

**MICHIGAN STATE**  

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**UNIVERSITY**

# Project Plan

## Integrated Analyst Ratings and Notes

### The Capstone Experience

Team Principal

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*From Students...  
...to Professionals*

# Functional Specifications

- Create robust ratings and notes capabilities that may incorporate additional media
- Support intelligent distribution of the notes/ratings
- Maintain both current and historical notes/ratings
- Leverage cloud computing (Amazon Web Services)



# Design Specifications

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- Incorporate functionality of 4 systems across 3 boutiques into one comprehensive tool
- Allow users to easily view the reporting history of an investment opportunity
- Provide each boutique with a user experience that feels tailored to them
- Notify users of changes in holdings to expedite the decision-making process



# Screen Mockup: Welcome Page

The screenshot shows a web browser window with the Principal logo in the top left. The main content area is divided into three sections:

- Recently Viewed:** A table with 8 rows, each showing a report titled 'International Buisnes Machines' by analyst 'John Doe', published on '1/25/2019'.
- Recently Edited:** A table with 8 rows, each showing a report titled 'Apple Inc.' published on '1/26/2019' at '3:45 PM'.
- Subscriptions:** A table with 3 rows, each showing a report titled 'Apple Inc.' by analyst 'Lena Mutchler', published on '1/29/2019', '1/28/2019', and '1/27/2019' respectively, with scores of 56, 41, and 56.

On the right side, there is a vertical navigation menu with four items:

- Profile (person icon)
- Write Report (pencil icon)
- Search Reports (magnifying glass icon)
- Home (house icon)

# Screen Mockup: User Profile Page

**Principal**

**Stephen Johnson**  
Technology Analyst

**My Reports** **Settings**

- Profile
- Write Report
- Search Reports
- Home

**Subscription Management:**

Subscribed Securities			
CUSIP/CISN	Company	Subscribed	Email
037833AB0	Apple Inc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
037833CD1	Apple Inc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
037833EF2	Apple Inc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17275RGH3	CISCO Systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17275R1J4	CISCO Systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17275RKL5	CISCO Systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17275RMN6	CISCO Systems	<input checked="" type="checkbox"/>	<input type="checkbox"/>
38259POP7	Google Inc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38259PQR8	Google Inc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
594918ST9	Microsoft Corp.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
68389XUVA	Oracle Corp.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
68389XWXB	Oracle Corp.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Subscribed Tags		
Tag	Subscribed	Email
Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Central America	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DDQ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Diversified Real Asset	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Domestic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
High Cap Yield	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Oil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Renewable Energy	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SmallCap Growth I	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SmallCap Value II	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Strategy Meetings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Technology	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Subscribed Analysts			
Analyst	Position	Subscribed	Email
Adam Armstead	Technology Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alex Henry	Portfolio Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Brandon Elizondo	Agriculture Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Daniel Gheistman	Energy Analyst	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Henry Smith	Technology Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Josh VanDevelde	Portfolio Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lena Mutchler	Pharmaceutical Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Max Neville	Agricultural Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mike Samson	Technology Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samuel Johnson	Entertainment Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Toby Ziegler	Portfolio Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Thomas Motor	Transportation Analyst	<input checked="" type="checkbox"/>	<input type="checkbox"/>

# Screen Mockup: Make PFI Ratings

New Tab x +

Principal Technology Credit Report Author: Stephen Johnson Date: 1/29/2019

Company:  Decision:

CUSIP/CISN:  PGI Factor Score:

**Fundamentals (6-9 Months):** Total:  <weight>

Revenue:  <weight>

Leverage:  <weight>

Profitability:  <weight>

FCF Generation:  <weight>

Credit Risk (Quantitative):  <weight>

Quality of Management:  <weight>

Environmental/Social/Governance:  <weight>

Regulatory/Legal Environment:  <weight>

Comments:

**Technicals (3-6 Months):** Total:  <weight>

**Valuation (Current):** Total:  <weight>

**Investment Thesis:**

Add Media Publish Delete Add Tags

# Screen Mockup: View PFI Ratings

New Tab x +

Principal Technology Credit Report

Author: Stephen Johnson  
Date: 1/29/2019

Company: International Business Machine      Decision: UNDERPERFORM

CUSIP/CISN: 459200101      PGI Factor Score: 45

**Fundamentals (6-9 Months):** Total:  <weight>

Revenue:	<input type="text" value="##"/>	<weight>
Leverage:	<input type="text" value="##"/>	<weight>
Profitability:	<input type="text" value="##"/>	<weight>
FCF Generation:	<input type="text" value="##"/>	<weight>
Credit Risk (Quantitative):	<input type="text" value="##"/>	<weight>
Quality of Management:	<input type="text" value="##"/>	<weight>
Environmental/Social/Governance:	<input type="text" value="##"/>	<weight>
Regulatory/Legal Environment:	<input type="text" value="##"/>	<weight>

