COMP4913

Capstone Project

Simulation Game for Learning Algorithmic Trading

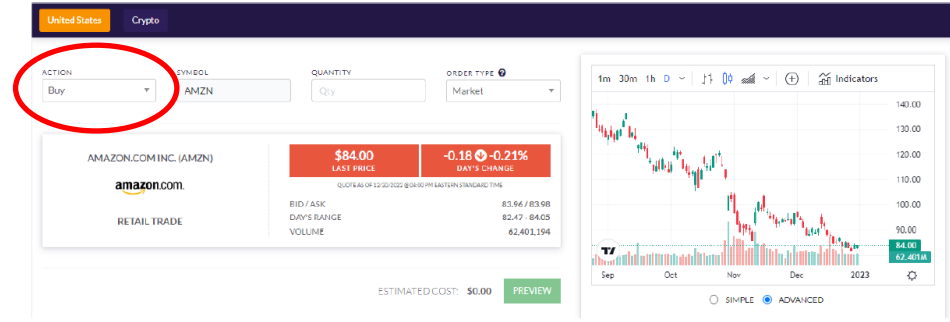|	
Programme-Stream Code:	61431-SYC
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Content

- System review
- Proposed solution
- System design
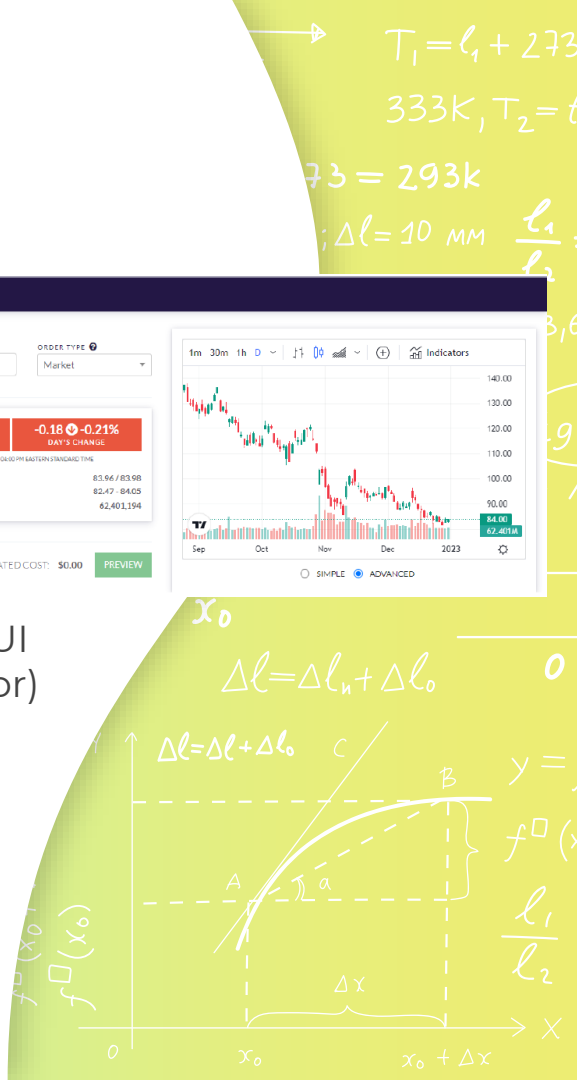- Progress
- Next stage
- Demo

System review

- Problems:
  - Only Buy/Sell options
  - Better one may contain a Stop-value
  - Too simple

Real-time trading UI
(Wall Street Survivor)

System review

Advanced or professional tool
- Very complex
- Require coding knowledge
- not user friendly (new user)


