

Robinhood Mobile Application Review

October 2019 | San Jose State University

Team Phoenix

Contributors-

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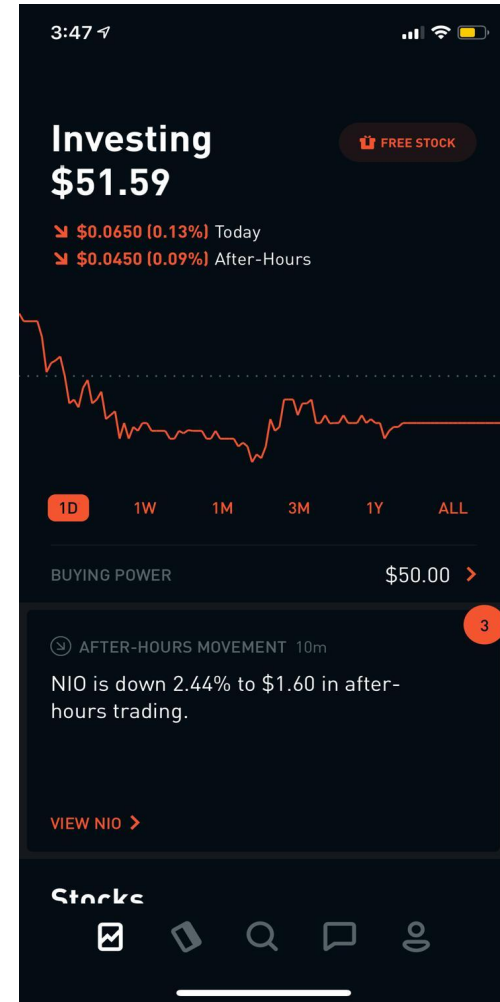
Shubham Sand

Hema Mutyala

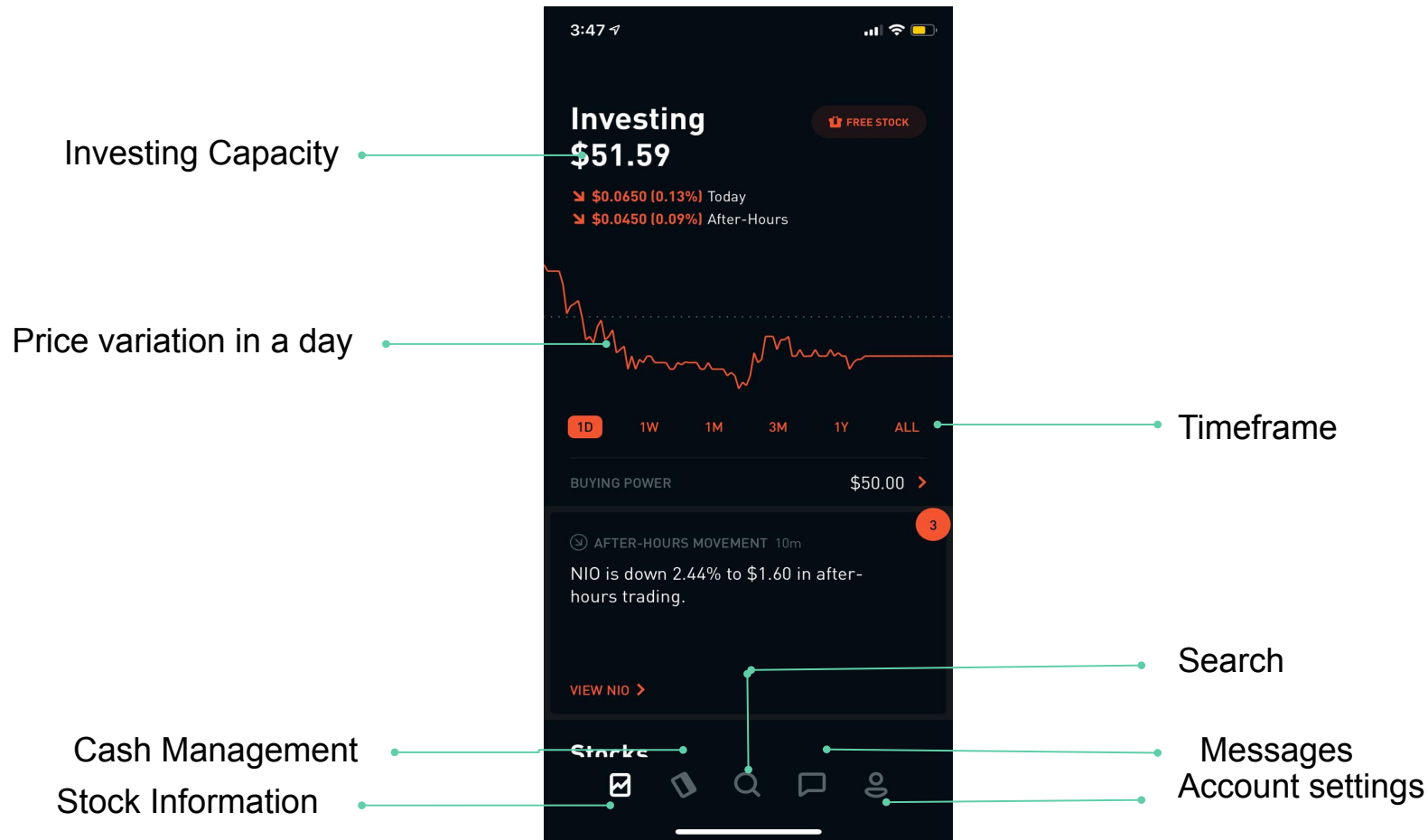


Introduction

- Robinhood - U.S based financial service company.
- Smartphone mobile app.
- There are five features - Investing and stock information page, cash management, search, messages, and settings.