Comments:  
Fundamentals Comment: Johnson 1/29/2019

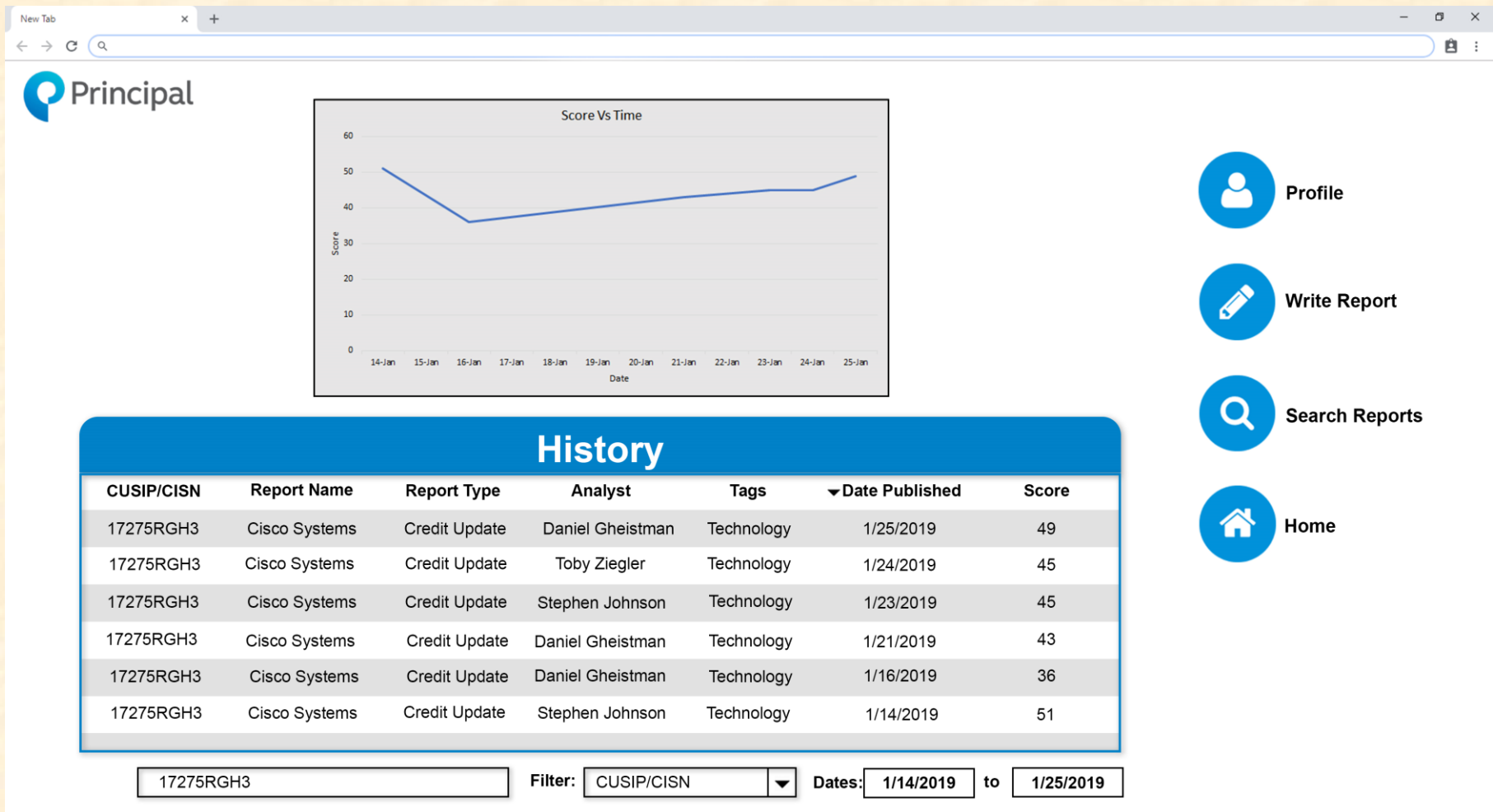
**Technicals (3-6 Months):** Total:  <weight>

