



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 2 Progress Evaluation

Progress of Current Milestone (Progress Matrix):

Task	Completion %	Donovan	Jonathan	Enrique	To do
ROI Tool	65%	0%	100%	0%	Upscale the tool to implement APIs
Investigate JavaScript functions and card layout on the home screen	65%	80%	10%	10%	Continue to improve functionality
Working Website Demo's	65%	60%	20%	20%	Continue to add features to the demo's
Improve on early stage demo, increase size, improve layout, and determine caching vs. API calls	40%	60%	20%	20%	Flask vs MERN and plan out the best ways to pull data for different features
House Comparison Tool	10%	20%	20%	60%	Plan out how we are going to set up the interface and backend comparison

Discussion of each accomplished task for the current Milestone:

Task 1: Frontend Development and Card Display

During this milestone, we focused on developing the front end of the website. We successfully displayed the housing cards on the home screen, allowing users to click on it for more details. This dynamic generation enhances user experience and engagement, showcasing our commitment to a polished user interface.

Task 2: Database Schema and Backend Integration

We worked on establishing the database schema, ensuring it aligns with our data storage needs for properties, neighborhoods, and user information. This foundation supports our integration with MongoDB as the primary data source.

Task 3: Exploring Flask Integration

To enhance our platform's functionality, we researched the possibility of incorporating Flask into our MERN stack to facilitate Python program calls, especially for Jonathan's work on the ROI calculator and my work on the main menu house lookup. This transition will leverage Python's capabilities while maintaining our current stack's benefits.

Task 4: API Research and Testing.

We focused on researching API calls to compare Express with Flask. This comparative analysis is vital for determining the most efficient method for our platform's backend operations, ensuring we utilize the best tools available.

Task 5: Progress on Home Comparison Tool

We initiated the early stages of the home comparison tool, allowing users to compare different properties. This feature is crucial for user engagement and the platform's overall value proposition.

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

Donovan Murphy:

During this milestone of the RealEase project, I focused on developing the front end of our web application, specifically concentrating on creating visually appealing and functional property cards. This involved using HTML, CSS, and JavaScript to give users clear and concise information about available properties. I also managed the integration of our database schema with the back end, ensuring that the data displayed was accurate and efficiently retrieved. This required close collaboration with back-end developers to align our work and facilitate seamless data flow between the front and back end.

Additionally, I conducted thorough research on utilizing Flask as a framework for our Python integration, exploring its features and benefits. This included reviewing documentation, examples, and best practices, allowing me to propose strategies for implementing Flask to enhance our web application's functionality. Through these contributions, I aimed to drive our project forward and ensure we met our objectives promptly, balancing organization, communication, and technical development to support our team's success.

Jonathan Bailey:

During this milestone, I collaborated in group meetings and worked with both teammates on many tasks. I collaborated in discussions, providing insight into where we needed to improve and how we could progress throughout the course of this project. I also was responsible for developing, testing, and demoing an ROI calculation tool that will eventually be implemented into our webpage.

The tool I created is a tool for evaluating the financial success of real estate investments. It collects investment information, calculates important parameters such as monthly mortgage payments, net profit, annualized ROI, cash-on-cash return, and IRR, and does a breakeven analysis to determine when the investment will pay for itself. Finally, it provides a report summarizing one- and five-year earnings, ROI, breakeven point, and 10-year IRR, giving

investors a clear, complete perspective of future returns to help them make educated decisions. This tool is just the first iteration and will eventually be able to take in data from our API's as well as be fully implemented into our front end.

Enrique Obregon:

During this milestone of the RealEase project, I focused on our testing strategies. I developed comprehensive test cases that addressed various functionalities, including the front-end components and the integration with the back end. I worked with Donovan to enhance the demo and ensure our cards and information were displayed correctly before moving on to more complex features. During this milestone, I also began working on the home comparison tool.

Plan for the next Milestone (task matrix):

Task	Donovan	Jonathan	Enrique
1. Continue to research and test out caching vs python scraping, and investigate scheduled API calls	implement/test 40%	Research 20%	Demo 40%
2. Planning and begin development of home comparison tool and ROI calculator	Design 30%	Design 30%	Design 40%
3. Look into the exact data we want to use for the open search vs. Neighborhood insights dashboard	Implementation and test 20%	Research and early testing 50%	Test 30%
4. Refining API List and Continued Testing of current product	Refine and test 70%		Test and Demo 30%

Discussion of each planned task for the next Milestone:

Task 1: Research and Test Caching vs. Python Scraping and Investigate Scheduled API Calls

For this task, we aim to implement and test various caching methods to optimize the performance of our application by reducing API call frequency. Concurrently, I will research Python scraping techniques to assess our project's viability. Additionally, I will investigate the possibility of scheduled API calls to streamline data retrieval. Jonathan will focus on research to understand the implications of each approach, while Enrique will work on creating a demo to showcase our findings.

Task 2: Planning and Beginning Development of Home Comparison Tool and ROI Calculator

In this task, our team will focus on designing the home comparison tool and the ROI calculator. I will concentrate on design, ensuring user interfaces are intuitive and align with our overall branding. Jonathan will also contribute to the design process, ensuring tool consistency and usability. Enrique will take the lead on design, utilizing his creative skills to enhance both tools' visual appeal and functionality.

Task 3: Look into the Exact Data We Want to Use for the Open Search vs. Neighborhood Insights Dashboard

This task involves a detailed analysis of the data requirements for the open search feature and the Neighborhood Insights dashboard. I will implement and test the data structures, ensuring they meet our application's needs. Jonathan will conduct research and early testing to identify the most relevant data sources, laying the groundwork for our data architecture. Enrique will focus on testing the integration of this data into the dashboard to ensure a seamless user experience.

Task 4: Refining API List and Continued Testing of Current Product

For this final task, I will lead the effort to refine our API list, selecting the most effective and relevant APIs for our project. This will involve testing each API's functionality and

reliability to ensure optimal performance. Jonathan will assist in this process, contributing to testing and preparing a demo to showcase the refinements made. Enrique will also be involved in testing, helping to ensure that our product is polished and ready for presentation to stakeholders.

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

- October 28th, 2024

Client & Faculty Advisor feedback on the current milestone

Task 1: Guidance on Data Retrieval Planning

Our advisor emphasized the need to strategically plan how we will pull various data types for each feature in our application. This involves evaluating whether to use a unified method for data retrieval or different approaches for each feature. By thoroughly analyzing our data requirements, we can ensure that our application remains efficient and responsive.

Task 2: Guidance on "Hello World" Demo Development

We were encouraged to build upon our existing demos to refine their functionality and enhance the user experience. This task involves iterating on the demos, integrating feedback from our advisor, and ensuring that each feature works seamlessly. A polished demo will demonstrate our progress and provide valuable insights into the usability of our application.

Task 3: Guidance on Front-End Design

A critical aspect of our next steps is focusing on our application's front-end design. This includes creating headers and footers incorporating our company's SVG logo on the dynamically generated web pages. A cohesive design will strengthen our brand identity and improve user navigation.

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: _____