CIS 121 – Lab 4 Functions

1. A salesperson should sell x amount of sales annually. Sales management wants to set targets for their annual sales but needs to know how many salespeople it will take to meet that target. Allows the sales manager to enter their annual sales target as well as the expected sales per salesperson. Then use a function to compute the number of sales people that are needed to support the annual sales target.

The functions should be passed the annual sales target and sales per salesperson. It will calculate the number of sales people needed as:

Number of sales people needed = annual sales target / sales per salesperson.

Display the annual sales target, the sales per salesperson and the number of sales people needed.

1. Enter student last name and three exam scores. Write a function to computer the student’s overall score. Pass the 3 exam scores to the function. It will compute the overall score as a weighted score as follows.

Exam 1 is 50% of the overall score.

Exam 2 is 30% of the overall score.

Exam 3 is 20% of the overall score.

Overall score = (Exam 1 x 50%) + (Exam 2 \* 30%) + (Exam 3 \* 20%)

Display the student’s last name and overall score.

1. You are working to help a purchasing agent for IT add up purchases automatically. The agent buys monitors, keyboards, mice and computers. Allow the agent to enter the number of each to purchase. Pass these values to a function to compute the total of the purchase include 7% sales tax plus $25.00 for shipping of each order.

The function will compute the order as:

Subtotal = (Number of monitors x $55) + (number of keyboards x $25) + (number of mice x $5) + (number of computers x $600)

Sales tax = subtotal x 7%

Shipping = $25

Total order = subtotal + sales tax + shipping

Display the total order.

1. Find the area of a circle given the user enters the diameter. Write a function that receives the diameter and returns the area of the circle. Display the area of the circle.

The area of a circle is computer as a = P x (R squared). Where P = 3.14 and R = diameter / 2.

1. The user will enter the number of credit hours needed for a degree as well as the number of credit hours taken. Write a function to compute the number of credit hours needed to complete the degree. This is just the difference between the number needed for the degree minus the number of credit hours taken. Write another function to compute the cost to complete the degree. Pass this function the number of credit hours needed to complete the degree and multiply by the tuition charge per credit hour ($250). Display the number of credit hours needed to complete the degree as well as the cost to complete the degree.

Examples

1. Allow the user to enter a quality of items to purchase. Write a function to compute the total order. Charge 7% sales tax. Charge $25 shipping and handling. Display the total order. The total order is computed as follows.

Subtotal = quantity x $15.

Sales tax = subtotal x 7%

Shipping and handling = $25

Total order = subtotal + sales tax + shipping and handling

1. Allow the user to enter the diameter of a circle/cylinder and its height. Write one function to compute the circumference of the circle (Pi x diameter) and another function to compute the volume of the cylinder (Pi x radius squared x height). Display the circumference and volume.
2. A machine can produce x number of items per hour. The user needs to enter the number of items needed for the order as well as the number the machine can produce per hour (x). Write a function to calculate the number amount of time needed to complete the order.

Amount of time needed to complete the order =

Number of items needed / number of items per hour(x).

Display the amount of time needed to complete the order.