# Business Program Challenge: XYZ Auto

# Objective

You have been hired by a car dealership, that is wishing to implement a computer program to make their business operate more efficiently and profitable.

Create a program using your preferred language, to provide the owner with the following information and complete the following tasks. You must also provide a flowchart or psuedo code to demonstrate your planning.

# Criteria

In your program you are expected to include the following menu:

1. Buy Vehicle
2. Sell Vehicle
3. Monthly Paycheck
4. Buy/Sell Report
5. Inventory Report
6. HST Report
7. Monthly Profit Report

Functionality

When the program starts you must read the initial data from the file dealer\_data.txt which will be provided on your flash drive. Your program must then provide the user with the following options.

Buy Vehicle (Company’s purchase)

User must enter the following fields

* Make
* Model
* Year
* Colour
* Purchase price

Sell Vehicle (Sale to consumer)

User must enter the following fields

* Sales person
* Model
* Sale price

Monthly Paycheck

Print to screen, each employee’s pay total for the month

* Base salary
* Commissions (see table for details)
* Tax Deductions (see table for details)
* Gross Income per paycheck
* Net Income per paycheck

Buy/Sell Report

* List of all vehicles purchased monthly
* List of all vehicles sold monthly

Inventory

* List of currently available inventory

HST Report (13%)

* Monthly report of HST combined total on all vehicles sold

Monthly profit report

* Monthly report of combined profit on all vehicles sold after commission payout

Tax Table

|  |  |
| --- | --- |
| Yearly Income | Tax Rate |
| Less than $25000 | 17% |
| $25000 - $35000 | 25% |
| Greater than $35000 | 35% |

Commission Table

|  |  |
| --- | --- |
| Manager | 5% of profit from every car sold |
| Salesperson | 15% of profit form the car they sold |

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# Data

The data is provided in a file, dealer\_data.txt in the following format:

Employee (E), First Name, Last Name, Position, Base Salary, SIN

Vehicle (V), Make, Model, Year, Colour, Purchase Price

During testing the following transaction will be made:

Buy Vehicle (2 purchases are made)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Make** | **Model** | **Year** | **Colour** | **Purchase Price** |
| Toyota | RAV4 | 2015 | Red | $17000 |
| Kia | Sorento | 2011 | Black | $11990 |

Sell Vehicle (3 sales are made)\*

|  |  |  |
| --- | --- | --- |
| **Salesperson** | **Model** | **Sale Price** |
| Patrick Jules | Trans Am | $25000 |
| Suzie Jones | Camaro | $35000 |
| Suzie Jone | Civic | $14500 |

\* for the purpose of testing we will keep the model field unique.

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# Scoring

**Flowchart/Pseudocode 10%**

Evidence of planning, flowchart or pseudocode

**Program 50%**

**Presentation/Demo** **10%**

You will present your solution to the car dealership owner, who is not a computer programmer. Demonstrate the functionality and answer any questions they may have.