Portfolio Sentinel

Team

Team Member information

- Chandler Rathke

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- Mason Leffel

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Client info

- Accutech

- Main : Matt Garrett

- Mentor: Drew Heiss

Business Requirements

BR1 - Generative AI with Prompts

◈ A generative AI is required to summarize and generate information based on a client's financial needs.

BR2 - Advisor and Client

◈ Advisor and client details will be required in order to manage who receives the emails and where the documentation will be coming from.

Use Cases (Examples)

UC1 - Monitor Portfolio Changes

- ◈ Monitoring portfolio changes is a key function of the system. Clients need to be informed about the status of their investments and any changes that may impact their portfolio. On a quarterly basis, the system will check for any changes, retrieve relevant information, and email the advisor. This enables the advisor to inform the client and make the appropriate decisions.

UC2 – View Advisor's Clients

- ◈ One of our requirements was to allow advisors to manage their clients and have access to their clients' portfolio details to make informed investment decisions. This allows advisors to retrieve necessary information and data to help them stay updated and effectively manage their clients' portfolios.

Requirements (Examples)

- FR1: Advisor management
  - ◇ Retrieve advisor information (high)
  - ◇ Create new advisor (medium)
  - ◇ Delete advisor (medium)
  - ◇ List of clients linked to advisor (high)
  - ◇ UC2
- FR2: Client management
  - ◇ Retrieve client information and link to portfolio (high)
  - ◇ Create new clients (medium)
  - ◇ Delete clients (medium)
  - ◇ UC1

- NR1: Performance - retrieve advisor and client information from database with no delay (high)
  - ◇ UC2
- NR2: Scalability - system should be able to handle a growing number of advisors and clients and documents (medium)
  - ◇ UC2
- NR3: Security - advisor and client information to be stored and transferred securely (high)
  - ◇ UC2

Domain model

AdvisorInformation
•Retrieves the advisor information and matches it to their clients
ClientInformation
•Retrieves the client information and matches it to their portfolio
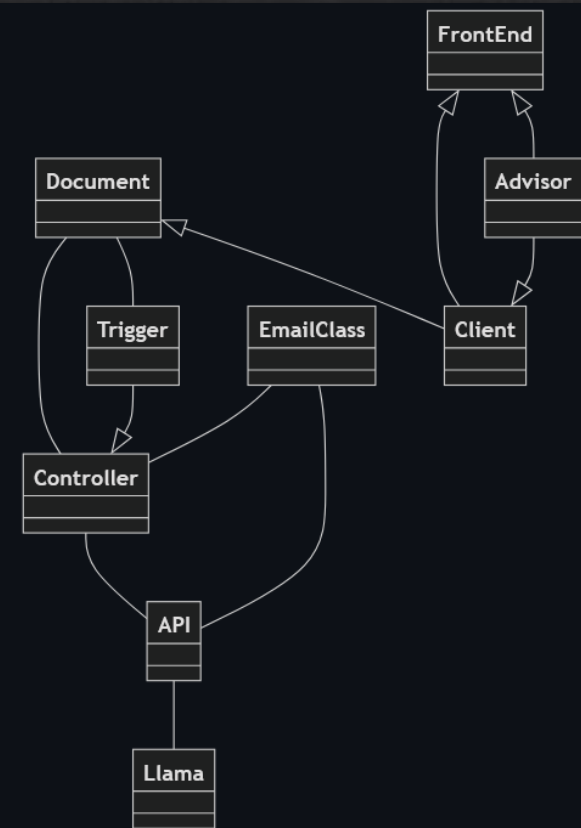**Controller**
•Processes requests between all the other aspects of the domain
API
•Processes requests between the Controller and the Llama AI
FrontEnd
•An admin terminal to help test the API

