Session Advanced Functions – Create IPO Chart and code for each problem below. Put the files in single folder M11 and named in the same manner as previous exercises. Post the folder in Github and put a link in Blackboard for the logic and program (code) entries.

1. The input consists of quantity, price and discount rate. Use a function to compute the discount amount and discounted price. Then, display these values in the main part of the program, along with the quantity and price. (The function should return both discount amount and discounted price).

Input	process	Output
Qty, price, discount rate	Discount amount = qty * price * discount rate Discount price = (qty * price) – discount rate	Discount amount, discount price
Qty, price, discount rate	Read user input and Compute discount amount and discount price	Discount amount, discount price

2. Enter the student's last name and 3 exam scores. Use a function to compute the average and total points. This function should return both total points and average. Display student's last name, total points and average exam score.

Input	Process	Output
Last 3 exam scores	Total points = exam 1 + exam 2 + exam 3 Average = total points / 3	Total points average
Last name, exam scores	Read user input and Compute average and total price	Last name Total points Average

3. Produce a sales report. Input salesperson last name and sales. Write a function that computes commission which is 10% for sales over $100, 000 and 5% for sales at or under $100,000. The function should also computer next year's target, which is 5% of the sales. This function should return both commission and next year's target. Display salesperson name, commission and next year's target.

Input	Process	Output
sales	If sales =< 100,000 Commission = sales * 0.05 If sales > 100,000 Commission = sales * 0.1 Target = sales * 0.05	Commission Target
Last name, sales	Read user input and Compute commission and target	Last name Commission Target

4. Enter bowler's last name, 3 game scores and handicap. Write a function to compute average score and average score with handicap. In the main part of the program, display last name, average score and average score with handicap. *Bowling handicap info*

Input	Process	Output
Last 3 scores Handicap	Average = (score 1 + score 2 + score 3) / 3 Avg w handicap = average + handicap	Average Average w handicap
Last name, last 3 scores, handicap	Read user input and compute average with and without handicap	Last name Average Average w handicap

5. Allow the user to enter quantity of an item and unit price. Write a function to compute total (qty * unit price) and tax (7% of total). Demonstrate your knowledge of global variables by making total and tax global scope. Display total and tax in main.

Input	Process	Output
Qty, price	Total = qty * price Tax = total * 0.07	Total, tax
Qty, price	Read user input and compute total and tax	Total, tax