

CIS 106 Module 4 Assignment Problems.

Develop an IPO Chart and Python code the following problems. Upload the IPO and code folders to Github. Paste the Github URL into the submission on Blackboard.

Save your files with the convention M4P1, M4P2 etc. M4P1 is Problem set 3, program 1 etc. Put the files in a folder labelled M4. The extension is sufficient to determine IPOs from programs.

1. Allow the user to enter two exam scores from the keyboard. The first exam is worth 60% of the total points and the second exam is worth 40%. Calculate the total score by multiplying each exam score input by the respective weighting then add the two results together. Display the total.

| Input | Process | Output |
|----------------------|--|--------|
| Exam_one Exam_two | Total = exam_one * .6 + exam_two * .4 | total |

2. Input the purchase price per share, the current stock price and quantity of stock, compute the increase (or decrease) of the value of the stock entered. (Value is computed as (current price – price per share) * quantity. If the amount is negative that means you are losing money).

| Input | Process | Output |
|---|--|--------------|
| Share_price Stock_price Stock_qty | Value = (stock_price - share_price) * stock_qty | Value_change |

3. Enter the total for a meal. Compute a tip at 15%, 18% and 20%. Display total, each tip value and total with each tip value. Your output should have total for the meal as entered, tip and total with tip for each tip value. (9 lines). Put a blank line between each tip of the set of tip values. For example, Points are lost if the output is not formatted according to the directions.

With 15% Tip:

Total: 10.00
Tip: 1.50
Total with Tip 11.50

With 18% Tip:

Total: 10.00
Tip: 1.80
Total with Tip 11.80

With 20% Tip:

Total: 10.00

Tip: 2.00
Total with Tip 12.00

| Input | Process | Output |
|-------|--|---|
| Total | $\text{Tip_one} = \text{total} * .15$ $\text{Tip_two} = \text{total} * .18$ $\text{Tip_three} = \text{total} * .2$ $\text{Tip_one_total} = \text{total} + \text{tip_one}$ $\text{Tip_two_total} = \text{total} + \text{tip_two}$ $\text{Tip_two_total} = \text{total} + \text{tip_three}$ | Total Tip_one Tip_one_total Total Tip_two Tip_two_total Total Tip_three Tip_three_total |

4. Enter first name and number of steps walked in a day. For each step you burned .25 calories. Computer the number of calories burned. Display first name and calories burned.

| Input | Process | Output |
|--------------------|--|-----------------------|
| Firstname steps | $\text{Calories} = \text{steps} * .25$ | Firstname calories |

5. You are setting up a business and need to compute the break-even point. This indicates how many items you must sell at a given price to cover your overhead. Enter fixed costs, price per unit and cost per unit into your program. Compute the break-even point by dividing fixed costs by the difference of price per unit and cost per unit.

| Input | Process | Output |
|---------------------------------------|--|------------|
| fixed_cost unit_price unit_cost | $\text{Break_even} = \text{fixed_cost} / (\text{unit_price} - \text{unit_cost})$ | Break_even |