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

- 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
discount
	def CompDiscount(qty, price, discount):
	  disc_amt = qty * price * discount
	  disc_price = qty * price - disc_amt
	  return disc_amt, disc_price
	
	qty = Enter the quantity:
	price = Enter the price:
	discount = Enter the discount rate:
	disc_amt, disc_price = CompDiscount(qty, price, discount)
	Display qty
	Display price
	Display disc_amnt
	Display disc_price
		Qty
		Price
		Disc_amnt
		Disc_price

- Enter the student's last name and 3 exam scores. Use a function to compute the average and total points. This functions 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
	def Compscore(lname, exam1, exam2, exam3):
	  total = exam1 + exam2 + exam3
	  avg = total / 3
	  return total, avg
	
	lname= Enter the students last name:
	exam1= Enter the students exam score:
		lname
		Total
		avg

	exam2= Enter the students exam score: exam3= Enter the students exam score: total, avg= Compscore(lname, exam1, exam2, exam3) Display lname Display total Display avg	

- 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 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

lname
sales
	def CompSales(lname, sales):
	  if sales > 100000:
	  com = sales * 0.10
	  elif sales <= 100000:
	  com = sales * 0.05
	  next_y = sales * 0.05
	  return com, next_y
	
	lname = Enter the salesperson's last name:
	sales = Enter the salesperson's sales:
	com, next_y = CompSales(lname, sales)
	Display lname
	Display com
	Display next_y
		lname
		Com
		Next_y

- 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
Score1
Score2
Score3
handicap
	def CompBowl(lname, score1, score2, score3, handicap):
	  avg = (score1 + score2 + score3) / 3
	  avg_handicap = (score1 + score2 + score3 + handicap) / 3
	  return avg, avg_handicap
	
	lname = Enter the bowler's last name:
	score1 = Enter the first score:
	score2 = Enter the second score:
	score3 = Enter the third score:
	handicap = Enter the handicap:
	avg, avg_handicap = CompBowl(lname, score1, score2, score3, handicap)
	Display lname
	Display avg
	Display avg_handicap
		lname
		Avg
		avg_handicap

- 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
up
	def CompPrice(qty, up):
	  global total
	  total = qty * up
	  global tax
	  tax = total * 0.07
	
	qtp = Enter the quantity of the item:
	up = Enter the unit price of the item:
	CompPrice(qtp, up)
	Display total
	Display tax
		Total
		tax