

Profit and Loss Portal

Design Document

Revision History

Date	Version	Description	Edited by
September 14, 2015	1.0	Initial Draft – Team input only	Joe McNelly
September 21, 2015	1.1	Second Draft with limited new requirements - Team input only	Donnie Waters

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1. Introduction

1.1 Purpose

The purpose of this design document is to give a solid description of the design of the Profit and Loss Portal system. This document strives to provide detail in the design of all of the working parts of the project, including the following:

- Class diagrams
- Database schemas
- Data flow and design
- Design constraints
- UI/UX mock-ups
- Test-cases and expected outcomes

1.2 Goals

The main goal of Profit and Loss Portal is to provide an easy to use engine for displaying the profits and losses made on options traded over a specified time period for specific stocks. This application will be tailored to our client making it most efficient for their system and their data. Profit and Loss is a valuable and efficient tool for options trading.

1.3 Overview

This document has 8 basic sections: Introduction, System Overview, System Architecture, Data Design, Component Design, Human Interface Design, Requirements, and the Appendix.

The System Overview gives a general description of the functionality of the project. System Architecture goes into detail the design of the system's architecture and the rationale behind it. Data Design shows how data is stored in the system, such as data structures and databases. Component Design shows how each component of the system works and interacts with the other components. Human Interface Design discusses the UI of the system, and provides images of the screens that the user will be interacting with. Lastly, the Requirements section describes each of the requirements for the project.

1.4 Scope

Profit and Loss Portal can essentially be split up into two main parts. First, the client-side web page which will display all of the data in an easy to understand and intuitive manner. Second, the server-side code which will take care of data

acquisition, data parsing, any calculations needed, and data storage. The features of Profit and Loss Portal can be split into two general categories: core features and additional features and they are as follows:

Core Features

1. DISPLAY OVERVIEW OF ALL OPTIONS TRADED
 - a. What the application will be most used for
 - b. Quick data for profits and losses
 - c. Results should be displayed very quickly
2. SEE OPTIONS FOR MULTIPLE EXCHANGES
 - a. Be able to filter results by specific exchanges
 - b. Fast results because server will have already fetched data
3. DISPLAY DETAILED INFO WHEN VIEWING SPECIFIC STOCK
 - a. When drilled into from overview screen
 - b. Taken to a specific page for that stock
 - c. See all options acted on for that stock

2. System Overview

Profit-Loss-Portal allows users to see all stocks they have interacted with on the options market and see the profits and losses for each contract and the total for the stock.

3. System Architecture

3.1 Architectural Design

TODO:Develop a modular program structure and explain the relationships between the modules to achieve the complete functionality of the system

3.2 Decomposition Description

TODO:You may choose to give a functional description or an object oriented description. For a functional description, put top level data flow diagram (DFD) and structural decomposition diagrams. For an OO description, put subsystem model, object diagrams, generalization hierarchy diagram(s) (if any), aggregation hierarchy diagram(s) (if any), interface specifications, and sequence diagrams here.

3.3 Design Rationale

TODO:Discuss the rationale for selecting the architecture described in 3.1

4. Data Design

4.1 Data Description

Data will be stored in a PostgreSQL database.

TODO: Explain how the information domain of your system is transformed into data structures. Describe how the major data or system entities are stored, processed and organized. List any databases or data storage items.

4.2 Data Dictionary

TODO: Alphabetically list the system entities or major data along with their types and descriptions. If you provided a functional description in Section 3.2, list all the functions and function parameters. If you provided an OO description, list the objects and its attributes, methods and method parameters.

5. Component Design

TODO: If you gave a functional description in section 3.2, provide a summary of your algorithm for each function listed in 3.2 in procedural description language (PDL) or pseudocode. If you gave an OO description, summarize each object member function for all the objects listed in 3.2 in PDL or pseudocode. Describe any local data when necessary.

6. Human Interface Design

6.1 Overview of UI

TODO: Describe the functionality of the system from the user's perspective. Explain how the user will be able to use your system to complete all the expected features and the feedback information that will be displayed for the user.

6.2 Screen Images

TODO: Display screenshots showing the interface from the user's perspective.

6.3 Screen Objects and Actions

TODO: A discussion of screen objects and actions associated with those objects.

7. Requirements

Id	Summary	User Story	Complete?
1	Account creation	As a standard user, I want to be able to create an account to log in	N
2	Log in to account	As a standard user, I want to be able to log into the application	N

3	See overview of stocks	As a standard user, I want to be able to see all of the stocks that I have interacted with on the options market	N
4	Sort overview by different fields	As a standard user, I want to be able to sort my overview by relevant fields. e.g. exchange, profits, etc.	N
5	See specific stock info	As a standard user, I want to be able to view all of the contracts acted on for a single stock	N
6	See profit and loss for specific stock	As a standard user, I want to be able to see the profit and loss total for a given stock, as well as for each contract with that stock	N
7	Log out of system	As a standard user, I want to be able to log out of the application	N