**Valuation (Current):** Total:  <weight>

**Investment Thesis:**

View Media   Copy Report   Subscribe   History

# Screen Mockup: Report History





# Screen Mockup: Search Results

**Principal**

## Search Results

CUSIP/CISN	Report Name	Report Type	Analyst	Tags	▼ Date Published	Score
17275RGH3	Cisco Systems	Credit Update	Daniel Gheistman	Technology	1/25/2019	49
17275RIJ4	Cisco Systems	Credit Update	Toby Ziegler	Technology	1/24/2019	45
N/A	Update on Cisco Systems	Note	Toby Ziegler	CISCO Systems, Technology	1/24/2019	N/A
17275RGH3	Cisco Systems	Credit Update	Stephen Johnson	Technology	1/23/2019	45
17275RGH3	Cisco Systems	Credit Update	Daniel Gheistman	Technology	1/21/2019	43
N/A	Cisco Strategy Update	Note	Adam Armstead	Cisco Systems, Technology	1/18/2019	N/A
17275RGH3	Cisco Systems	Credit Update	Daniel Gheistman	Technology	1/16/2019	36
17275RIJ4	Cisco Systems	Credit Update	Stephen Johnson	Technology	1/16/2019	51

Cisco Systems      Filter: All

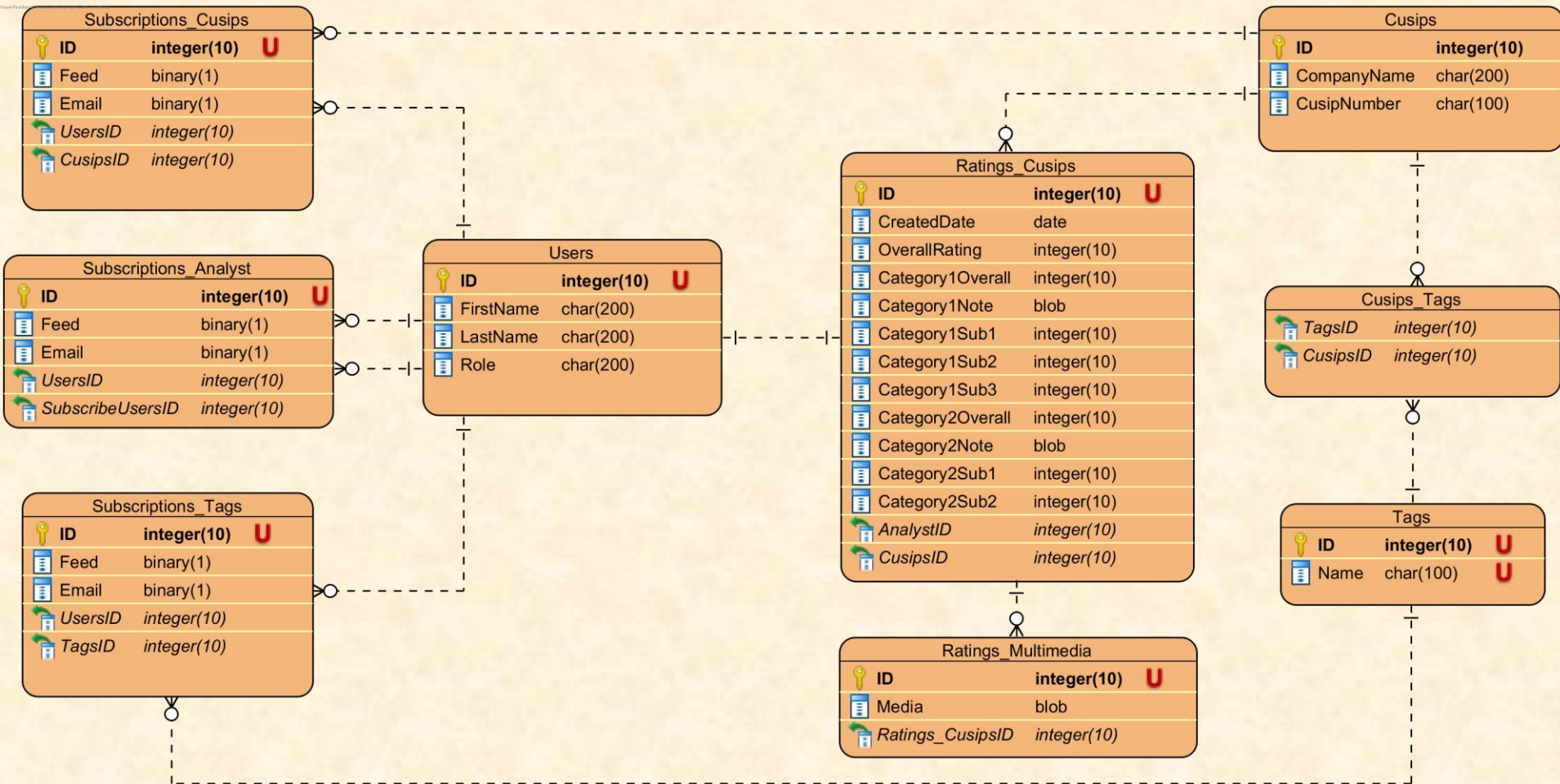
- Profile
- Write Report
- Search Reports
- Home