Trading View

Proposed solution

- Build the mirror world using historical data

- Balance between too simple and too professional

- Using GUI to lead the user to config
  - 2 classic 1 flexible algorithms

- Simulate the process

- Animated the trading

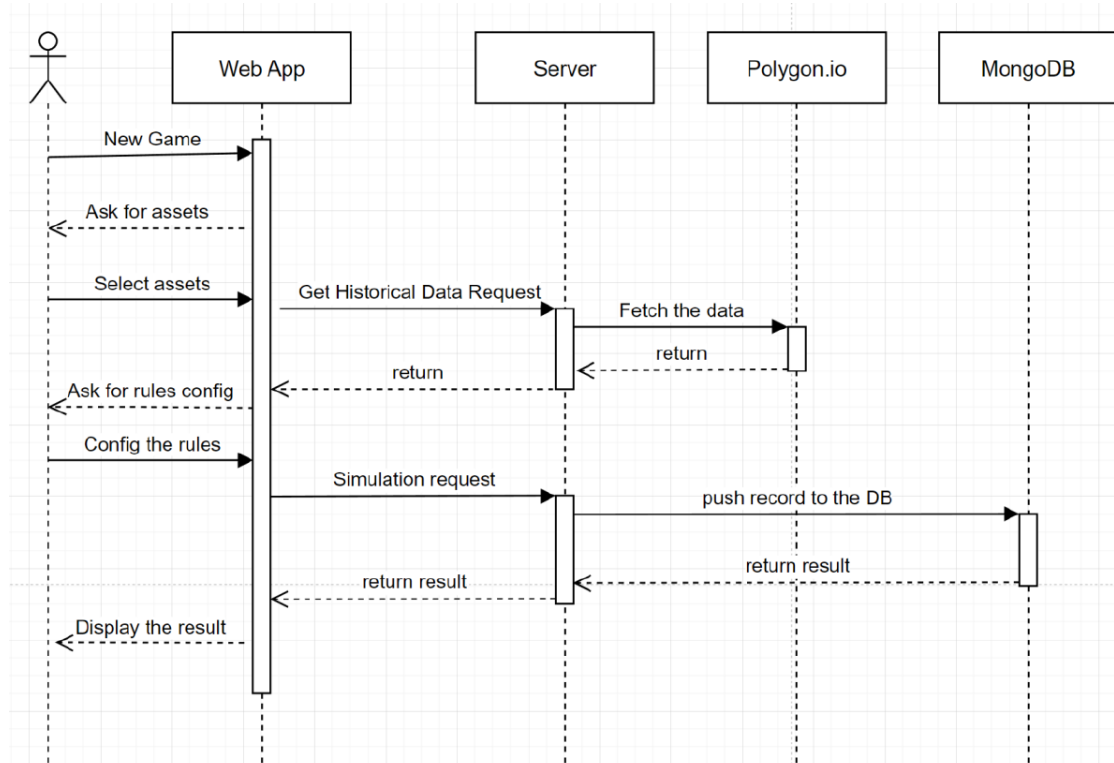- Learn something during the process

System design

- Frontend web application
  - React.js
- Backend server
  - Node.js + express.js + mongoose.js
- Third party API
  - Polygon.io (Update everyday)
- DB
  - MongoDB

System architecture
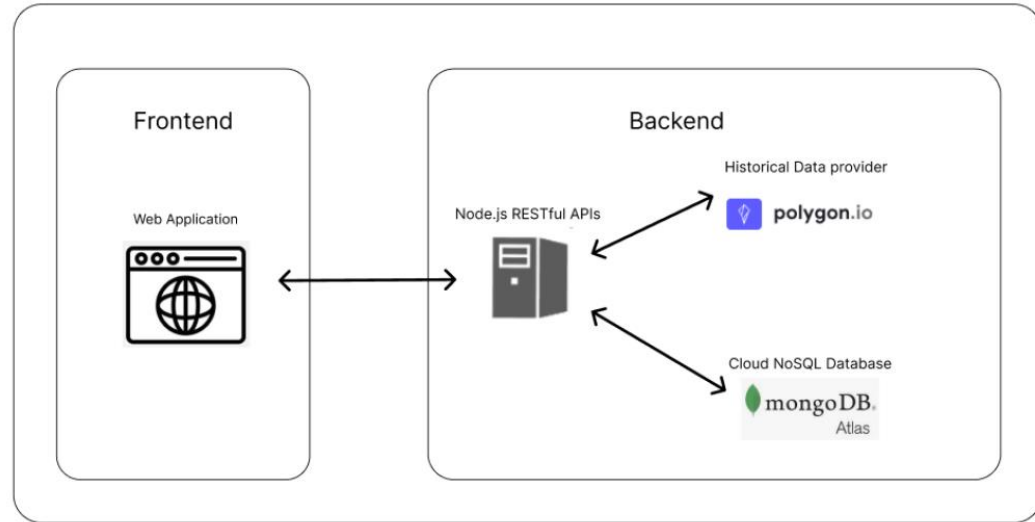
System design
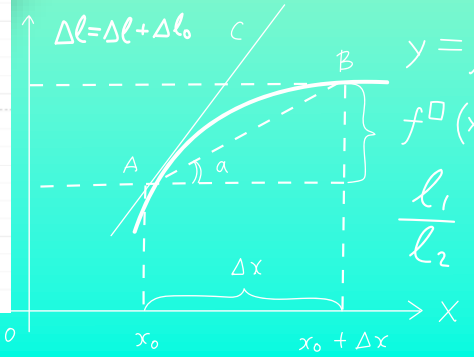
Progress