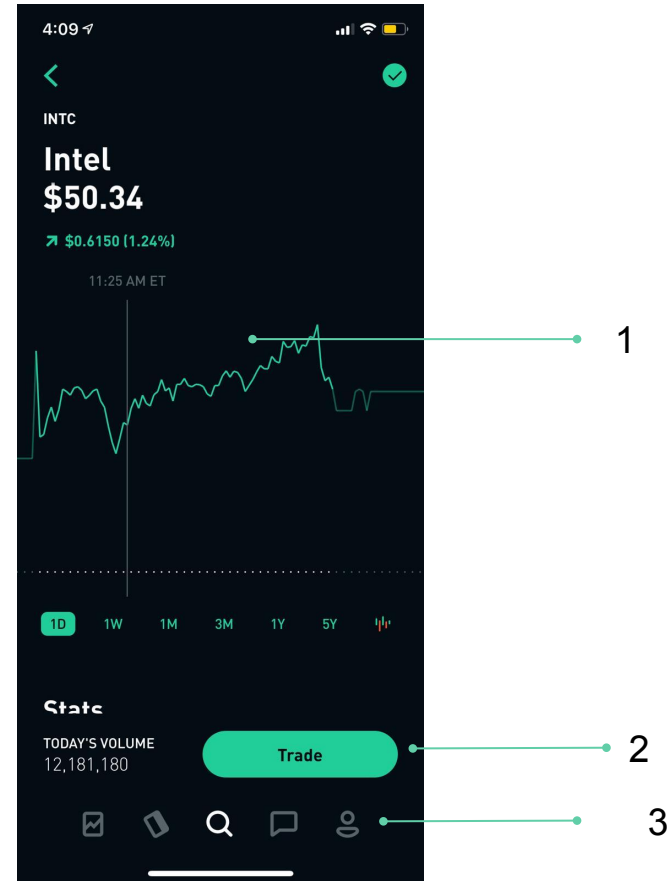
Robinhood - Product Overview



Features Evaluated

The features evaluated for the app are:

1. Stock information and search
2. Buy/Sell Options
3. Account Settings



Stock information and search

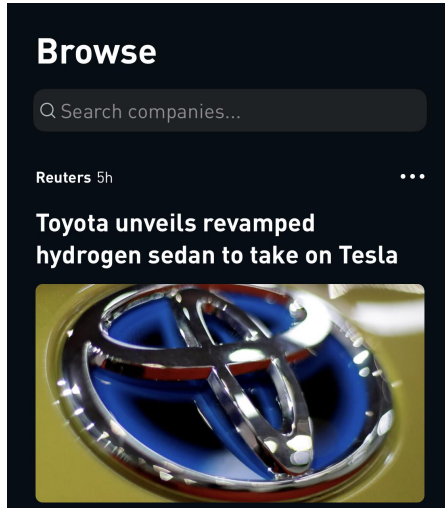
- Stock information page shows detailed performance of a particular stock.

The Good:

- Mapping
- Visibility
- Grouping

The Bad:

- Feedback
- Limit Cognitive load complexity



A screenshot of a 'Stats' table for Intel stock. The table has two columns and two rows of data. The first column lists various metrics, and the second column lists their corresponding values. The table is styled with a dark background and white text.

OPEN	50.45	VOLUME	14.61M
HIGH	51.78	AVG VOL	15.27M
LOW	50.40	MKT CAP	223.63B
52 WK HIGH	59.59	P/E RATIO	11.77
52 WK LOW	42.36	DIV/YIELD	2.57

