

Project Summary

Stock Score provides investment information to users. Users enter a stock ticker and a date range to generate a stock score which indicates if the user should buy, hold or sell a stock. Users can save a score as a favorite or share the score with other users.

Requirements

Business Requirements are NONE.

User Requirements (Use Cases)			
ID	Requirement	Priority	
UR-01	As a user, I want to see the current price, and the industry classification of a stock.	High	
UR -02	As a user, I want to see the company overview of a stock so that I can learn more about what the company does.	High	
UR -03	As a user, I want to see the historical price information for a stock over a given time period in a graphical representation.	Critical	
UR -04	As a user, I want to see a recommendation to strongly buy, buy, strongly hold, hold, strongly sell, or sell as an indicator of the investment decision.	Critical	
UR -05	As a user, I want to see the dividend payout ratio of a stock so that I can estimate the better measurement of earnings for my possible investment.	Medium	
UR -06	As a user, I want to compare the historical performance of my stock with its top 3 industry competitors.	High	
UR -07	As a user, I want to compare the historical performance of my stock with one of the market benchmarks (Dow, Nasdaq, and S&P 500)	Medium	
UR -08	As a user, I want to store a stock as a favorite so that I can keep monitoring it in the future.	Medium	
UR -09	As a user, I want to set an alert on the different states of recommendations as a reference of future investment decision.	Medium	
UR -010	As a user, I want to be notified via email when a recommendation of a stock changes to what I set up to alert me	Medium	
UR -011	As a user, I want to share a stock and its recommendation with others.	Low	

Non-Functional Requirements

ID	Requirement	Topic Area	Priority
NFR-01	The system should respond within 3 seconds on average to an user's request.	Performance	Critical
NFR-02	The system should have a capacity of handling 10 simultaneous requests at a time.	Performance	Critical
NFR-03	The page should display correctly on screen resolution down to 1024 x 768.	Screen Resolution	High
NFR-04	The system should display correctly on the latest version of Chrome and Firefox	Web Browser	Critical
NFR-05	Users must authenticate to be able to access their StockScore account.	Verification	Critical
NFR-06	Passwords must be secured using SSL (https) from the web application and encrypted in the database.	Security	Critical

Data Storage

For Our data we will be using MySQL. To do this we will be creating a database for our site and in our database we store objects like that will also reference another database. For instance, we as a user need to look at our favorite lists. So when we look up our favorites our user has a reference to our own favorites database.

UI Mockups

UI Mockups

[1st Page]

10 - StockScore

Welcome



Bull or Bear?

Let StockScore help you make the right investment decisions.

CREAT ACCOUNT

Navigate to 'SignUp' page

Already a User?

LOGIN

Email

Password

StockScore Logo

First name : _____

Last name : _____

Email : _____

password : _____

confirm password : _____

SIGN UP **CANCEL**

[2nd page]

3



Ticker Symbol or Company Name

Log Off

Search

Navigate to
SignUp (1st) page

1) Company Name (Ticket Symbol)

Add ticket to FavoriteList

My Favorite

2) Industry Name

Navigate to
"popover" menu

3) Recommendation Score : _____

Share

Set Alert

Navigate to
"popover" menu

4) Current price : \$ _____ (\pm percent change since the daily open price)

Navigate to
"popover" menu

5) Dividend payout ratio : _____ % (or Not Applicable)

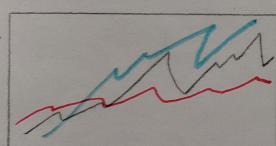
6) Historical performance

Date Range From : mm/dd/yyyy To : mm/dd/yyyy

map to 'Google calendar'

APPLY

when click "Apply",
the initialized empty
chart will be filled
with historical performance
for the given time period



