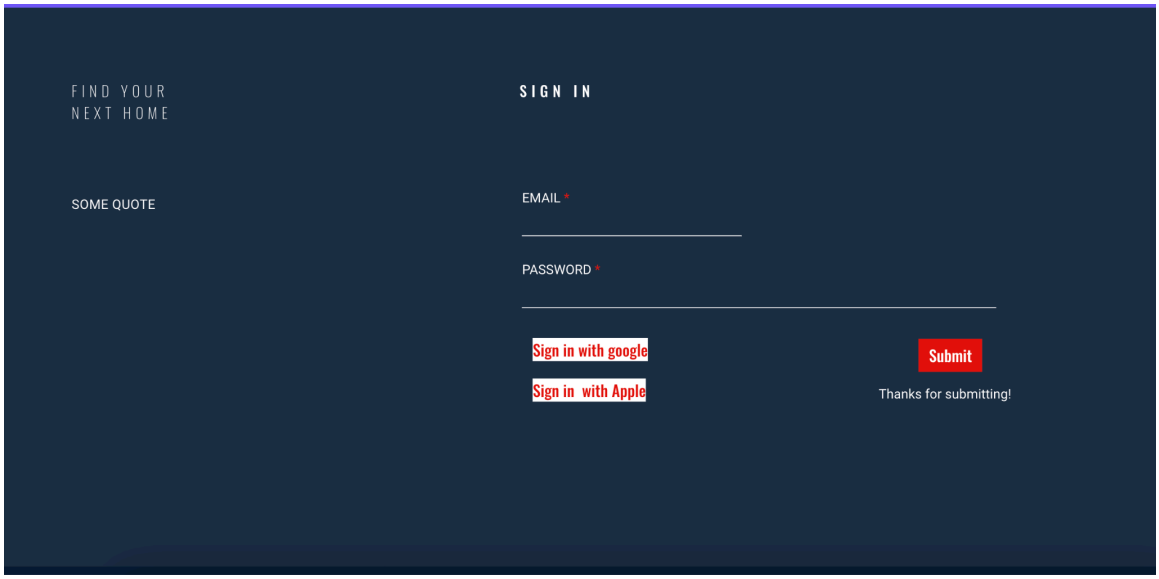

Figure 2. Login Page

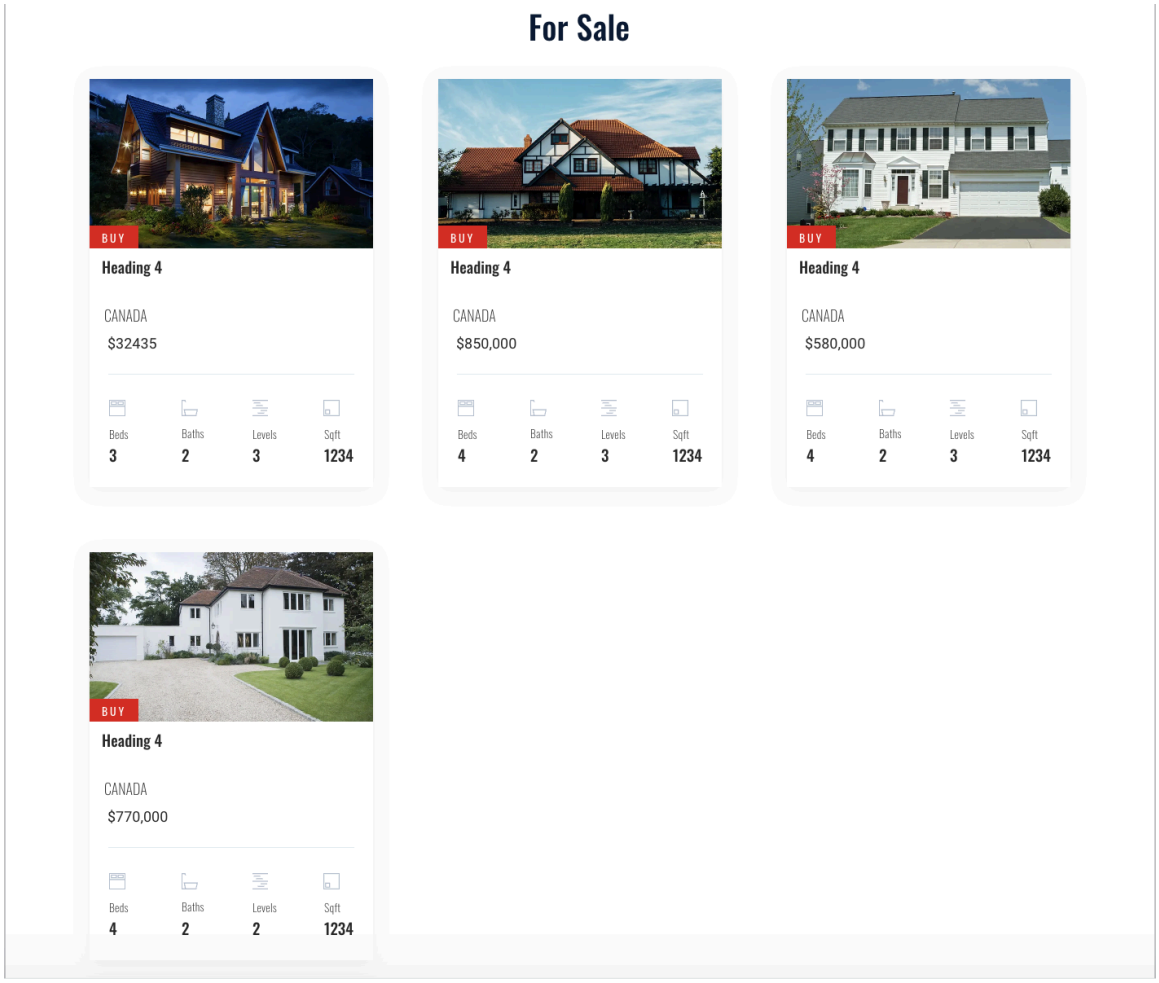

Figure 3. Properties Listing View

Appendix 2: Team Member Information

Drishty

Full Name: Drishty Dhiman

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Kevin

Full Name: Kevin Cheng

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Nam

Full Name: Nam Nguyen

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Malaika

Full Name: Malaika Qureshi

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Amrit

Full Name: Haramrit Toor

GitHub: https://github.com/htoor1999

Appendix 3: External Links

GitHub Repository

https://github.com/CMPT276-Project-Group-6/Realtorest

GitHub Organization

https://github.com/CMPT276-Project-Group-6

Canvas Group

https://canvas.sfu.ca/groups/310253