**Project 1: Yahoo Finance Trading System (YFTS)**

**Description:** YFTS is a real-time trading system that retrieves real-time market data from Yahoo Finance. A new trader can register the system for free. A registered trader can login or logout the system, buy or sell stocks, watch the real-time market data, view the portfolio and transaction history in different visualization formats. There is a $5 charge for any transaction.

**Responsibilities:**

* Register: A new trader can register for a new account. Validation should be applied and a welcome email should be sent automatically.
* Login: The trader can log in the system with valid username and password.
* Transaction: The trader can buy or sell a stock with the current price. Each transaction will be charged $5. Back-end validation should be applied. The transaction should be saved to a csv file instead of database.
* Market data: The trader can watch the real-time market data which is refreshed every two seconds.
* Portfolio: The trader can view all the stocks in the portfolio. The value of each stock should be displayed in a pie chart; the buy and sell volumes should be displayed in column chart. Other visualization might be also applied.
* History. The trader can view the history transactions under different search criteria.
* Log off. The trader can log off the system and his/her session will be expired.
* Admin account: There is an admin account for the administrator of the system. The admin can login to a different page. As an admin, he/she has the authority to do the following two things.

1. Commit all the transactions in csv files and save those transactions in database.
2. Add or remove stocks.

**Implementation (The following technologies should be applied):**

* Core Java
* Spring Security, Spring MVC or Struts 2 MVC, Spring IoC, Spring Dao Support
* Hibernate
* REST or SOAP web service
* HTML5, CSS3, JavaScript, jQuery, AJAX
* Responsive Design

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