Market Comparison

- Dow
- Nasdaq
- S&P 500

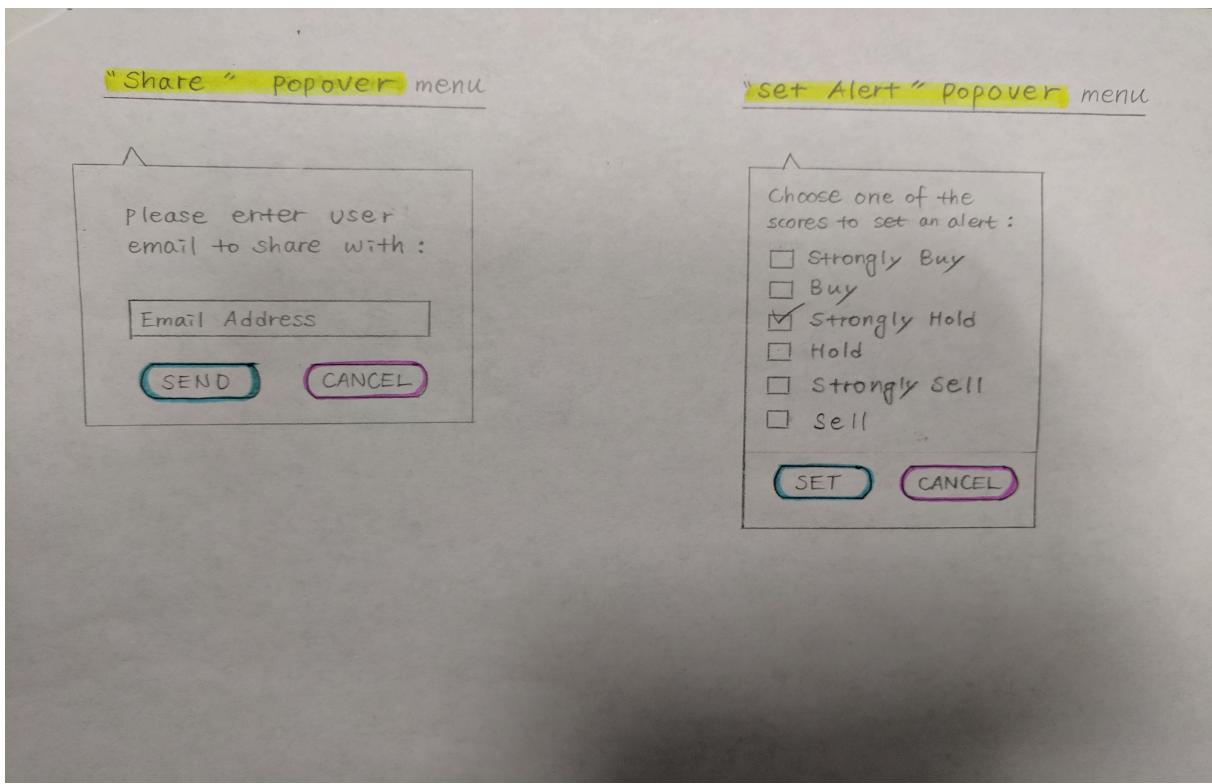
Industry Competitors

- peer 1
- peer 2
- peer 3

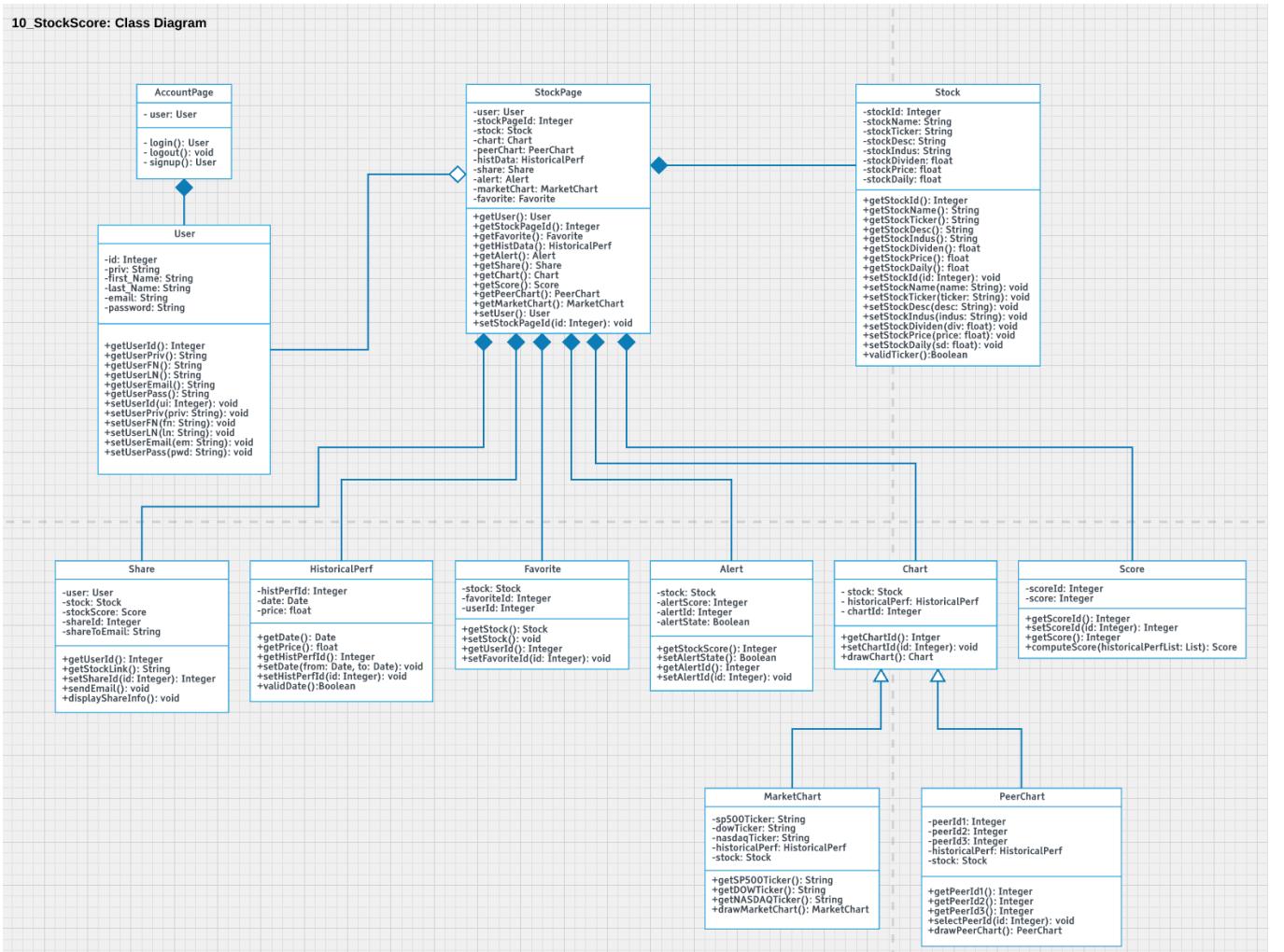
7) Description

i.e.