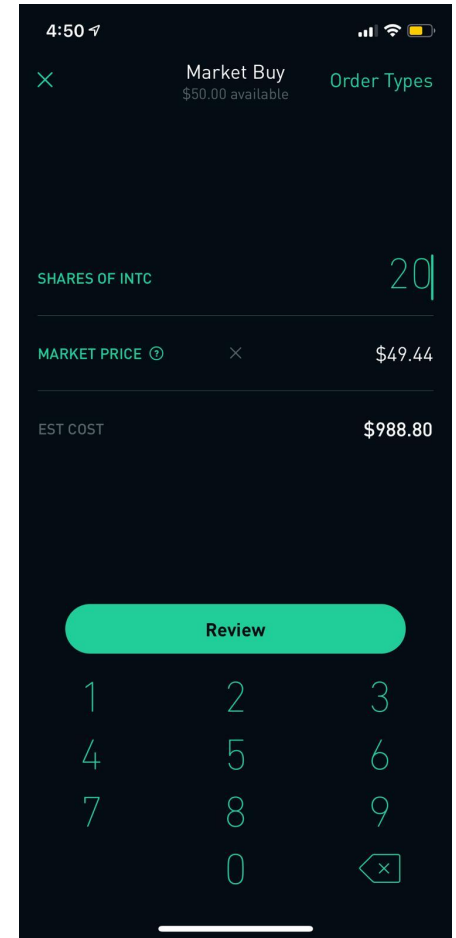
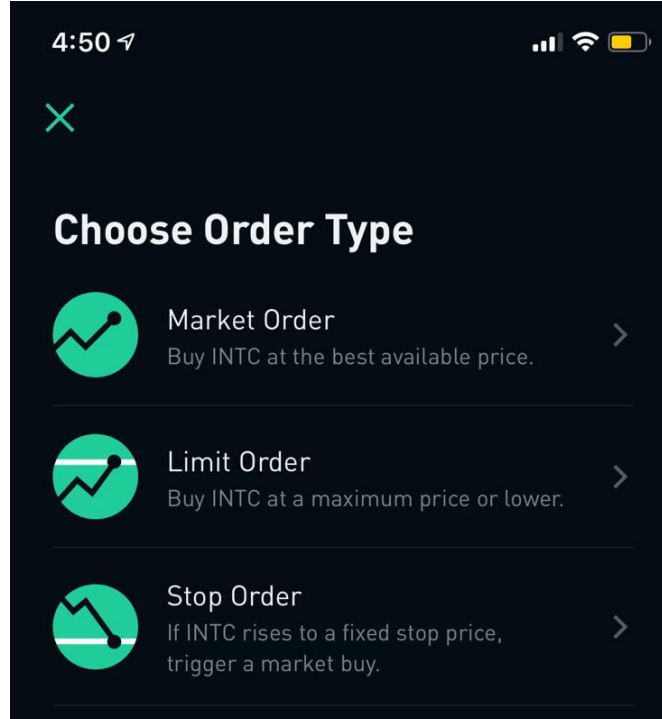
Buy/Sell Options

The Good:

- Affordances
- Mapping
- Visibility

The Bad:

- Mapping
- Visibility



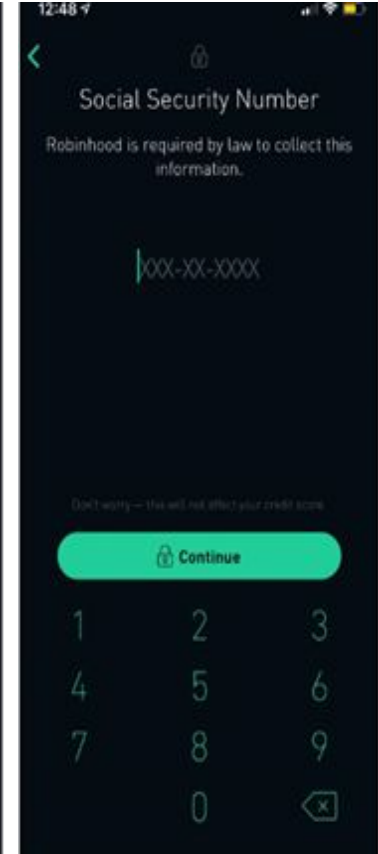
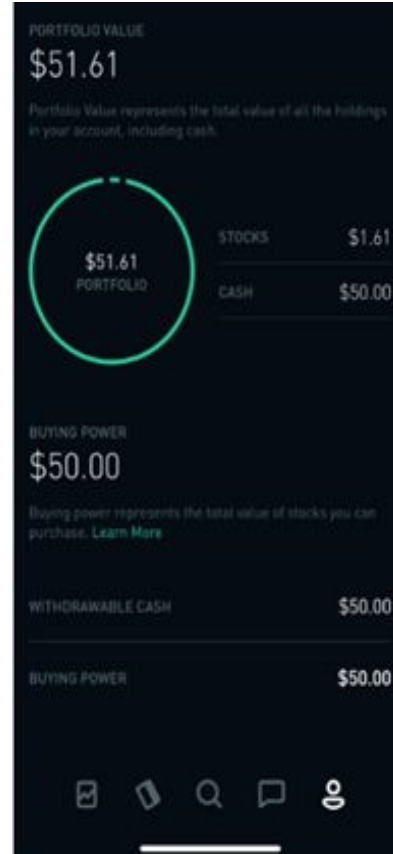
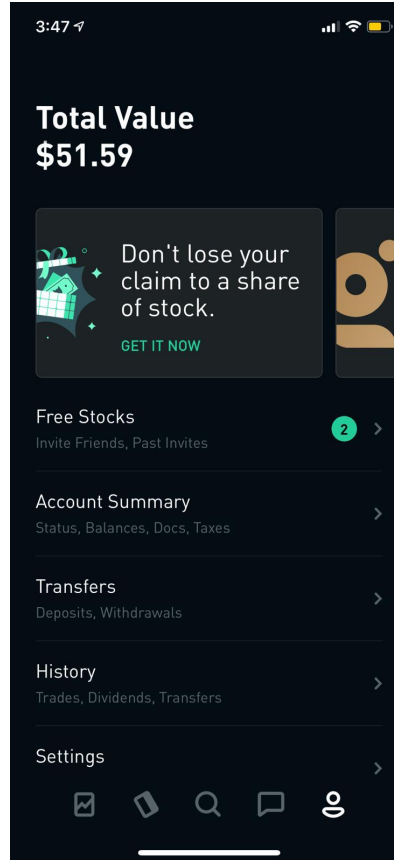
Account settings

