CSC4350/6350

Spring 2017

A stock trading software. The price is real-time and the exchange is virtual.

Virtual Stock

BATMAN

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2/6/2017

Problem Statements of Virtual Stock

Virtual Stock-1.0 Introduction

Batman shall develop a stock trading software with a user-friendly GUI. The software is PC based. The price is real-time from the Internet while the exchange is virtual. It shall be designed for beginners who want to learn stock trading.

Virtual Stock-2.0 User Registration

The system shall provide a window for user to register an account in Batman. Each user shall have his/her own account after registration. Users shall provide the following information: First Name, Last name, Address, Birthday, SSN, Bank account routing number and account number, Email address, Nationality and Agreement Form.

Virtual Stock-2.1

If a same account has been built up, the system shall let user know and ask the user to refill the form for registration

Virtual Stock-3.0 User Log In

The system shall have a window for user to log in. The window shall provide a user name input, a password input, a forget password button, a sign-in button and a sign-up button. The system shall let user into the "Portfolio" interface if the user type the right user name and password.

Virtual Stock-3.1

If the user failed to log in to the system, the system shall ask the user to refill the password.

Virtual Stock-3.2

The system shall provide a pin number for quick log in.

Virtual Stock-4.0 Portfolio

The system shall have a portfolio interface. In this interface, the system shall show a chart of user's balance chart of today, a total balance value, a breaking news of today, stocks that a user keeps and his/her Shares, and a Watch list. A search button shall also be shown in the corner for user to search a specific stock.

Virtual Stock-4.1

The color of the GUI shall be green if the user's balance goes up and be red if the user's balance goes down.

Virtual Stock-5.0 Account

The system shall provide a window to show user's account. The account shall show the Total balance, Stocks balance and Cash balance.

Virtual Stock-6.0 Banking

The system shall give a function for user to transfer money to a bank or to the Batman app. The linked accounts shall be shown in the bottom.

Virtual Stock-6.1

The system shall provide a bank account for user to deposit money.

Virtual Stock-7.0 History

The system shall provide a list of history of user's trading log. The list will show the deposit form a bank, the buying and selling with the corresponding money. The system shall also show the date.

Virtual Stock-7.1

The system shall allow the user to see the history from/to a specific date.

Virtual Stock-8.0 Setting

The system shall have a setting interface for user to reset pin number and update user information including name, password, email, phone number and address. It shall also have a log out button for user to log out.

Requirements Traceability Matrix

Entry#	Para#	Requirements Traceability Matrix	Type
1	1	Batman shall develop a stock trading software with a user-friendly GUI.	SW, HW
2	2	The system shall provide a window for user to register an account in Batman.	SW
3	2.1	the system shall let user know and ask the user to refill the form for registration.	SW
4	3	The system shall have a window for user to log in.	SW
5	3.1	If the user failed to log in to the system, the system shall ask the user to refill the password.	SW
6	3.2	The system shall provide a pin number for quick log in.	NTH
7	4	The system shall have a portfolio interface.	SW
8	4.1	The color of the GUI shall be green if the user's balance goes up and be red if the user's balance goes down.	NTH
9	5	The system shall provide a window to show user's account.	SW
10	6	The system shall give a function for user to transfer money to a bank or to the Batman app.	SW
11	6.1	The system shall provide a bank account for user to deposit money.	SW
12	7	The system shall provide a list of history of user's trading log.	SW
13	7.1	The system shall allow the user to see the history from/to a specific date.	NTH

14	8	The system shall have a setting interface for user to reset pin number and update user information including name, password, email, phone number and address.	SW

Work Structure Document

Group name: **Batman**

Name	Tasks
Mengyuan Zhu	Team Coordinator Documents handler Java coder Problem Statement Requirements Traceabillity Matrix Dictionary
Sungjae Kim	Finalize code documentation Java coder Gannt Chart
Sharon Kim	User Guide Program tester Rationale
Jakub Pietrasik	Client Program tester
Hyeun Kang	GUI development GUI tester

Dictionary

Portfolio: In finance, a portfolio is a collection of investments held by an investment company, hedge fund, financial institution or individual.

Broker: A person who buys or sells an investment for you in exchange for a fee (a commission). Here is Tim's favorite broker.

Dividend: this is a portion of a company's earnings that is paid to shareholders, or people that own hat company's stock, on a quarterly or annual basis. Not all company's do this.

Exchange: An exchange is a place in which different investments are traded. The most well-known in the United States are the New York Stock Exchange and the Nasdaq.

Quote: Information on a stock's latest trading price. This is sometimes delayed by 20 minutes unless you are using an actual broker trading platform.

Volume: The number of shares of stock traded during a particular time period, normally measured in average daily trading volume.

Yield: This usually refers to the measure of the return on an investment that is received from the payment of a dividend. This is determined by dividing the annual dividend amount by the price paid for the stock. If you bought stock XYZ for $40-a-share and it pays a $1.00-per-year dividend, you have a "yield" of 2.5%.

JDK: The Java Development Kit (JDK) is an implementation of either one of the Java Platform, Standard Edition; Java Platform, Enterprise Edition or Java Platform, Micro Edition platforms released by Oracle Corporation in the form of a binary product aimed at Java developers on Solaris, Linux, Mac OS X or Windows.