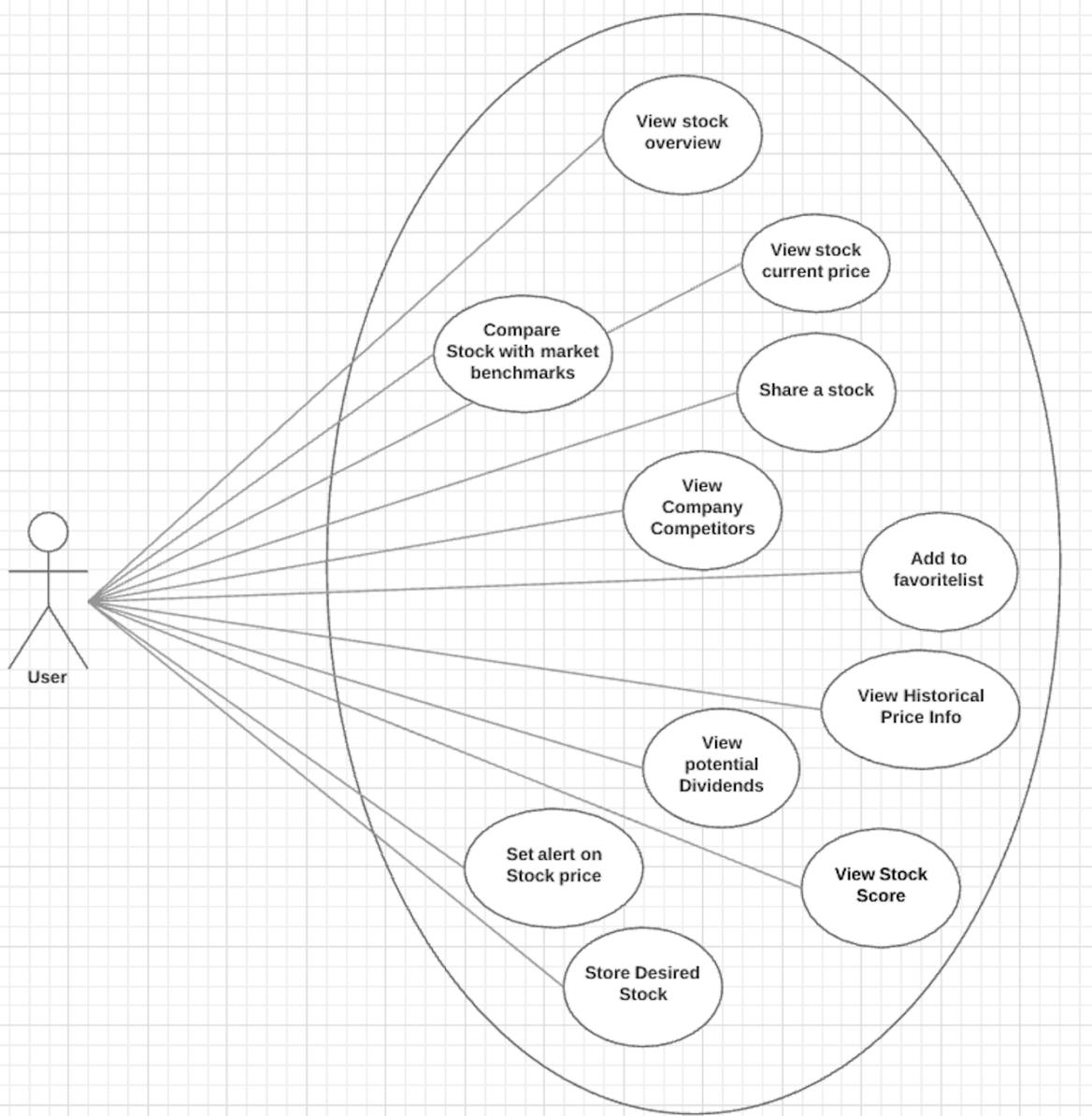
Apple Inc. designs



Class Diagram



Use Case Diagram



Use Case Documents

Use Case ID:	UR-04
Use Case Name:	Compute a Recommendation Score
Description:	User can see a rating our site will give for a specific stock and will be given a rating of strongly buy, buy, hold, strongly hold, sell, and strongly sell

Actors:	Users	
Pre-conditions:	SQL databases have listed stocks, Search function works properly, APIs are properly connected and running	
Post-conditions:	User finds desired stock and is able to click on it to direct them to a stock information page, page will have data for selected stock and from data give a score from 1-100 on its buyability	
Frequency of Use:	Daily by Users	
	Actor Action	System Response

Flow of Events:	1	Enter ticker or company name	Validate ticker or name if no then display invalid message and prompt to re-enter
	2	Enter date range	Validate date range then aggregate historical closing stock prices for the range
	3	view stock score	compute a recommendation score and retrieve market recommendation score then compare with the market, if matched the score at least 75% with the market then display a recommendation score if no then display a recommendation score with confidence level
	4		
	5		
	6		
	7		
	8		
	9		
Variations:	If no then display invalid message and prompt to re-enter		
Exceptions:			
Developer Notes:	<p>Stock Score will be a computation of all selected data and values.</p> <p>Think:</p> <p>stockScore: $EMA = (Closing\ Price - EMA\ previous\ day) \times \{2 / (Time\ Period + 1)\} + EMA\ previous\ day$</p>		

