Project 1 – Python – Functions and Lists

The **One Stop Insurance Company** needs a program to enter and calculate new insurance policy information for its customers. Allow the program to repeat to allow the user to enter as many customers as they want. Add at least 3 functions to the program. I will accept the FormatValues.py library as a function option – but you need to add a new function to the library – make it relevant. Bonus point – actually just my admiration - if you can create a function that returns multiple values.

Set up the following default values for the next policy number, the basic premium, the discount for additional cars, the cost of extra liability coverage, the cost of glass coverage, the cost for loaner car coverage, the HST rate, and the processing fee for monthly payments. The values are 1944, , 869.00, .25, 130.00, 86.00, 58.00, .15, and 39.99 respectfully.

The user will input the customer's first and last name, address, city, province (validate using a list to make sure the province is valid), postal code, and phone number. They will also enter the number of cars being insured, and options for extra liability up to $1,000,000 (enter Y for Yes or N for No), optional glass coverage (Y or N), and optional loaner car (Y or N). Finally enter a value to indicate if they want to pay in full or monthly (Full or Monthly or Down Pay – use a list to validate). If the enter Down Pay allow them to enter the amount of the down payment. Finally enter the Claim number, claim date, and the claim amount of all previous claims for the customer – set up to get out of the loop by the method of choice. Add at least 2-3 claims and store the values in lists. Convert the first and last name, the city, and the payment Method to title case and the Y/N values upper case. No validations required – other than those specified - but go for it if you want. Be careful when testing - enter values that are valid for each input.

Insurance premiums are calculated using a basic rate of $869.00 for the first automobile, with each additional automobile offered at a discount of 25%. If the user enters a Y for any of the options, the costs are $130.00 per car for extra liability, $86.00 per car for glass coverage, and $58.00 per car for the loaner car option. All these values are added together for the total extra costs. The total insurance premium is the premium plus the total extra costs. HST is calculated at 15% on the total insurance premium, and the total cost is the total insurance premium plus the HST. Customers can pay for their insurance in full or in 8 monthly payments, with or without a downpayment. Calculate the monthly payment by adding a processing fee of $39.99 to the total cost and dividing the total cost by 8. If the user entered a down payment, determine the monthly payment based on the total price less the downpayment with the same processing fee over the same 8 months. The invoice date is the current date, and the first payment date is the first day of the next month.

Display all input and calculated values to the screen in a **well-designed receipt**. At the end include the previous claims from the lists with the following format:

```
Claim #   Claim Date        Amount
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#####     YYYY-MM-DD     $##,###.##
#####     YYYY-MM-DD     $##,###.##
#####     YYYY-MM-DD     $##,###.##
```

Bonus: Write all input values and the total insurance premium (this is the pretax value). Include a message for the user indicating the policy data has been saved. Increase the next policy number by 1.