Comprehensive Real Estate Insights Platform

Members:

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Faculty Advisor & Client:

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- Florida Institute of Technology, Department of Computer Science -

Guidelines for Milestone 3 Progress Evaluation

Progress of Current Milestone (Progress Matrix):

Task	Completion %	Donovan	Jonathan	Enrique	To do
ROI Tool	85%	0%	100%	0%	Implement logic into frontend and figure out how to pull information from house instead of having the user enter it all
Investigate JavaScript functions and card layout on the home screen	95%	50%	10%	30%	Continue to improve functionality and appearance
Working Website Demo's	75%	33%	33%	33%	Add a Neighborhood Insight Demo
House Comparison Tool	90%	0%	0%	100%	Improve design if needed and further logic of comparison
Flask + MERN stack & caching/geolocating users	20%	33%	33%	33%	Implementation of caching methodology and figure out whether we want to use user location to show houses in their area on launch

Discussion of each accomplished task for the current Milestone:

Task 1: Frontend Development and Home Comparison Tool

During this milestone, we focused on furthering the development of the frontend. We successfully added the .svg logo and implemented a frontend heavy housing comparison feature to the home page. At the click of a button, the user can enter comparison mode and compare two or three homes.

Task 2: ROI Tool

We worked on the logic of the ROI Tool and have it completed and thoroughly tested. Next steps include: pulling numbers from the home the user wants to view which limits user input, implementing this logic into the frontend, and figuring out how we want to display all of this information to the user.

Task 3: MERN Stack w/ Flask

After research and deliberation, we have decided to replace Node in the MERN stack for Flask (python) to make it easier for us to develop the web application. This means no change for the frontend and only a minor change in the backend of the web application.

Task 4: Website Demos

For this milestone, I created a demo of the Home Comparison tool to showcase its functionality and ensure that we're moving forward with the project as planned. The demo highlights how users can seamlessly compare homes based on their preferences, providing a tangible preview of how the final product will work. This demo not only serves as a proof of concept but also helps us gather feedback and make improvements as we continue to develop other tools. As we move forward, we'll keep creating and refining demos for additional features to ensure that each component of the app is on track and aligns with our overall vision.

Discussion of contribution of each team member to the current Milestone:

Donovan Murphy:

During this milestone of the RealEase project, I made noteworthy strides in developing the front end of our web application, particularly advancing the Home Comparison Tool and ROI Calculator. I focused on improving the user interface with property cards, ensuring they are visually engaging and convey relevant information succinctly. Using HTML, CSS, and JavaScript, I aligned these designs with the project's goals and user expectations.

In addition, I continued to refine the integration between our database schema and back end, optimizing data accuracy and retrieval efficiency. My work required close collaboration with backend developers to synchronize efforts, enabling a seamless connection between the database and the front end.

I also researched advanced uses of Flask for our Python-based backend framework, identifying practical implementations to support new features and streamline the functionality of our tools. This research helped shape strategies for integrating Flask effectively into our application.

These efforts collectively aimed to advance our project milestones, providing innovative solutions to meet team and user needs while focusing on organization and technical precision.

Jonathan Bailey:

During this milestone, I collaborated in group meetings and worked with both teammates on many tasks. The majority of work that I completed during this milestone included concentrating on maintaining the original calculation process while improving usability by switching from command-line data entry to a user-friendly front-end interface. I tested extensively and created a responsive user interface customized with Tailwind CSS to ensure device compatibility. My responsibilities included developing features that allowed users to enter data through the UI and triggering computations using a Flask API. I also added dynamic result displays to the same page, displaying critical investment indicators such as monthly mortgage payments, net profit, ROI percentages, and cash-on-cash returns. I plan on implementing these findings within the rest of the front end development during the next milestone.

Enrique Obregon:

In this milestone, I focused primarily on the development of our Home Comparison tool, which is a key feature for the app. I worked on implementing the core functionality, ensuring that users can easily compare homes based on their preferences. This required integrating various data points and creating an intuitive interface to enhance the user experience.