The Good:

- Grouping
- Consistency and Flexibility

The Bad:

- Duplication
- Limit cognitive load and complexity
- Flexibility



Comparative Study

The three apps we used to compare are

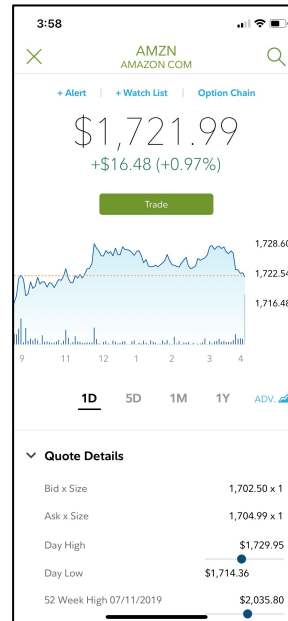
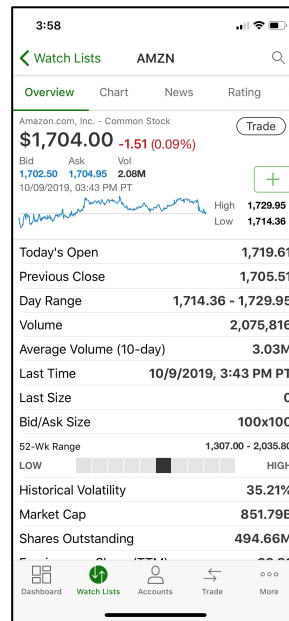
1. Robinhood
2. Fidelity
3. Ameritrade



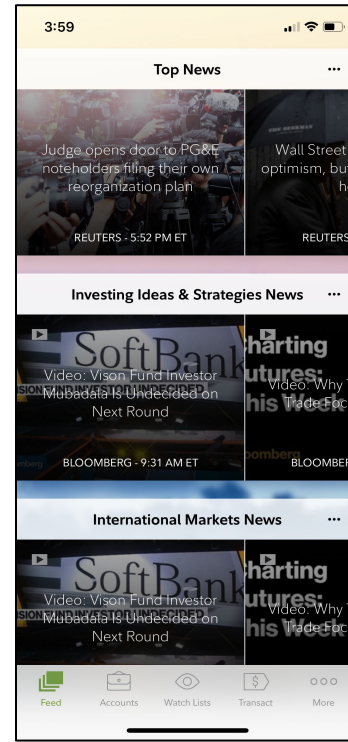
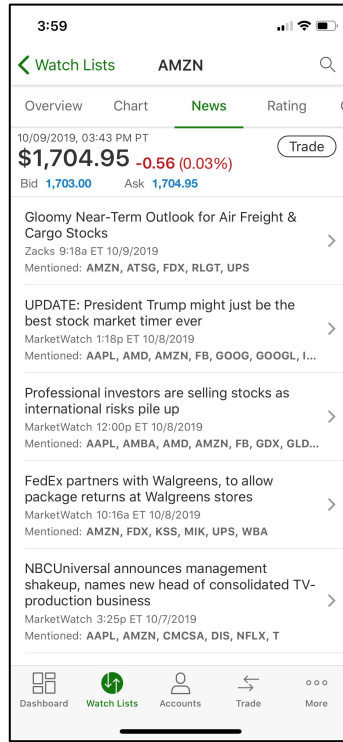
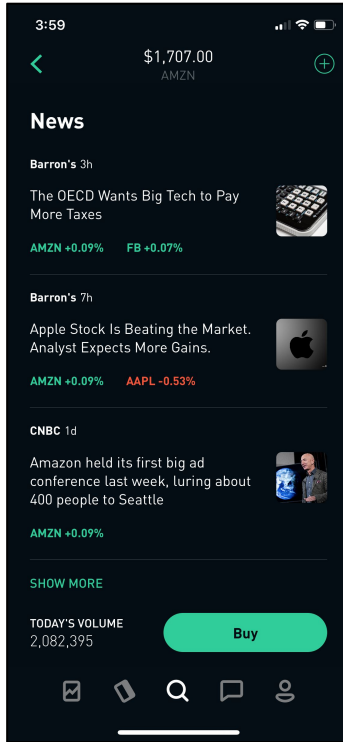
User Interface Elements

