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CIS121 061 - Introduction to Programming
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CIS 121 Introduction to Programming.
Week 3

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.

Input	***Process***	***Output***
fexsc	`total_sc = (fexsc * fev) + (sexsc * sev);`	total_sc
sexsc		

Name	***Etymology***
fexsc	First Exam Score
sexsc	Second Exam Score
total_sc	Total Score
fev	First exam value being 60% = 0.6
sev	Second Exam Value being 40% = 0.4

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

Input	***Process***	***Output***
price		
quantity	`port_value = price * quantity;`	port_value

Name	***Etymology***
price	Stock Price
quantity	Stock Quantity
port_value	Portfolio Total Stock Value

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

Input	***Process***	***Output***
total	`tip = total * t15;`	`tip`
`t15`	`bill = total + tip;`	`bill`

Name	***Etymology***
`total`	`Payment due for meal`
`t15`	`15% tip = 0.15`
`tip`	`Tip calculated from meat total`
`bill`	`Total bill amount with tip`

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

Input	***Process***	***Output***
Pprice	`Change = ((Cprice – Pprice) / Pprice) * 100;`	`change`
Cprice		

Name	***Etymology***
`Pprice`	`Purchase price`
`Cprice`	`Current price`
`change`	`Chance percent change`

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***
`costf`		`bep`
`ppu`	`bep = fixed_cost / price_per_unit – cost_unit`	
`cpu`		

Name	***Etymology***
`costf`	`Fixed cost`
`ppu`	`Price per unit`
`cpu`	`Cost per Unit`
`bep`	`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.

   N/A

2. Enter last name and credits taken. Tuition is $250 per credit hour. Compute total tuition. Display last name and tuition.

Input	*Process*	*Output*
`lname`		
`credits`	`total_tuition = credits * 250.00f;`	`tuition_t`

Name	*Etymology*
`lname`	`Last Name`
`credits`	`Credits taken`
`tuition_t`	`Tuition Total`

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.

Input	*Process*	*Output*
`fname`		
`steps`	`cal_burn = steps * cps`	`cal_burn`
`cps`		

Name	*Etymology*
`fname`	`First Name`
`steps`	`Steps taken`
`cps`	`Calories per step = .25`
`cal_burn`	`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.

   NA