# Introduction & Executive Summary

Building on the previous progress report written on 10.22.2020 I have updated the database model to include the new information that National Investments has shared with me. I have made several changes which are: adding a Management\_Fee attribute to the client table, adding the AUM attribute to the Client and Investment tables, adding share\_prices to the Investment table, adding the Ticker attribute to the Investment table, adding the Investor\_Contact\_Email attribute to the Investor\_Contact table, adding the Client\_ID foreign key to the Investment table and adding the Address\_1, Address\_2, City, State, Zip attributes to the client table.

I have new questions about how the assets under management should be modeled and represented in this model. I believe that with the next progress report these questions should be resolved. In the current design I am afraid that I may be duplicating AUM data due to my limited understanding of the database design at this stage of development.

My questions regarding investments, clients, and the accounts relation have been answered. My only remaining question is how to properly represent the AUM without duplicating data unnecessarily and keeping the database normalized. I would still like clarification on the security requirements and strategy. This project is progressing very well, I do not anticipate any delays at this time.

# Adding Data into The Database

Adding data into my database was challenging at first. I developed a good workflow to get around this issue. I learned that I need to start with the client. Fill in each attribute in order. When you get to a foreign key edit that key’s table and populate data into it. If that table requires another foreign key, then you will have to populate this data before you can save the table you’re working on. It’s almost a recursive activity that’s happening over several iterations, each iteration would be each client addition, or each attribute addition. This has really made me think about my database and how I’ve structured my data.

# Database Model Changes

The Management\_Fee attribute was added to the Client table. The AUM attribute was attached to each client and each investment table. To break down the AUM by account manager or investment a simple SQL query can be made to do so. The Share\_Price attribute was added to the Investment table. The Ticker attribute was added to the Investment\_Table. The Investor\_Contact\_Email attribute was added to the Investor\_Contact table. The Client\_ID FK was added to the Investment table. Address\_1, Address\_2, City, State, Zip attributes were added to the client table.

# T-SQL Code:

1. use [CSCI-1320-Proj4-2]

/\*Finds the investment name, price, client\_id and shares that National Investments is managing \*/  
select Investment\_Name, Price, Client\_ID, Shares  
from dbo.Investment

1. use [CSCI-1320-Proj4-2]  
   /\*Find AUM for client 1\*/  
   select SUM(price\*shares) as Aggregate\_AUM\_Client\_1  
   from dbo.Investment   
   where Client\_Id like 1  
   /\*Find AUM for client 2\*/  
   select SUM(price\*shares) as Aggregate\_AUM\_Client\_2  
   from dbo.Investment   
   where Client\_Id like 2  
   /\*Find AUM for both clients\*/  
   select SUM(price\*shares) as Aggregate\_AUM\_All\_Clients  
   from dbo.Investment

# Questions and Clarification:

1. What is the best way to store the AUM with the least amount of duplication?

# Updated Database Diagram

Diagram, schematic

Description automatically generated

# Conclusion

The database model has been updated to reflect the new information that National Investments has disclosed to me. Several changes were made that are: The Management\_Fee attribute was added to the Client table. The AUM attribute was attached to each client and each investment table. To break down the AUM by account manager or investment a simple SQL query can be made to do so. The Share\_Price attribute was added to the Investment table. The Ticker attribute was added to the Investment\_Table. The Investor\_Contact\_Email attribute was added to the Investor\_Contact table. The Client\_ID FK was added to the Investment table. Address\_1, Address\_2, City, State, Zip attributes were added to the client table.

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