The following pages are compared in regards to UI elements

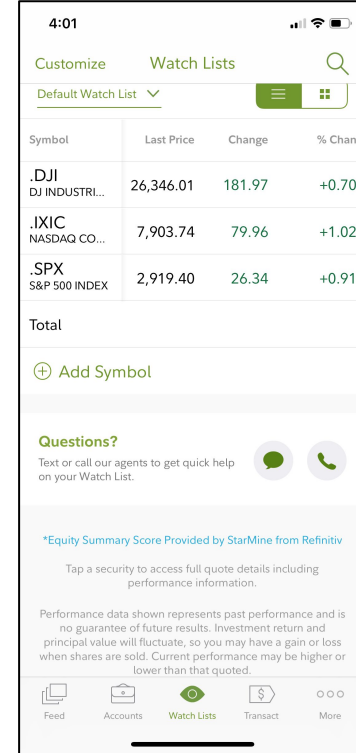
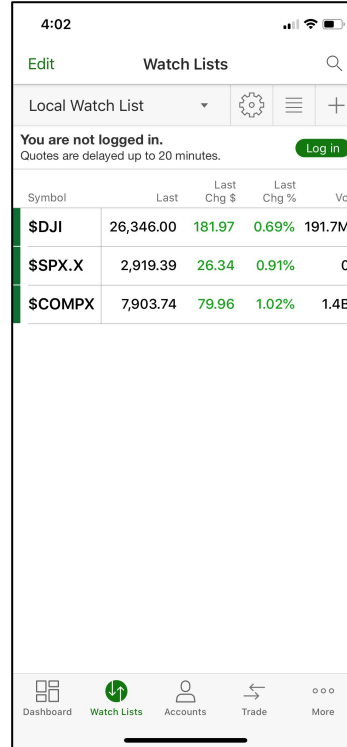
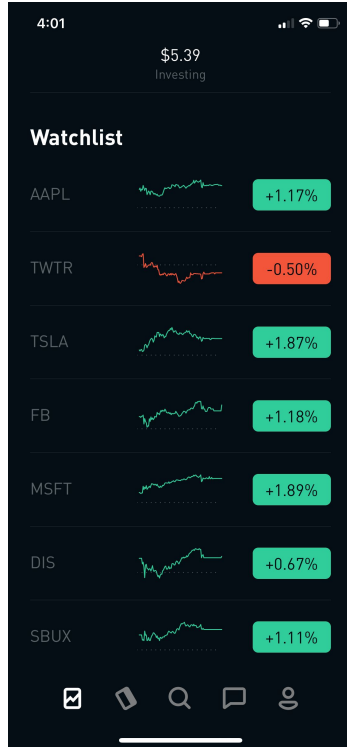
1. Stock price page
2. News page
3. Watchlist page



