**Reflection Paper**

From the beginning of the course we planned that we will each be partners in the pair assignments, this I believe was important as we all had a chance to work with each other individually, learn about each teammates strong points, communication and work style. This also made it easy to make decisions and strategize on this project. For this particular project, we decided to split some of the code writing between two pairs so as to accommodate for the different time zones of team members. We also met after class every day to work on the project, this was helpful as we were able to bring in fresh perspective and learnings of the class and apply it to the project task. Lastly, we collaborated on the project by taking up certain responsibilities and task to increase our efficiency and speed.

To achieve desired results, we each took certain responsibilities. For example, Saviera and Haiyan were the lead Sql programmers, putting together all the code and coming up with various strategies to utilize tools and methods learnt in class to improve the quality of our results. Valeria was our finance lead and knowledge expert, she advised the team on ways we could input and structure all the entries in the account database required in the balance sheet and profit and loss tables to ensure our outputs were presentable, accurate and met the assignment criteria. Ade’s responsibility was that of a debugger, responsible for troubleshooting lines of code that wouldn’t run or deliver expected results. This involved looking through code provided in class for tips and from public sources such as startupbootcamp’s website to give us multiple options to achieve desired results.

We believe the key learnings involved the efficient use of code through tools such as stored procedures etc to build tables and analyze data effectively from existing databases such as the accounting one provided for this project. The first key learning was the use of stored procedures to help us utilize a code multiple times without having to rewrite it, which saved us time. We also liked the flexibility to give specific inputs and arguments in the stored procedure to achieve various results.

Secondly, another learning was the importance of user-defined functions for projects like ours that require calculations. It helped us organize complex code in one structure and test input parameters using conditionals (if or case) as needed for complex calculations. Also, we believe a properly tested and working function reduces the chances of making an error associated with rewriting queries especially when we tried recreating balance sheets and P&L tables for different years.

Thirdly, we agreed it is important to understand the database details and its parameters by using simple queries before diving into creating functions. This is because at various times after running our user defined functions we got “null” instead of integers as results in our table. We had to go back to the database to understand the particular table headers value and saw that in some cases associated parameters had a “0” value that won’t make our calculations give desired results. Finally, adopting a peculiar naming convention is very important to avoid errors especially in a database that has numerous variables with similar names.

In regard to actions we could have taken differently, it would have been better to pursue a project of such complexity as full-time students as compared to being part-time, in this case we could have achieved more in a shorter time. We also would improve or refresh our financial accounting knowledge before the project, so we can easily understand the accounting database contents and focus our time on coding.