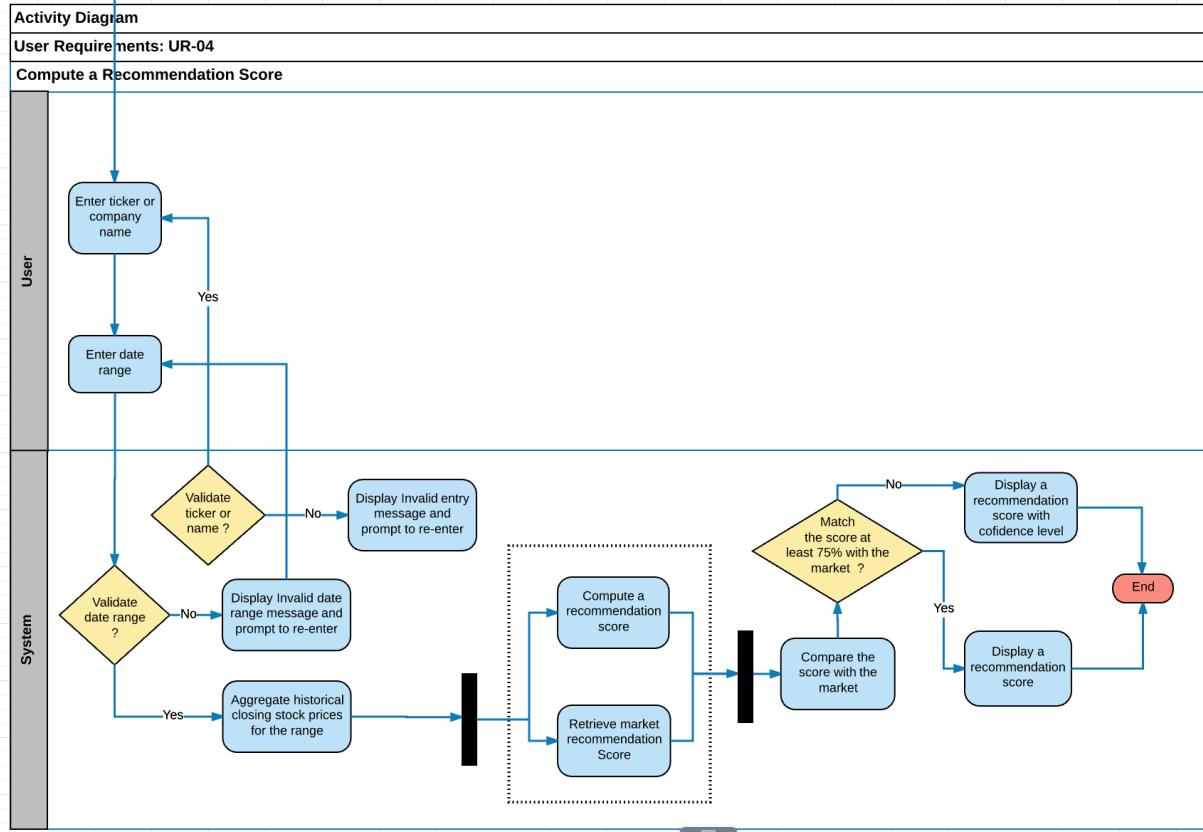
Use Case ID:	UR-06
Use Case Name:	View Top Three Competitors
Description:	User can add 3 competitors to see how they stack up to current selected stock

Actors:	Users	
Pre-conditions:	SQL databases have listed stocks, Search function works properly, chart builds correctly	
Post-conditions:	User can see a graph of 3 competitors in comparison to their prospect stock	
Frequency of Use:	Daily by Users	
Flow of Events:	Actor Action	System Response