News page



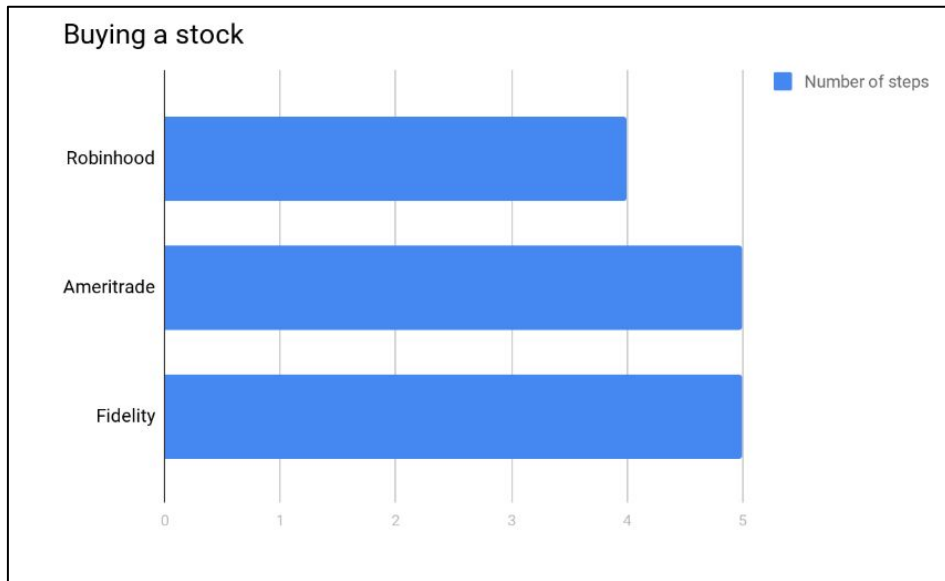
Watchlist page



Task Flows

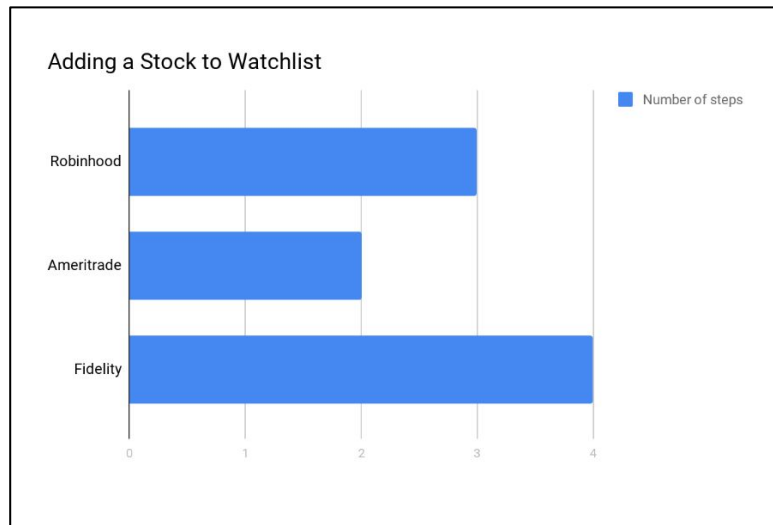
The following task flows are compared for the number of steps taken to finish the task

1. Buying a stock.
2. Adding a stock to the watchlist.
3. Reading company related news.

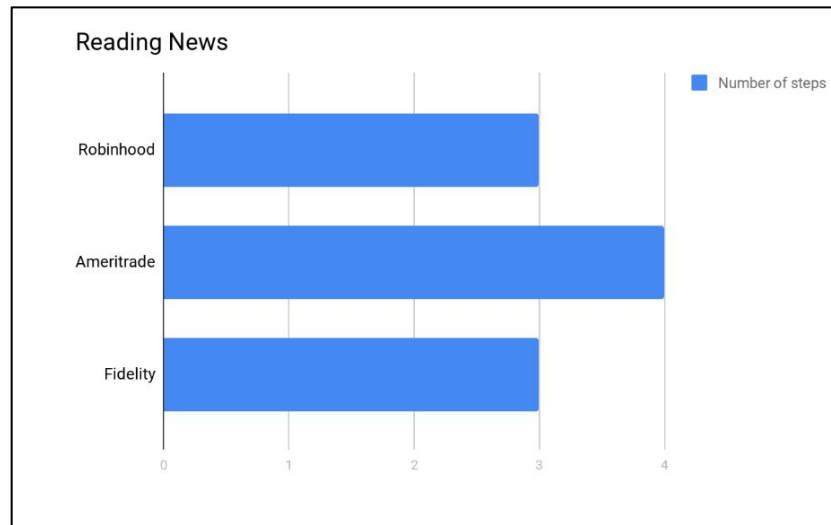


Task Flows

Maintaining stock watchlist



Reading Stock related news



Availability

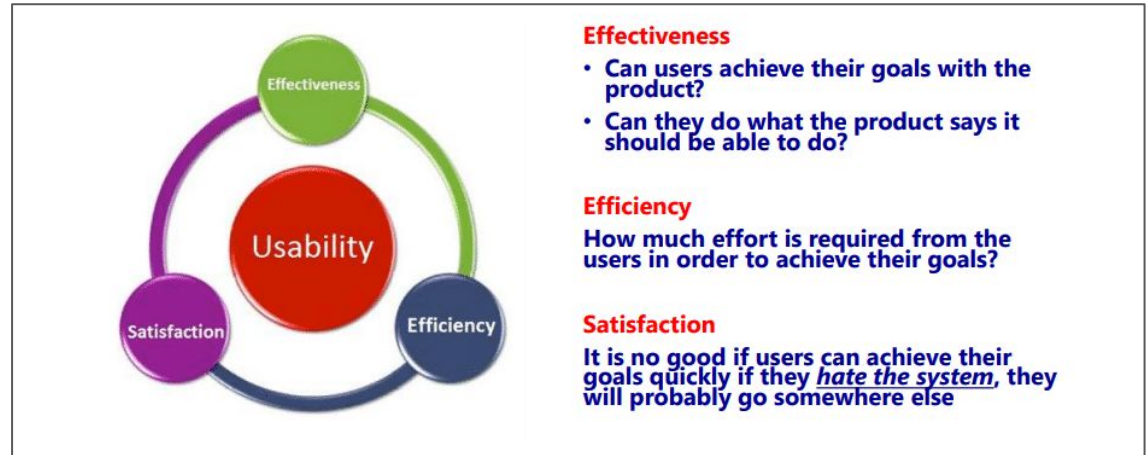
For this comparison, we will be comparing the platforms that the particular application is available in

Application	IOS	Android	macOS	Windows	WearOS	Android Wear
Robinhood	✓	✓			✓	✓
Ameritrade	✓	✓	✓	✓	✓	✓
Fidelity	✓	✓	✓	✓		

