CIS 121 Sequence 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 the quantity and unit price (price per item). Compute extended price (quantity x price). Display the extended price.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| quantity | Create equation that’ll give the total price of multiple items | “The total extended price is $” << extended price |
| Unit price | Extended price = quantity \* unit price |  |
| Extended price |  |  |

1. Allow the user to enter last name, hours and pay rate. Compute gross pay to be hours x rate. (Note: we are not giving time and a half for over time hours yet!). Display last name and gross pay.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Last name | Allow user to enter surname |  |
| Hours | Create equation that’ll find gross pay | “The total gross pay for “ SURNAME “is “ GROSS |
| rate | Gross = hours \* rate |  |
| gross |  |  |

1. The user is to enter the length and width of a rectangle. Computer the area (length x width) and the circumference (2 x length + 2 x width). Display the area ad circumference.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Length, Width | Add Values to “length” and “width |  |
| Area, Circumference | Add equation to “area”  Area = l x w  Add equation to  ‘circumference”  Circumference = (2 x length) + (2 x width)  Display results | Area: AREA  Circumference: CIRCUMFERENCE |
|  |  |  |

1. Enter last name and credits taken. Tuition is $250 per credit hour. Add a $100 lab fee. Compute total tuition (credits taken x 250 + lab fee). Display last name and tuition.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Last name | Store last name | Total tuition for NAME : TUITION |
| Credits, tuition | Store equation into TUITION  Tuition = 250 x credit + 100 |  |
|  |  |  |

1. The price of an item and discount percent is entered into the program. Display the discount amount and discounted price of the item. Note: enter the discount percent in decimal form.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| Discount, discounted price. item | Add values to discount and price | Discounted price for ITEM is: TOTAL |
| total | Create equations |  |
|  | Percentage = (price \* discount) / 100  Discounted price = price - discount |  |