	1 Enter the date range	Validate the date range then aggregate historical stock prices then compute, retrieve market recommendation score, and draw a chart of the historical stock prices. The compare the score with the market, match the score at least 75% with the market then display a recommendation score
	2 Select at most top three competitors to compare	Validate the same date range then draw a comparable chart of the historical stock prices
	3	
	4	

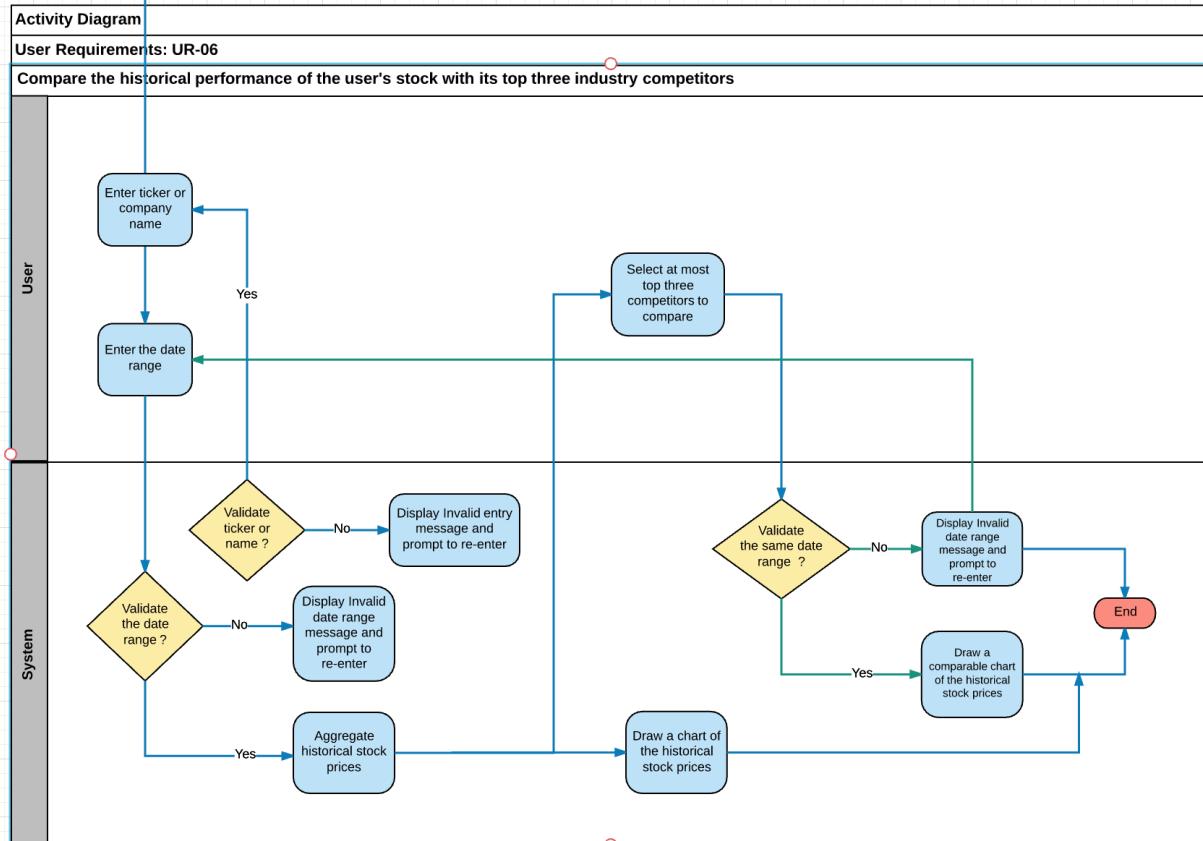
	5	
	6	
	7	
	8	
	9	
Variations:	if no validation then display invalid message and prompt to re-enter	
Exceptions:		
Developer Notes:		

