Problem Set – Introduction to Functions.

- Allow the user to repeatedly enter a quantity and price. Prompt the user on whether they want to do the program (Yes or No). Use a function to compute the total (quantity times price). The function should be passed the quantity and price and then return the total. In the function, provide a 10% discount if the total is over $10,0000.00. Display quantity, price and total. Sum and display the extended price.

Input	Process	Output

Qty
price
	compExtPrice(qty, unitprice)
	  Extprice = qty * unitprice
	  If extprice > 10000
	  Discamnt = extprice * 0.10
	  Else
	  Discamnt = 0
	  NwExtprice = extprice - discamnt
	  Return nwextprice
	
	Main
	  Totalextprice = 0
	  Work the program (Y/N)
	
	While yes
	  Input qty, price
	  Extprice = compextprice9qty, price)
	  Display extprice
	  totalextprice += extprice
	  Work the program (Y/N)
	
	Display totalextprice
		Extprice
		Total ext price

- Enter players last name, number of hits and at bats at the keyboard. Prompt the user on whether they want to do the program (Yes or No). Use a function to compute batting average. Pass the hits and at bats to the function. The function

should return batting average. Display last name and batting average. Give a count of the number of players entered.

Input	Process	Output

Name
Hits
bats
	def compbavg(hits, bats):
	  avg = hits / bats
	  return avg
	
	affrim = input("Compute bat average(Y/N)?: ")
	c=0
	
	while affrim = Y:
	  lname = input("Enter last name: ")
	  hits = input("Enter number of hits: ")
	  bats = input("Enter number of at bats: ")
	  avg = compbavg(hits, bats)
	  Display lname
	  Display avg
	  c+= 1
	  affrim = input("Compute bat average(Y/N)?: ")
	
	Display c
		Name
		Avg
		c

- Enter the destination city, miles travelled and gallons used for a trip. Prompt the user on whether they want to do the program (Yes or No). Use a function to compute miles per gallon. Pass miles travelled and gallons used to the function. The function should return miles per gallon. Count the number of entries made (number of trips) Display destination city, miles and mpg. At end display the number of entries made.

Input	Process	Output
Dcity	def compmpg(miles, gallons):	Dcity

Miles gallons	mpg = miles / gallons return mpg affirm = input ("Compute miles per gallon(Y/N)?: ") c = 0 while affirm = Y: dcity = input("Enter the destination city: ") miles = input("Enter the number of miles traveled: ") gallons = input("Enter the number of gallons used: ") mpg = compmpg(miles, gallons) c+=1 Display dcity Display miles Display mpg affirm = input ("Compute miles per gallon(Y/N)?: ") Display c	Miles Mpg c

- Allow the employee to enter last name, job code and hours worked. Prompt the user on whether they want to do the program (Yes or No). Use a function to determine the pay rate. Pass to this function the job code and it should return rate of pay. Use Job code L is $25/hr, A is $30/hr and J is $50/hr for respective pay rates. Compute gross pay. Give time and a half for overtime. Display last name and gross pay. Sum and display total of all gross pay.

Input	Process	Output

lname
Code
hours
	def compay(hours, code):
	if code == "L":
	rate = 25
	elif code == "A":
		lname
		Grosspay
		c

	rate = 30
	else:
	rate = 50
	
	if hours <= 40:
	pay = hours * rate
	else:
	pay = hours * rate * 1.5
	
	return pay
	
	affirm = input ("Run program(Y/N)?: ")
	c = 0
	
	while affirm = Y:
	lname=input("Enter your last name: ")
	code = input("Enter your job code(L/A/J): ")
	hours = (input("Enter the number of hours worked: ")
	grosspay = compay(hours, code)
	Display lname
	Display grosspay
	c += grosspay
	affirm = input ("Run program(Y/N)?: ")
	
	Display c	

- Allow the user to enter student last name, credit hours and district code. Prompt the user on whether they want to do the program (Yes or No). Use a function to compute tuition owed. Charge In district (code of I) $250 per credit hour. Out of district (code of O) is $550 per credit hour. The function should receive credit hours and district code and return tuition owed. Display student name and tuition owed. Sum and display total of all tuition owed.

Input	Process	Output

lname
Credithrs
code
	def comptuition(credithrs, code):
	  if code == "I":
	  tuition = credithrs * 250
	  elif code == "O":
	  tuition = credithrs * 550
	  return tuition
	
	affirm = input("Run Program(Y/N)?: ")
	c = 0
	
	while affirm == "Y":
	  lname = input("Enter your last name: ")
	  credithrs = int(input("Enter your credit hours: "))
	  code = input("Enter your district code(I/O): ")
	  tuition = comptuition(credithrs, code)
	  Pdisplay lname
	  Display tuition
	  c += tuition
	  affirm = input("Run Program(Y/N)?: ")
	
	Display c
		lname
		Tuition
		c