# Technical Specifications

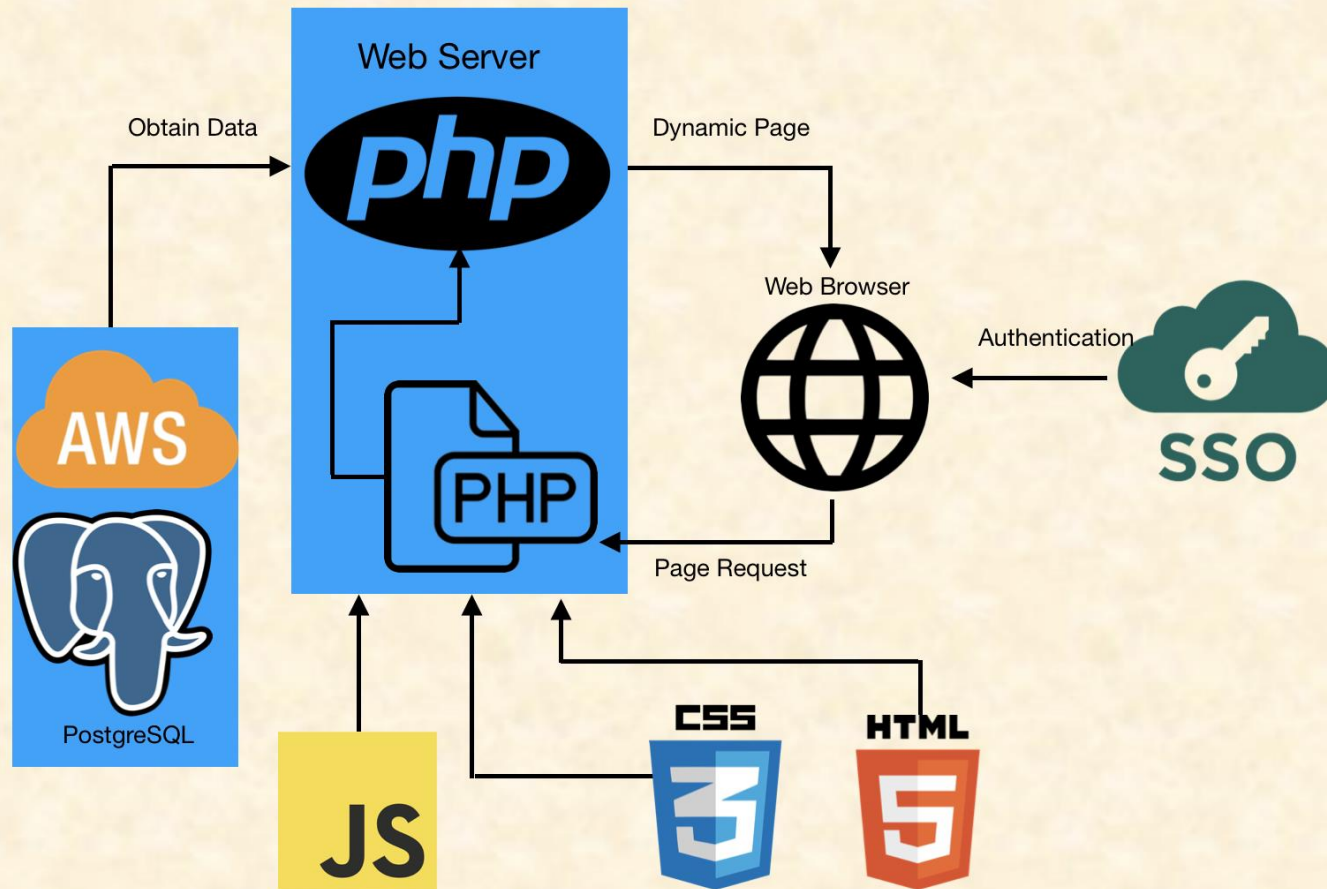
- Use Amazon Web Services' SDK for user authentication and role information
- The PostgreSQL database will store data for
  - Investments
  - Ratings
  - User Subscriptions
  - Tags
- Security between boutiques will be maintained by creating multiple instances of the application



# Technical Specifications



# System Architecture



# System Components

- Hardware Platforms
  - Amazon Web Services – Amazon Elastic Compute Cloud (EC2)
- Software Platforms / Technologies
  - PostgreSQL
  - PHP
  - JavaScript
  - HTML
  - CSS



# Risks

- Integrate web app into client's SSO
  - Application must integrate with current SSO through AWS
  - Work with client to understand current solution
- Verify system will comply with government regulations
  - Financial regulations set in place by the federal government that application must follow
  - Work with Principal to ensure the system meets all requirements
- Accommodate the functionality of 4 different systems that are currently in use
  - Application needs to merge the systems currently used by the different boutiques without losing functionality
  - Iterate through mockups with the client and analysts before implementing the front-end



# Questions?

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