Usability Metrics

The metrics used to measure usability for the purpose of our evaluation is

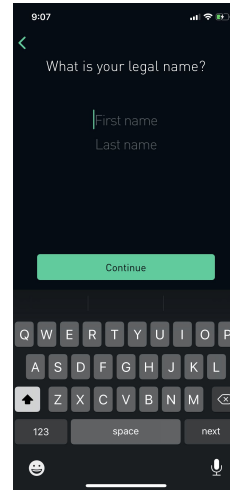
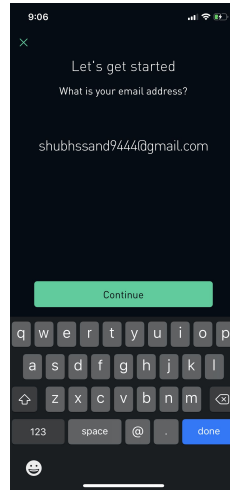
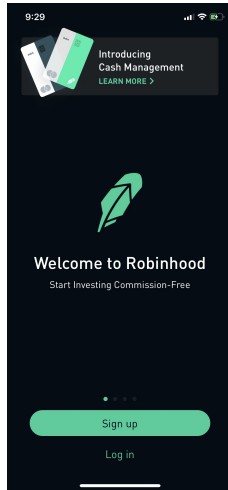
- Easy to use
- Easy to learn
- Visually Appealing



Task Evaluation

Task : Sign up to Robinhood app as a new customer

- The signup button is designed according to the **Fitts law** as the button is larger in size and also an easy target to hit for the user.
- The sign-up task is a progressive process where on each screen the user is asked a specific information.
- **Progression feedback** such as a percentage or milestone bar will help the user to identify the task progress effectively.



Task Evaluation

Task : Buying a stock on Robinhood app

- Autosuggestions for stock/cryptocurrency search
- Graphically and visually appealing charts and statistics
- The “red” button color - when price of stock has been down
- On the buying page we have **affordances** in different order types
- **Mapping** in two scenarios :

a) Continuous updates to the stock price b) On selecting stock quantity the multiplier updates the final amount.



9:12

Market Buy
\$1.01 per share

Order Types

SHARES OF AMZN 2

MARKET PRICE ⓘ × \$1,704.31

EST COST \$3,408.62

Review

1 2 3
4 5 6
7 8 9
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Tools and Techniques

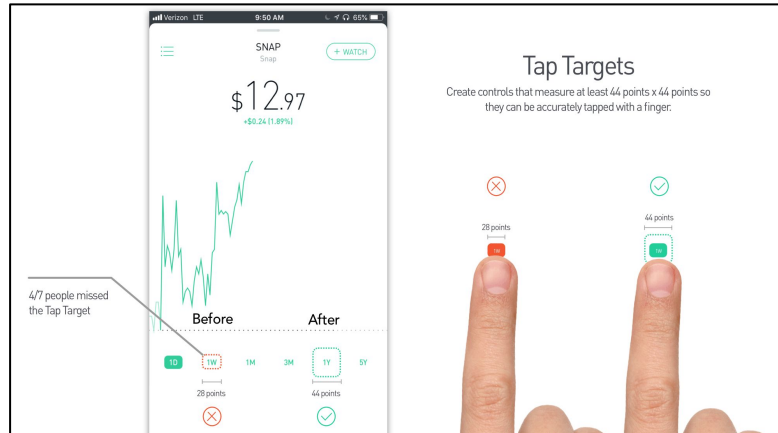
Usability Task Analysis:

- User intends to search for the stock price on a particular day or time
- User wants to get his/her portfolio details

Smartphone Timer	To note task completion time
Qualtrics survey	To gather multi persona perspectives
Draw.io	To model task in flow charts
Microsoft excel	To aggregate the data
Screen recorder	Note usability and user experience

Suggested Enhancements

- **Soften cognitive impetus on the user:**
 - Revealing additional information when requested but the user.
- **Make time frame selection buttons larger(Fitts law):**
 - The size of interactive elements should be well thought of and there should be consideration of people with visual impairments as shown in the fig below.
- **Provide a search tool for studying historic prices of the stock:**
 - Currently the user has to search swipe through the entire line graph
 - As a solution, a search box should be provided for fostering fine grained search



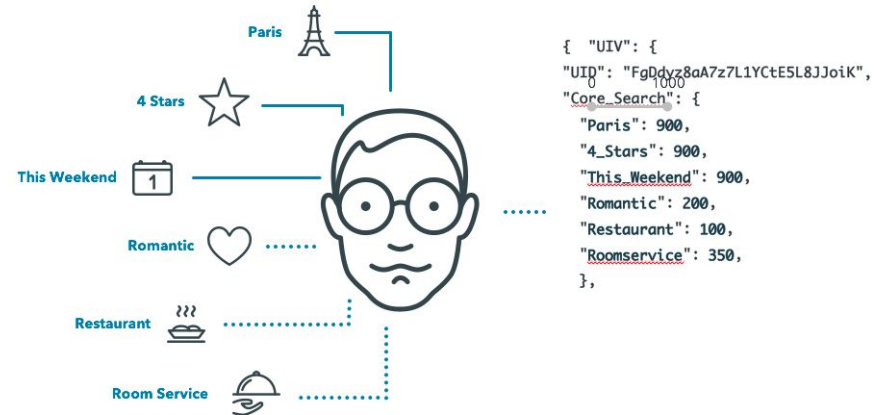
User Profiling

- User Profiling can be defined as the process of identifying the data about a user interest domain
- Target age group 30 (Since 78% of the users are between the age of 28 -35)
- Most of the users are university students