GUI: The graphical user interface is a type of user interface that allows users to interact with electronic devices through graphical icons and visual indicators such as secondary notation, instead of text-based user interfaces, typed command labels or text navigation.

HTTP: The Hypertext Transfer Protocol (HTTP) is an application protocol for distributed, collaborative, and hypermedia information systems. HTTP is the foundation of data communication for the World Wide Web.

XML: In computing, Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. The W3C's XML 1.0 Specification and several other related specifications-all of them free open standards—define XML.

Virtual Stock

Batman

	Project Lead:	Mengyuan Zhu
	Project Start Date:	1/21/2017 (Saturday)
	Display Week:	1

Week 1
1 / 16 / 17

WBS	Task	Lead	Start	End	Cal. Days	% Done	Work Days	M	T	W	T	F
1	**Introduction**											
1.1	Title Page	Mengyuan	Sat 1/21/17	Sat 1/21/17	1	100%	1					
1.2	Resumes	Mengyuan	Sun 1/22/17	Sun 1/22/17	1	100%	1					
1.3	Approved topic	Mengyuan	Mon 1/23/17	Mon 1/23/17	1	100%	1					
1.4	Work Strucutere Document	Mengyuan	Sun 1/22/17	Mon 1/23/17	2	100%	1					
2	**Requirements Elicitation**											
2.1	Problem statement	Mengyaun	Thu 1/26/17	Thu 2/02/17	1	100%	6					
2.2	Requirements Traceabillity Matrix	Mengyaun	Fri 2/03/17	Fri 2/03/17	1	100%	1					
2.3	Gantt Chart	Sungjae	Thu 1/26/17	Thu 1/26/17	1	100%	1					
2.4	Dictionary	Mengyaun	Sat 2/04/17	Sat 2/04/17	1	100%	1					
2.5	Topic rational	Sharon	Thu 1/26/17	Wed 2/01/17	1	100%	1					
2.6	Updated WSD	Mengyaun	Sat 2/04/17	Sun 2/05/17	1	100%	1					
3	**System Analysis & Design**											
3.1	Horizontal prototype				1	0%	0					
3.2	RTM Update	Jakub			1	0%	0					
3.3	Use cases & Interaction Diagram				1	0%	0					
3.4	Function Point Cost Analysis				1	0%	0					
3.5	Updated WSD	Mengyaun			1	0%	0					
3.6	Updated Gantt Chart	Sungjae			1	0%	0					
3.7	Dictionary	Hyeun			1	0%	0					
3.8	Use cases rational	Sharon			1	0%	0					
4	**Object Design**											
4.1	Software architecture used				1	0%	0					
4.2	RTM Update	Jakub			1	0%	0					
4.3	Category Interaction Diagram				1	0%	0					
4.4	Design of objects				1	0%	0					
4.5	Updated WSD	Mengyaun			1	0%	0					
4.6	Updated Gantt Chart	Sungjae			1	0%	0					
4.7	Dictionary	Hyeun			1	0%	0					
4.8	Object design rational	Sharon			1	0%	0					
5	**Rationale**											
5.1	Merge rationale	Sharon			1	0%	0					
5.2	RTM Update	Jakub			1	0%	0					
5.3	Updated WSD	Mengyaun			1	0%	0					
5.4	Updated Gantt Chart	Sungjae			1	0%	0					

5.5	Dictionary	Hyeun			1	0%	0
6	**Test Document & Code**						
6.1	RTM Update	Jakub			1	0%	0
6.2	Source code & Executable code				1	0%	0
6.3	Test cases				1	0%	0
6.4	Updated WSD	Mengyaun			1	0%	0
6.5	Updated Gantt Chart	Sungjae			1	0%	0
6.6	Dictionary	Hyeun			1	0%	0
6.7	Test cases rational	Sharon			1	0%	0
6.8	COCOMO						
7	**Final Report**						
7.1	Table of Contents				1	0%	0
7.2	Full documentation				1	0%	0
7.3	Function Point Cost Analysis & COCOMO				1	0%	0
7.4	Prototype				1	0%	0
7.5	Project legacy				1	0%	0
7.6	Final WSD	Mengyaun			1	0%	0
7.7	Final Gantt Chart	Sungjae			1	0%	0
7.8	Dictionary	Hyeun			1	0%	0
7.9	Resumes				1	0%	0
7.10.1	User Guide				1	0%	0
7.10.2	Email from GIT				1	0%	0

	Week 2							Week 3							Week 4							Week 5							Week 6					
	1 / 23 / 17							1 / 30 / 17							2 / 6 / 17							2 / 13 / 17							2 / 20 / 17					
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S

Week 7 2 / 27 / 17								**Week 8** 3 / 6 / 17								**Week 9** 3 / 13 / 17								**Week 10** 3 / 20 / 17								**Week 11** 3 / 27 / 17				
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S

Week 12	Week 13
4 / 3 / 17	4 / 10 / 17
M	T	W	T	F	S	S	M	T	W	T	F	S	S