StockSim

StockSim is a stock trading simulation platform for education purpose with trading strategies rendering functions.

To help student have hands-on experience with financial market, professors nowadays are using stock trading simulation tools in finance courses. However, with limited function, significant delay and unclear interface, current products can’t quite fulfill the requirements of class teaching and learning. Besides basic stock trading and portfolio management functions, users can apply all kinds of trading strategies through both built-in choices and self-created models.

The domain objects of the project will include Class, Person (students, professors and administrators), Stocks ( individual stock/ETF/fund/derivative), Portfolios( combination of all kinds of Stocks), Strategies and Market News.

There are three main users in the project: Students, Professors, and administers), each with different authorities in the platform. First, the professor will login and create a class for his/her students. Then the students will login and join the class. The class will have an begin and end date during which the students are allowed to trade through the platform. The professor has the right to check the performance of the portfolio his/her students are managing. The administrator has access to all components of the platform to solve technical issues and manage its users. For detailed user cases please check the user case form.

User goals

|  |  |  |  |
| --- | --- | --- | --- |
| User Type  Goal | Students | Professor | Administrators |
| View Dashboard | √ | √ | √ |
| Link to certain websites | √ | √ | √ |
| Register | √ | √ |  |
| Modify profile | √ | √ | √ |
| Login | √ | √ | √ |
| View news | √ | √ | √ |
| Create class |  | √ | √ |
| Manage class |  | √ | √ |
| See class information | √ | √ | √ |
| Create portfolio | √ | √ |  |
| Trade stocks | √ | √ |  |
| View portfolio performance | √ | √ |  |
| Delete portfolio |  | √ | √ |
| Delete Class |  | √ | √ |
| Remove user/class |  |  | √ |
| Create strategies | √ | √ | √ |
| Mange portfolio | √ | √ | √ |

User & Domain

|  |  |  |  |
| --- | --- | --- | --- |
| User Type  Domain | Students | Professor | Administrators |
| Person | CRUD | CRUD | CRUD |
| Class | Join/withdraw | CRUD | CRUD |
| Portfolio | CRUD | CRUD | CRUD |
| Stock | R | R | R |
| Strategies | CRUD | CRUD | CRUD |
| News | R | R | R |

User/User relationship

|  |  |  |  |
| --- | --- | --- | --- |
| User Type  User Type | Students | Professor | Administrators |
| To Students | Manage profile/ portfolio | Manage class and Students | Mange all users |
| To Professor | Join/withdraw | N/A | Mange all users |
| To Administrators | Help desk | Help desk | Mange all users |

Domain/Domain relationship

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Domain  Domain | Person | Class | Portfolio | Stock | Strategies | News |
| Person |  | Class includes person in it | Portfolio belongs person | Stock belongs to portfolio | Strategies can be applied to a portfolio | Linked to stock and independent |
| Class | Created by person, includes a group of persons |  |  |  |  |  |
| Portfolio | Person create portfolio |  |  | Includes stocks | Can be applied with strategies |  |
| Stock | Can be added in to a portfolio by user |  |  |  |  | Links to news for a certain stock |
| Strategies | Created by person |  | Be applied to a portfolio |  |  |  |
| News | Person can check news |  |  | News for each stock |  | General news dashboard |