CIS 106 Session Assignments Set Problems.

Develop an IPO Chart and Python code the following problems. Upload the IPO and code files to Github. Paste the Github link into the upload link on Blackboard.

Save your files with the convention PS3P1, PS3P2 etc. PS3P1 is Problem set 1, program 1 etc.

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.

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| --- | --- | --- |
| Input | Processing | output |
| Exam 1 score | exam1\_weighted = Exam 1 score \* 0.60 | Display the total score |
| Exam 2 score | Exam 2 score \* 0.40 |  |
|  | total\_score = exam1\_weighted + exam2\_weighted. |  |

1. 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).

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| --- | --- | --- |
| Input | Processing | Output |
| Purchase price per share | Calculate the increase (or decrease) in the value of the stock:  - value = (current stock price - purchase price per share) \* quantity | Display the increase (or decrease) in the value of the stock |
| Current stock price |  |  |
| Quantity of stock |  |  |

1. 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,

With 15% Tip:

Total: 10

Tip: 1.50

Total with Tip 11.50

With 18% Tip:

Total: 10

Tip: 1.80

Total with Tip 11.80

With 20% Tip:

Total: 10

Tip: 2.00

Total with Tip 12

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| Total for a meal | Calculate tips at 15%, 18%, and 20%:  - tip\_15 = total \* 0.15  - tip\_18 = total \* 0.18  - tip\_20 = total \* 0.20  - Calculate total with each tip value:  - total\_with\_tip\_15 = total + tip\_15  - total\_with\_tip\_18 = total + tip\_18  - total\_with\_tip\_20 = total + tip\_20 | Display total for the meal as entered |
|  |  | Display tip and total with tip for each tip value |
|  |  | Put a blank line between each set of tip values |

1. 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.

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| --- | --- | --- |
| Input | Processing | Output |
| First name | Calculate the number of calories burned:  - calories\_burned = number\_of\_steps \* 0.25 | Display the first name and calories burned. |
| Number of steps walked in a day |  |  |

1. 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

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| --- | --- | --- |
| Input | Processing | Output |
| Fixed costs | Calculate the break-even point:  - break\_even\_point = fixed\_costs / (price\_per\_unit - cost\_per\_unit) | Display the break-even pointTop of Form |
| Price per unit |  |  |
| Cost per unit |  |  |

1. 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.

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| Input | Processing | Output |
| Fixed costs | Calculate the break-even point:  - break\_even\_point = fixed\_costs / (price\_per\_unit - cost\_per\_unit) | Display the break-even point |
| Price per unit |  |  |
| Cost per unit |  |  |