

Intro to Python - Lesson 3

Please review the following videos before the Python class on input() and print().

<https://www.youtube.com/watch?v=-Xyh9RUJuyE>

https://www.youtube.com/watch?v=5Omd8E1_1V8

Use the following exercises to practice IPO Charts and writing code.

1. Prepare a program to help determine spending habits of an individual or family. Allow the user to input the total monthly revenue, and the amount spent on each of the following: Mortgage / Rent, Food, Clothing, and Entertainment. Calculate the total expenses for the month, the total savings for the month, and the percentage of total revenue spent on each expense. Display all input and all calculated values to the screen. NOTE: when the percentages are calculated, they are values between 0 and 1 – we want them to be displayed as a percentage between 0 and 100.
2. Prepare a program to determine a customer's bank balance at the end of the month. Allow the user to enter the previous month balance, the total of all deposits, and the total of all withdrawals. Interest earned is calculated on the previous month balance at 1.25%, and the bank imposes a 1% service charge on all transactions. Determine the ending monthly balance by adding the deposits and the interest earned and subtracting the withdrawals and service charge from the previous monthly balance. Display all input values, the interest earned, service charge, and the ending balance.
3. The local gas station does car repairs. The attendants at the station would like a program to determine the customer's bill. The user will be required to enter the customer's name, the cost for parts, and the hours of labor. Determine the cost of labor using a labor rate of \$35.00 per hour. The Subtotal is the cost of parts plus the cost of labor. Calculate the HST on the parts only using a rate of 15%. The total bill is the Subtotal plus the taxes. Display the customer's name, the cost of parts, the cost of labor, the HST and the total bill.
4. Bob fills his car with gas every Wednesday evening before the price change on Thursday. This is so he can track exact mileage on his car from week to week based on a constant price. He has asked you to write a program to help him. The program will ask him to enter the total kilometers driven – from the trip odometer reset after each fill, the total litres of gas purchased, and the cost per litre. Calculate the Kilometers per litre as total kilometers divided by the total litres purchased, the total gas cost as the number of litres purchased multiplied by the cost per litre, and the Cost per kilometer as the Cost per litre divided by the Kilometers per litre. Display all input and calculated values to the screen.

See you at 1.