Session Advanced Functions – Create IPO Chart and code for each problem below.

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 main along with the quantity and price. (The function should return both discount amount and discounted price).

| Input | Process | Output |
| --- | --- | --- |
| qty  price  discrate | #Main  input qty, price, discrate  Call Computedisc (qty, price, discrate)  Return discamt & discprice  discamt=qty\*price\*discrate  discprice= qty\* price-discrate | qty  price  discamt  discprice |
|  |  |  |
|  | def Computedisc:  Display discamt, discprice | discamt  discprice |

1. 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 exam score. Display student last name, total points and average exam score.

| Input | Process | Output |
| --- | --- | --- |
| Lname  exam1  exam2  exam3 | input Lname, exam1,2,3  def Computepoints (avgscore, ttlpoints):  ttlpts= exam1 +exam2+exam3  avgscore= ttlpts/3  **return: ttlpts , score** | Lname  ttlpts  avgscore |
|  |  |  |
|  | Display– Lname, ttlpts, avgscore |  |

1. Produce a sales report. Input salesperson last name and sales. Write a function that compute commission which is 10% for sales over $100, 000 and 5% for sales at or under $100,000. The function should also compute 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 |
| --- | --- | --- |
|  |  |  |
| Lname  sales | #Main  Input: salespn, Lname, sales  call Computesales( Lname, sales)  if statement determining comm  **return: comm, nexttarget** | Lname  comm  nexttarget |
|  | Display– Lname, comm, nexttarget | comm  nexttarget |

1. Enter bowler last name, 3 game scores and handicap. Write a function to compute average score and average score with handicap. Back in main, display last name, average score and average score with handicap.

| Input | Process | Output |
| --- | --- | --- |
| Lname  gs1  gs2  gs3  handicap | #Main  input(Lname, gs1,gs2,gs3, handicap)  Call CompAvgscore(Lname, gs1,gs2,gs3, handicap)  Return: Lname, avgscore, avghandicap  Display: Lname, avgscore, avghandicap) | Lname  avgscore  avghandicap |
|  |  |  |
|  |  |  |

1. 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 in scope. Display **total** and **tax** in main.

| Input | Process | Output |
| --- | --- | --- |
| qty  uprice | input qty, uprice  call ComputeTotal (qty,uprice) | ttl  tax |
|  | def  ttl=qty \* uprice  tax=0.07\* ttl  return ttl, tax |  |
|  | Display ttl, tax |  |