In addition to this, I also dedicated time to frontend improvements. I converted our logo to an .svg format to ensure better scalability and performance across different devices and screen sizes. Furthermore, I worked on refining the design of our cards and buttons, ensuring they are visually appealing and provide a smooth, consistent interaction for users. These frontend updates are part of my ongoing efforts to improve the app's overall design and usability.

Plan for the next Milestone (task matrix):

Task	Donovan	Jonathan	Enrique
1. Finish research and implement caching & user location usage	implement/test 20%	Research 20%	Research/implement 60%
2. Research, planning, and implement first stages of Neighborhood Insights Tool	Design 30%	Design 30%	Design 40%
3. Touch up existing tools and frontend with help of client	Implement 30%	Implement 30%	Implement 30%

Discussion of each planned task for the next Milestone:

Task 1: Research, Implement, and Test Neighborhood Insight Tool

For this task, we aim to implement and test the first iteration of the Neighborhood Insights Tool. From the beginning we knew this would be the tool that would set us apart from the competition which is why we allowed ourselves ample time to research, implement, and test it.

Task 2: Finish Research, Implement, and Test Caching & User Location Data

For this task, our focus will be on enhancing the user experience by implementing data caching and utilizing user location data. We plan to research, implement, and test caching strategies for housing data and zip codes, which will enable users to view past home groupings instantly without waiting for new data to load. Additionally, by leveraging location data, we aim to show users homes in their immediate area right from the start, improving the relevance and personalization of their experience. Both of these features will require careful planning and testing to ensure they are seamless and efficient for our users.

Task 3: Touch Up Existing Tools and Frontend/Backend

For this task, we plan to focus on refining and improving our existing tools, such as the ROI Tool and Home Comparison Tool, to enhance their functionality and user experience. This will involve addressing any feedback or issues that have arisen since their initial implementation, as well as making design and usability improvements where necessary. Along with these tool updates, we'll also work on optimizing both the frontend and backend of the web application. This will include improving performance, fixing any bugs, and ensuring smooth integration between the user interface and server-side processes. These enhancements will help ensure that our app is not only feature-rich but also reliable and efficient for our users.

Date(s) of meeting(s) with Client & Faculty Advisor during the current milestone:

- November 13th, 2024
- November 25th, 2024

Client & Faculty Advisor feedback on the current milestone

Task 1: Guidance on Home Comparison Tool

The client provided valuable advice during the development of the Home Comparison tool, offering key insights that helped shape its functionality. Their guidance led to the decision to add pictures of the homes to the comparison, enhancing the visual experience for users. They also discussed how to sort the comparisons by various factors, including the amount of green showing (positives), price (low to high), and year (low to high). This feedback allowed us to refine the tool to better align with their vision and ensure it meets the needs of the end users. Through regular feedback and discussions, the client advised on important decisions regarding the user interface and overall flow, helping us make the necessary adjustments for a smoother and more intuitive experience. Their input continues to be instrumental in guiding the development process.

Task 2: Guidance on Front-End Design

Our client provided positive feedback on the frontend, expressing satisfaction with the design and overall look and feel of the app. They appreciated the progress we've made and suggested changing the details of the house to include visual hierarchy, ensuring that users can easily distinguish what is more important and what is less important. Their ongoing input ensures that we're aligned with their vision and helps us make targeted improvements to enhance the user experience as we move forward.

Task 3: Guidance on ROI Implementation

Our advisor provided valuable guidance for improving the functionality of the ROI tool, suggesting that we add a call to action button on the cards of the homes that stands out to the user. This button would trigger a popup form pre-filled with the existing information, allowing the user to easily enter any additional details required. This enhancement is aimed at streamlining the user experience by making it easier for users to provide the necessary information while maintaining a smooth, intuitive flow throughout the tool.

Faculty Advisor Signature: _____ Date: _____

Evaluation by Faculty Advisor

Faculty Advisor: detach and return this page to Dr. Chan (HC 209) or email the scores to pkc@cs.fit.edu

Score (0-10) for each member: circle a score (or circle two adjacent scores for .25 or write down a real number between 0 and 10)

Donovan Murphy	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Jonathan Bailey	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Enrique Obregon	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

Faculty Advisor Signature: _____   Date: _____