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CIS121 061 - Introduction to Programming

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CIS 121 Introduction to Programming.

Week 4

1. Allow a user to enter a quantity of an item. If the quantity is greater than or equal to 1000, the unit price should be $3.00. For quantities under 1000 the unit price is $5.00. Compute extended price to be quantity x unit price. Compute tax to be 7% of the extended price. The total is computed as extended price plus the tax. Display the quantity, unit price, extended price, tax and total.

Input	Process	Output

q	`if (q >= 1000)`
	`    up = 3.0f;`
	`else`
	`    up = 5.0f;`
		q

i	`exp = up * tax;`	up
	`total = exp + up;`	exp
		total
		b4t

Name	Etymology
i	Item name
q	Quantity
up	Unit price
tax	Tax = 0.07
exp	Extended price or the
total	Total price

2. The program asks the user for an item and quantity. Determine the unit price of the item based on the chart below. Compute the extended price to be quantity x unit price. Display the item, unit price and extended price.

Item	Unit Price
A	$10.00
B	$20.00

Input	Process	Output

i	`if (i == "A")`
	`    up = 10.00f;`
	`else if (i == "B")`
	`    up = 20.00f;`
	`else`
	`    up = 0`
		i

q	`total = q * up;`	up
		total

Name	Etymology
i	Item name
q	Quantity
up	Unit price
total	Total

3. Enter the number of books to order and cost per book. If the order total is over $50.00 shipping is free. If the order total is $50.00 or under charge $25 shipping. Display the order total and shipping charge (note 0 should display for a free shipping charge).

Input	Process	Output
bn	order = bn * bp;	order

bp	if (order > 50)
	    sc = 0;
	else
	    sc = 25;
		sc

	total = order + sc;	total

Name	Etymology
bn	Number of books
bp	Book prices
order	Order total before shipping
sc	Shipping cost
total	Total

4. The warrantee of an appliance depends on the cost of the appliance. For appliances over $1,000 the warrantee cost is 10% of the price. For appliances $1,000 or less the warrantee cost is 5% of the price. The user will enter the name and cost of an appliance. Display name and cost of appliance, the cost of the warrantee and the total (cost of the appliance + warranty).

Input	Process	Output
		an

an	if (ap > 1000)
	    wp = 0.10 * ap;
	else
	    wp = 0.05 * ap;
		ap

ap	total = ap + wp;	wp
		total

Name	Etymology
an	Appliance name
ap	Appliance price
wp	Warranty cost
total	total

5. Enter the user's last name, number of dependents and gross income. Compute adjusted gross income to be gross income minus dependents times $12000. Next determine an income tax rate. Adjusted gross incomes over $50,000 have a tax rate of 20%. Adjusted gross incomes $50,000 or under have a tax rate of 10%.

Once you determine the tax rate, compute income tax to be adjusted gross income times tax rate. If the income tax is less than 0, set the income tax to $100.

Display last name, gross income, number of dependents, adjusted gross income, and income tax.

Input	Process	Output
		ln
ln	`adjusted = gross - (dep * 12000);`	gross

dep	`if (adjusted > 50000)`
	`        rtax = .020;`
	`else`
	`        rtax = 0.10;`
		dep

gross	`itax = adjusted * rtax;`	adjusted

	`if (itax <= 0)`
	`        itax = 100;`
	`else`
	`        itax = itax;`
		itax

Name	Etymology
ln	Las name
dep	D
gross	Gross income
adjusted	Adjusted income
itax	Income tax
rtax	Tax rate