Personas:

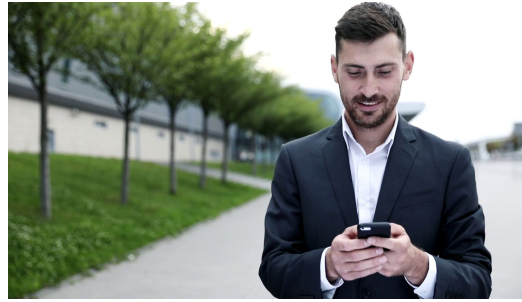
Created Based on :

- Content present in the profiles
- Survey





- Buying the stocks frequently with price of less than 10\$
- Selling the stocks for profit as soon as there is an increase in the stock value
- Save the companies to the watchlist to make a decision



- Buy and sell stocks at a certain price in the future
- Watch news in the app to know the current information
- Read the announcements to know the changes in the app



- Buying the stocks of companies with good price history
- Wait till there is a huge increase in the price of the stock
- Buy the stock at the market price

Usability Evaluation based on your Usability Metrics

- Survey

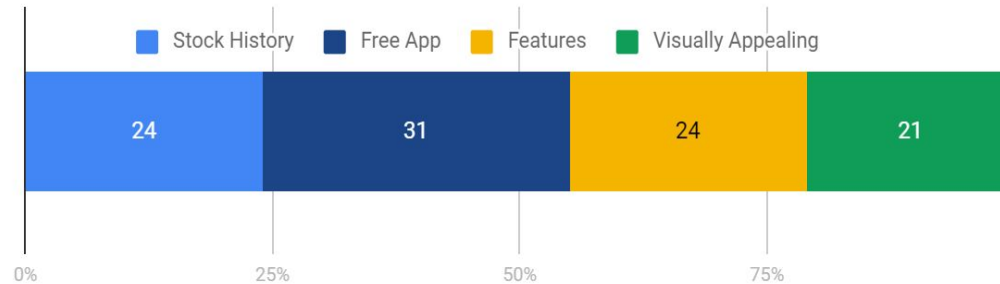
Q1) What do you like the most about Robinhood?

Q2) What do you dislike the most about Robinhood?

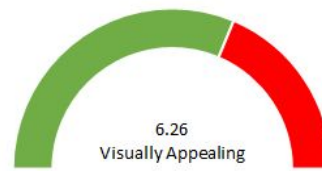
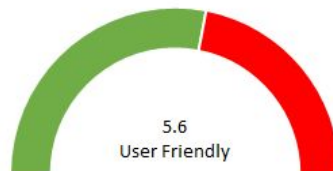
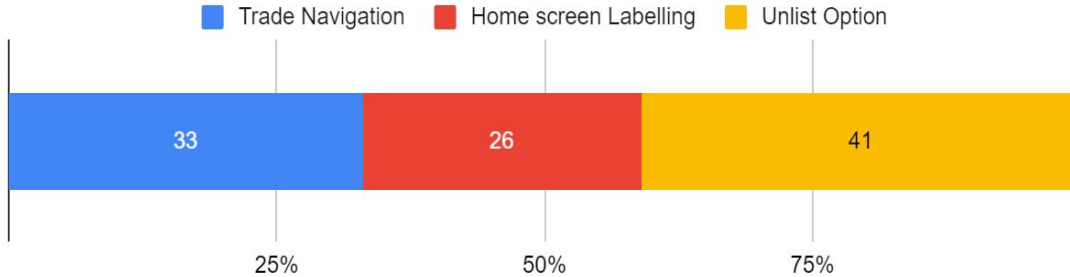
Q3) Rate on scale on 1 to 10 Robinhood's ease of selling and buying the stocks

Q4) Rate on scale on 1 to 10 Robinhood's user friendly design

Q5) Rate on scale on 1 to 10 Robinhood's visually appealing



Q2, Q3, Q4, and Q5 Survey Results



Usability Evaluation based on your Usability Metrics

- User Study

Task 1: Select a Company, buy its stocks

Is this task easy to learn how to do?

8 ✓, 2 ✗

Is this easy to use?

All took - 40- 42 seconds and it takes 4 steps (only one was able to do)

Task 2: Add the companies in watchlist

Is this task easy to learn how to do?

9 ✓, 1 ✗

Is this easy to use?

All took 30 seconds and it takes 3 steps (only one person took 5 steps)

User Study

Task 3: Browse for a company

Is this task easy to learn how to do?

10 ✓, 0 ✗

Is this easy to use?

All took 30 seconds and it takes 3 steps

- Easy to Learn
- Easy to Use

Conclusion

Robinhood excels in:

- Seamless multi platform user experience.
- Grouping and consistency of information.
- Mapping of user inputs to changes in the screen
- Affordances and personalization

Improvements:

- Smaller tap targets
- Information for the labels as feedback
- Incomplete portfolio information on the app versus on the desktop version
- Revealing additional information only when requested by user

Thank You

Team PHOENIX