

Specification

Mock Internet Trader (MIT) is a mock trading website for novices to practice stock investments. It simulates real-world trading by allowing users to perform stock transactions with virtual currency (but with zero true value). Users can make purchasing decisions based on real-time stock market statistics, and the website will calculate and update their net profit on the fly. The website will also display a real-time leader-board demonstrating the rankings of the earnings of top registered users and **single-user transaction histories**.

MIT will ideally serve as an introductory trading platform for traders who want to learn about finance and investments without having to bear risks due to the volatility of the market.

Languages:

- Python
- JavaScript

Framework

- Django

JavaScript libraries

- jQuery (UI + Ajax)

CSS / UI libraries

- Bootstrap
- Materialize

Data sources / APIs

- Yahoo Finance

Functionalities

Module	Action	Team Member
Player	<ul style="list-style-type: none"> • Sign up: The first-time player should register in the MIT website. • Sign in: Any registered player can login the MIT website. • Create a game: Any signed-in players can create a game and post it, waiting for others to join in. • Join in the game: A player can join in a game. As soon as the player did it, his account will have the starting balance of the game (set by game creator) which will be used to trade • Buy stocks: The player can choose and buy some stocks between the start time and end time of the game he joined. • Sell stocks: The player can sell bought stocks between the start time and end time of the game he joined. • Change the profile: the player can change username, and other player information. • View trading records of other player: A signed-in player can view other players' trading records (including transaction histories, etc.) by clicking on his username. 	Irao
Game	<ul style="list-style-type: none"> • Rank a real-time leader-board: Each game will display its top 5 players depended on a real-time net worth among the players. 	mengranw
Stock	<ul style="list-style-type: none"> • Display a real-time stock quota: Each stock will display its current key data and performances. (update every X mins) • Display a stock trend line chart: Each stock will show a stock trend line within one day, one week, one month or one year. • Compare among different stocks: In each stock trend line chart, a player feels free to add one or more stocks to the chart by typing the stocks' name. • Search for a specific stock: supports stocks search by typing key word. 	mengranw

Data Model

Class name	Field
Game	players: ForeignKey (points player table) creator: OneToOneField (player) name: CharField description: CharField (optional) starting_balance: IntegerField
Player	remaining_balance: IntegerField net_worth: IntegerField user: OneToOneField(User) stocks: ManyToManyField(stock)
Stock	name: CharField player: ForeignKey share: IntegerField (other stock info like real-time value is retrieved using Yahoo finance API, but not permanently stored in our database)
Transaction	creator: OneToOneField(player) time: DateTimeField type: CharField amount: IntegerField