CIS 121 Introduction to Programming. Assignment 2 Problems

Develop an IPO Chart and C++ code the following problems. Upload the IPO and code files to Blackboard.

Save your files with the convention PS2P1, PS2P2 etc. PS1P1 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 | PROCESS | OUTPUT |
| - First exam score (double)  Second exam score (double) | Convert the percentages into decimals  -60%= 0.60  - 40% = 0.40 Multiply first exam score by  - Multiply second exam score by 0.40  - Add both results to get total score: totalScore = (exam1 \* 0.60) + (exam2 \* 0.40) | Display the total |

1. Given the current stock price and quantity of stock, display the current value of the stock in your portfolio.

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| INPUT | PROCESS | OUTPUT |
| Variable int and/or double for stock price and quantity of stock owned | Portfolio value = stock price \* quantity | Display value of the stock |

1. Enter the total for a meal. Compute a tip at 15%. Display total, tip and total with tip.

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| INPUT | PROCESS | OUTPUT |
| Meal cost | Calculate tip   * Tip = mealTotal \*0.15   Calculate total with tip   * Total with tip = meal total + tip | Display meal total and tip and total with tip |

1. The purchase price and current price of a stock is entered into your program. Display the percentage increase of decrease of the stock.

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| --- | --- | --- |
| INPUT | PROCESS | OUTPUT |
| Purchase price  Current price | Calculate percentage change  Percentage change = ((current Price – purchase price) / purchase price ) \* 100 | Display percentage |

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 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 | PROCESS | OUTPUT |
| Fixed costs  Price per unit  Cost per unit | Calculate difference of price per unit and cost per unit  Profit per unit = price per unit – cost per unit  Calculate break even point  Break even = fixed cost / profit per unit | Display the break even point |

Example Problems (do not have to do – solutions will be provided)

1. Get two numbers from the keyboard. Display the sum, product, difference and quotient of the two numbers.
2. Enter last name and credits taken. Tuition is $250 per credit hour. Compute total tuition. Display last name and tuition.
3. 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.
4. Enter the name of the political party and number of votes for two political parties. Compute the percentage of votes each party achieved. Display the party and percentages of votes.