Activity Diagrams

10_StockScore

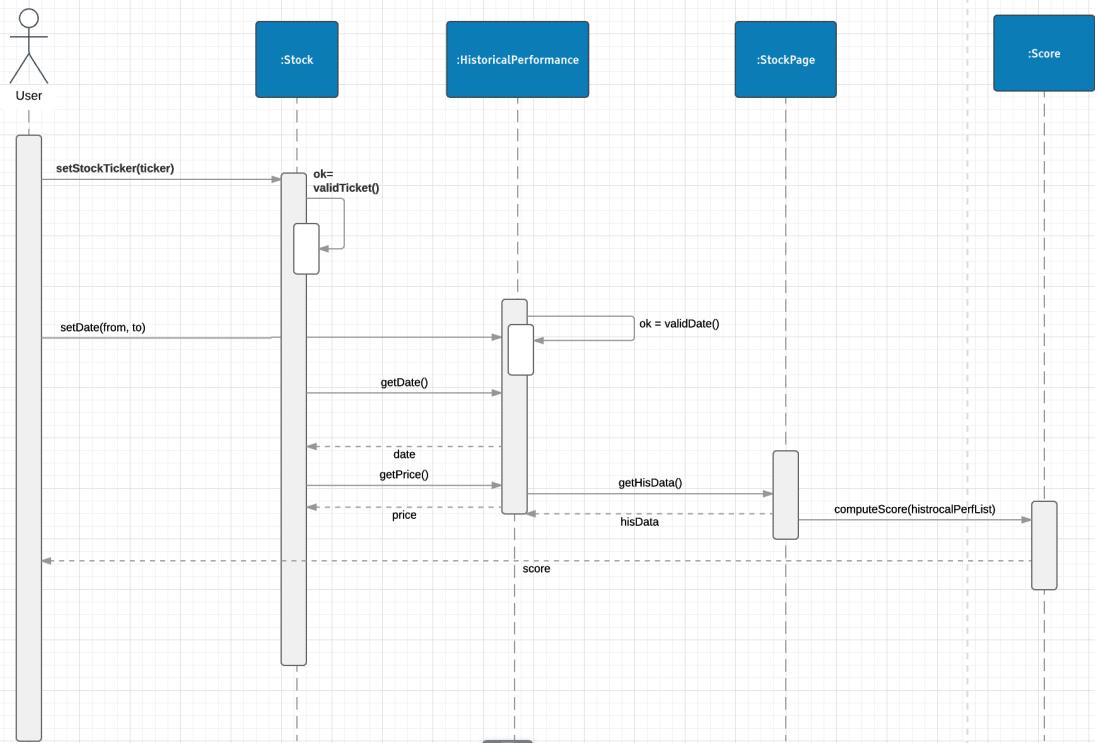


10_StockScore



Sequence Diagrams

Use Case (UR-04): Compute a Recommendation Score



Use Case (UR-06): Compare the historical performance of the user's stock with its top three industry competitors

