Database Structure

Our intended design in building out the database structure is to break up the data storage as much as possible, and in do so go for more tables with fewer columns. The database system is also designed to facilitate expansion, so that more teams can be added without much difficulty and limited restructuring. Below are the tables necessary to build a prototype of the system:

users – a standard users table, with necessary information about each system user, including login credentials

* id
* email
* password
* first\_name
* last\_name
* creation\_date

permissions – each user will have various permissions that are potentially different depending on which team they are on. permissions will generally take a standard read-write format, and can be expanded as the system grows. permissions will not be team specific, but that could theoretically be added in later

* id
* description

teams – the idea behind this system is to promote group cohesion, and these groups are referred to as “teams”. the teams table will contain the necessary information relevant to each team, so that teams can be set up quite easily

* id
* name
* default\_user\_id
* creation\_date
* end\_date

team\_members – this separate table will be used to track which users are members of which teams and will have the functionality of allowing for removal of team members

* team\_id
* user\_id
* add\_date
* remove\_date

user\_permissions – each user will have certain permissions on various teams. this separate table tracks each permission a user has on which teams, in a way that is easy to edit on a per-permission basis

* team\_id
* user\_id
* permissions\_id

portfolio\_cash\_history – each team will have a portfolio that will need to have a cash value associated with it. cash values are most easily tracked by a history table, which will track both deposits and withdrawals by users to teams

* id
* date
* team\_id
* user\_id
* amount
* notes

actions – a stock can be bought or sold in many different ways (market, limit, etc.). this table will track the various methods of sale of a stock

* id
* description

pitches – this system is designed for collaboration, and this will be done through pitches made by users to their respective teams about stocks they are interested in and why there should be interest

* id
* date
* user\_id
* ticker
* notes

pitch\_teams – this is the easiest way to track which pitches are available to which groups, to ensure that the pitches can stay in their own table

* pitch\_id
* team\_id

proposals – if a pitch is received favorably, then a proposal should be made for the idea, which will more concretely outline the purchase plan

* id
* date
* pitch\_id
* team\_id
* user\_id
* ticker
* action\_id
* notes

orders – each team will make certain trades (initially outside of the system), but they need to be tracked for balance and performance analytics (using this and the linked proposals table)

* id
* proposal\_id
* order\_date
* execution\_date
* order\_price
* execution\_price
* amount