TechStack

◈   Vue JS

This is a JavaScript open-source front-end framework with a large community and comprehensible documentation. Other projects from Accutech use Vue, so building in a familiar framework for them will allow them to build off of the project after we have finished our work.
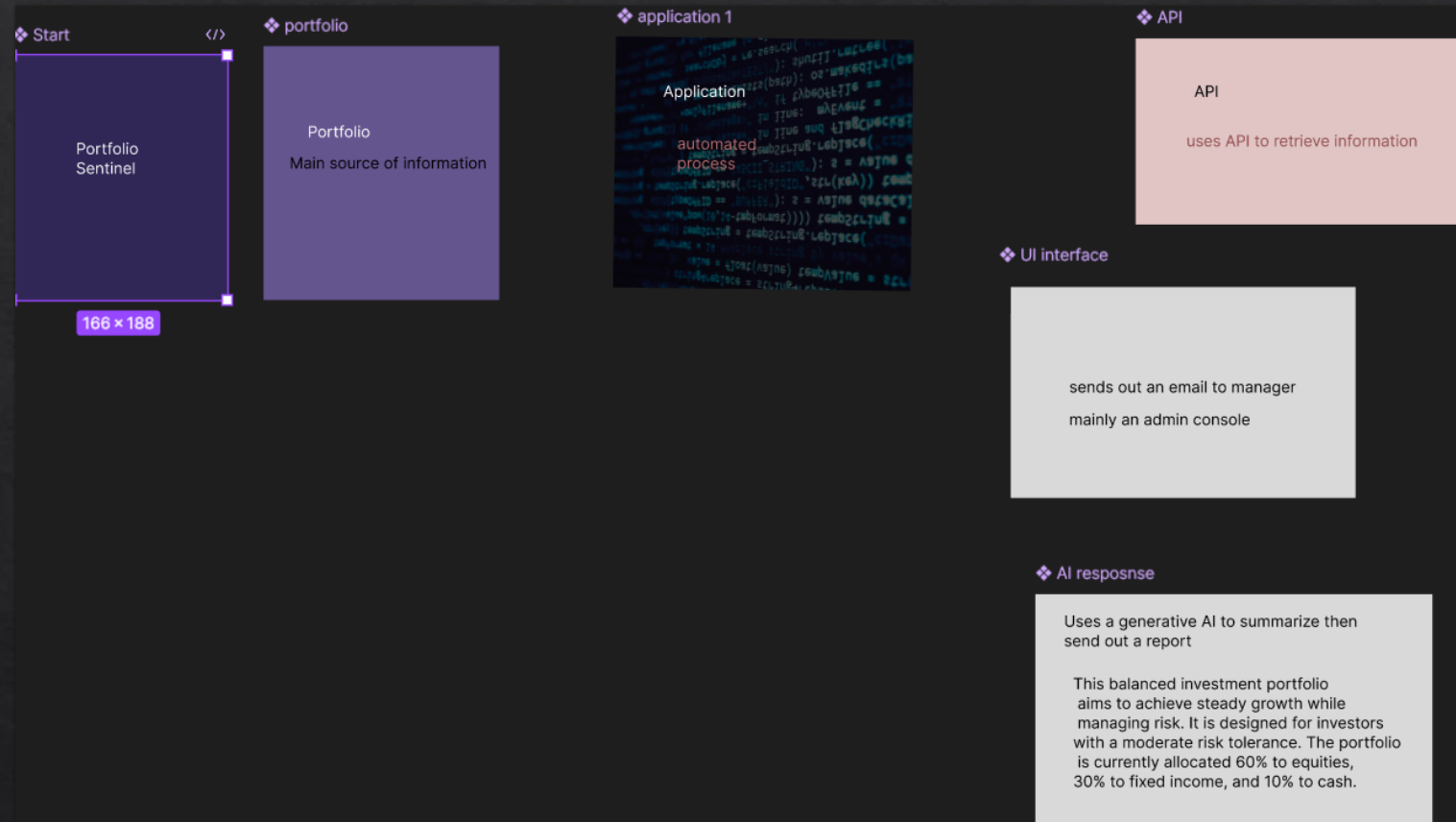
◈   .Net and C#

.Net and C# are going to be used for the back-end code. Both are popular frameworks with developers and have a number of sources and libraries that can be learned from. Accutech has used these for previous projects, therefore, using these will benefit them long after we are finished.

◈   Llama

A collection of pretrained generative models. This was the AI model recommended by our mentor for the use as our generative AI.

Prototype

Start ⟨/⟩

Portfolio
Sentinel

166 × 188

portfolio

Portfolio

Main source of information

application 1

Application

automated
process

API

API

uses API to retrieve information

UI interface

sends out an email to manager

mainly an admin console

AI resposnse

Uses a generative AI to summarize then
send out a report

This balanced investment portfolio
aims to achieve steady growth while
managing risk. It is designed for investors
with a moderate risk tolerance. The portfolio
is currently allocated 60% to equities,
30% to fixed income, and 10% to cash.

Slide, Fun