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|  |  | ISM 6930 – 901  Web Applications Development |

Project 1 – Stock Portfolio Tracker

Primary goal – Warm up and overview of object-oriented techniques

# Project description

This project requires you to develop a simple security tracking application. The application gathers input from the user about his/ her security trades and summarizes the positions. This is a very simple application that collects user data and displays a summary.

The application can handle two kinds of securities – stocks and options. The class diagram for securities is shown below.

# Project0-UML.emf

# Recommendation

This project is very simple. It is intended to get you warmed up with Object orientation, programming in .NET and using the Visual Studio IDE. Specifically, you are not expected to check for the correctness of input. It will be the responsibility of the user to enter correct data.

Save your securities in a list such as an ArrayList or Vector. When a user adds a security, you can simply add it to the list, without looking of other instances of the same security in the list. If the user sells a security, you can simply deduct it from the first matching entry in the list. Please see the sample output for example behavior.

# Deliverable

Clean the project. This removes the large executable files. Zip the project folder and upload to Blackboard.

# Presentation

In your presentation, demonstrate the application accepting user input and producing output.

# Grading scheme

Projects will be graded by the instructor based on the following criteria.

|  |  |
| --- | --- |
| Object definitions (constructors, private properties, public accessors) | 15% |
| Object hierarchy | 10 % |
| Constructors for inherited classes invoking constructor of parent object | 10% |
| toString() method override in inherited classes | 15 % |
| Collection data structure in main program | 15% |
| User input without errors | 10% |
| Mathematical correctness of output | 10% |
| Wow!!! Factor (use of at least 2 additional APIs/ extension of functionality or validation) | 15% |

# Appendix – Sample program output

WELCOME TO THE PORTFOLIO TRACKER

**------------------------------------------**

Your current holdings are as follows**:** You have no holdings

what would you like to **do?** 1 to buy stock**,** 2 to buy options**,** 3 to sell stock**,** 4 to sell options**,** 0 to end

1

Stock ticker to buy**:** AAPL

Name**:** Apple

Price**:** 339.45

Date **(**mm**/**dd**/**yy**):** 02**/**02**/**11

Quantity**:** 100

MorningStarRating **(**1**-**5**):** 4

Security added

what would you like to **do?** 1 to buy stock**,** 2 to buy options**,** 3 to sell stock**,** 4 to sell options**,** 0 to end

1

Stock ticker to buy**:** AAPL

Name**:** Apple

Price**:** 341.03

Date **(**mm**/**dd**/**yy**):** 02**/**03**/**11

Quantity**:** 50

MorningStarRating **(**1**-**5**):** 4

Security added

what would you like to **do?** 1 to buy stock**,** 2 to buy options**,** 3 to sell stock**,** 4 to sell options**,** 0 to end

2

Option ticker to buy**:** AAPL110521C00230000

Name**:** May 11

Price**:** 38.03

Date **(**mm**/**dd**/**yy**):** 01**/**25**/**11

Quantity**:** 100

Expiration date **(**mm**/**dd**/**yy**):** 05**/**20**/**11

Security added

what would you like to **do?** 1 to buy stock**,** 2 to buy options**,** 3 to sell stock**,** 4 to sell options**,** 0 to end

3

Stock ticker to sell**:** AAPL

Quantity**:** 500

what would you like to **do?** 1 to buy stock**,** 2 to buy options**,** 3 to sell stock**,** 4 to sell options**,** 0 to end

0

Thanks **for** **using** the Portfolio Tracker

Your current holdings are as follows**:**

AAPL Apple 4 **-**400

AAPL Apple 4 50

AAPL110521C00230000 May Sep 11**,** 1906 100