

## SAMPLE TEST

You have just been hired at as a software developer for Tim Horton's parent company and are tasked with building a new piece of software for their organization. The software will consist of two individual components that when combined provide a complete solution.

The software (**Part A**) will be a point-of-sale (POS) program that reads student calculates the amount customers pay at the register.

### Part A (32 marks)

The first component you must develop is a point-of-sale (POS) application that every cashier at Tim Horton's will work with. The program should continuously ask the user if they would like to enter another bill into the system until they are finished.

- If they type "Y" for yes, the program should then ask the user to enter the menu price of the item (i.e. without tax) as well as their method of payment.  
Options of payment are restricted to: "CASH", "DEBIT", "CREDIT"
  - If user pays in "CASH" they must entered the amount they are paying
- If the use enters "N" for no, then the program should exit and display a message reading: "Thank-you! Please come again!"

For each bill entered in the system the program should calculate the amount collected by the cashier depending on the method of payment.

- "CREDIT" OR "DEBIT": Customer pays the menu price of the item plus tax.
- "CASH": Customer pays the menu price of item plus tax, rounded to nearest nickel (\$0.05).
  - HINT: Modulus operator may be useful here
- **IMPORTANT:** In Ontario, if the cost of your bill for food/beverages is \$4.00 or less you only pay 5% GST on your bill; otherwise, you pay the entire 13% HST on the bill.

With these calculated values write the data in the following format to the console:

"MenuPriceOfItem CostOfItemIncludingTax RoundedAmount MethodOfPayment AmountPaid"

The sample output for the console window output file can be found on the following page. Please ensure your output values and format match the expected output.

### Console Output

```
Do you have another bill to enter [Y/N]? Y
Please enter amount of bill (before tax): 3.23
Enter method of payment [CASH/DEBIT/CREDIT]: CASH
The customer owes: 3.40
Amount Tendered: 5.00
Saving transaction Record...
    3.23  3.39  3.40  CASH  5.00
Do you have another bill to enter [Y/N]? Y
Please enter amount of bill (before tax): 3.23
Enter method of payment [CASH/DEBIT/CREDIT]: DEBIT
The customer owes: 3.39
Saving transaction Record...
    3.23  3.39  3.40  DEBIT  3.39
Do you have another bill to enter [Y/N]? Y
Please enter amount of bill (before tax): 5.05
Enter method of payment [CASH/DEBIT/CREDIT]: CREDIT
The customer owes: 5.71
Saving transaction Record...
    5.05  5.71  5.71  CREDIT  5.71
Do you have another bill to enter [Y/N]? Y
Please enter amount of bill (before tax): 6.30
Enter method of payment [CASH/DEBIT/CREDIT]: CASH
The customer owes: 7.10
Amount Tendered: 20.00
Saving transaction Record...
    6.30  7.12  7.10  CASH  20.00
Do you have another bill to enter [Y/N]? N
Thank-you! Please come again!
```