

## Group 6

Anusmita Chanda	154453203
Dev Soni	130759210
Le Chanh Tin Luong	154574214
Sungbin (Alex) Choi	177037215

Income tax season is coming up and Christy has to supply her accountant with her income and expenses. How would she do that? Does your model accommodate that? What queries does she need? What are the government requirements?

For Christy to be able to supply her accountant with her income and expenses, the system must be able to store and calculate the expenses, income and tax rate of her business. As tax rates may change, the tax rate is either a system handled by a 3<sup>rd</sup> party, or a flexible variable that can be changed. In the given model, Christy should be able to declare her expense in the system in which the system will store as a Double (Number) additively. The income variable will record all transactions that the company makes with its customers. Both variables must be sorted by Months/Years as the company only pays income tax on income it has made in that financial period and may need to sort out transactions based on previous dates or years if issues arise with the government. In our current model, the system has a class for financials that contain number array variables that hold the MTD and YTD for both income and expenses based on Month/Year (Month-to-Date, Year-To-Date). This class also contains the variable for the tax rate which may or may not be fixed depending on if the tax is calculated via 3<sup>rd</sup> party controller or manually adjusted for provincial tax rates. A important query that is needed is the ability to calculate the taxes owed on a given year/month and this can be done with the CalculateTax() Function. This function will take a given month or year, find the total income generated that period, and output the amount of taxes owed. Afterwards, subtracted the taxed amount from the financial period can be stored as total profit after paying taxes. Depending on how well Christy's business is doing, the tax rate may have to be dynamic, as in Ontario, any business income under \$500k is subject to a rate of 12.5% while over \$500k is 26.5%.

Class Diagram1

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