2022:

Milestones 1 (10-24 to 11-13):

- Setup the react/server-side/DB of the projects
- Landing page
- Account related function (e.g., create account/login/profile)

Milestones 2 (11-14 to 12-04) (Maybe busy due to the end of the semester):

- Access the polygon.io API to get the market price data
- Build the GUI to teach the user to create their algorithm step by step (Martingale)

Milestones 3 (12-05 to 12-31): (Include Exam period)

- Build the logic of the Martingale
- Build report page of Martingale
- Interim Report + presentation video
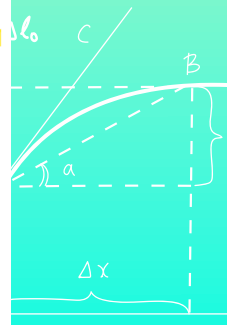
Progress

1

Setup the rules ?

	Draw back %		Share(s)
# 0	0	%	1
# 1	1	%	2
# 2	1	%	4

+ Add   **× Delete**

2

Take profit ratio (>=0.1%)

0.1

Take profit when earn up to this value. ?
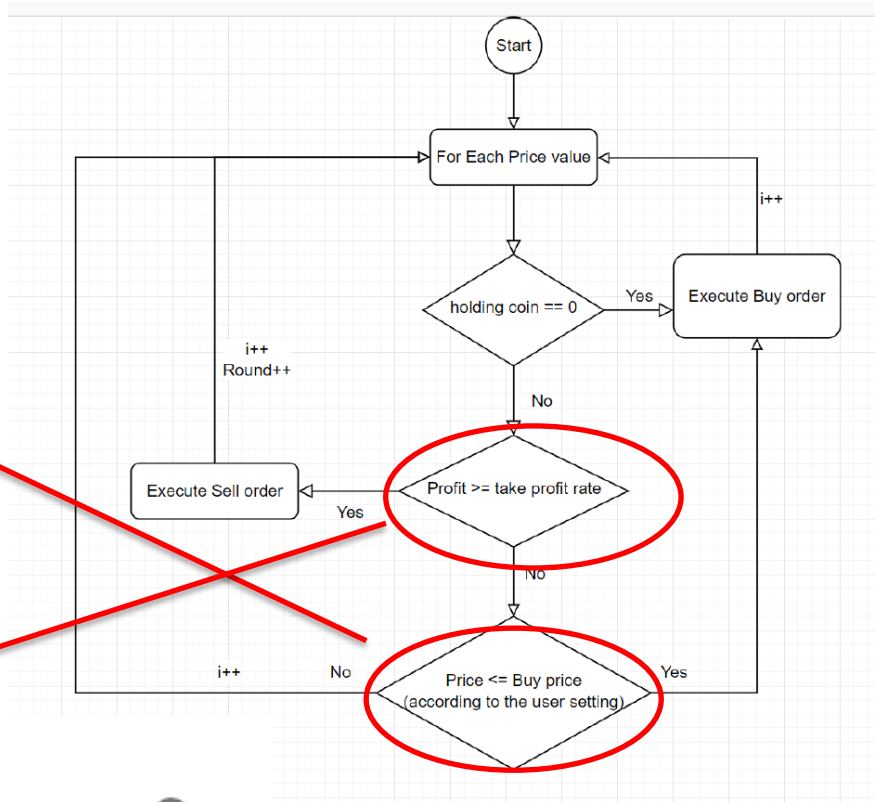
Next Stage

- Complete the remaining function
  - Dollar cost average
  - Custom Indicator
  - Leaderboard
  - Animation
  - Tooltip

Demo