TASK 01

**(a)**

Declare 3 input variables a, b, gcd of type int  
Prompt user to enter the variables a and b

Initialize two empty lists listA and listB

for loop (i=1 to i<=a, i++)

if (a%1 == 0)

append i in listA

for loop (i=1 to i<=b, i++)

if b%1 == 0

append i in listA

for (i=0 to length of listA)

for (j=0 to length of listB)

if (listA[i]== listB[j])

gcd = i

Print gcd

**(b)**

Declare 3 variables; A, B and C

Prompt user to enter the value of A

Save input to variable A

Prompt user to enter the value of B

Save input to variable B

Prompt user to enter the value of C

Save input to variable C

If A+B>C print “Yes the sum of A and B is greater than C”

Else “No”

Return

**(c)**

**(d)**

Declare 5 var one, two, three, four, five

Save the values from 1st to 5th number in the variables one to five respectively.

Declare 5 new variables and call them diff1, diff2, diff3, diff4, diff5

Diff1 = sum – one

Diff2 = sum – two

Diff3 = sum – three

Diff4 = sum – four

Diff5 = sum – five

**(e)**

Declare two variables called ‘even’ and ‘current’.

As we iterate through the list, save each number in the variable ‘current’.

Take modulus of the variable ‘current’ and if it is == 0, increment in the value of ‘even’ by 1. (even++)

Enter the next line and save the value of the number to ‘current’ again.

Take modulus of the variable current and if it is != 0, do nothing

When the list is finished, print even.

Return.

Declare a variable ‘count’

Iterate through the list

**TASK 02**

Age = Integer because Age is represented in whole numbers.

Temperature = Float because we can use %.2f to obtain up to two decimals of temperature.

Longitude = Double because they can be in up to 16 decimals.

Third letter of your name = Character because it is an alphabet.  
Wind = Float because they can be in up to 6 decimals.

**TASK 05**

Declare 9 variables item1,item2,item3,item4,item5,item\_total,grand\_total,gst,profit

Prompt user to enter the values of items individually

Store the values of items in variables item1,item2,item3,item4,item5 respectively

item\_total = item1 + item2 + item3 + item4 + item5;

profit = (item\_total \*15) / 100;

gst = (item\_total \*18) / 100;

grand\_total = item\_total + ((item\_total \*18) / 100);

Print "Salman Grocery Store"

Print "--------------------------------------------------"

Print "Description | Price"

Print "--------------------------------------------------"

Print "Item 1 | ", item1

Print "Item 2 | ", item2

Print "Item 3 | ", item3

Print "Item 4 | ", item4

Print "Item 5 | ", item5

Print "--------------------------------------------------"

Print "Item total | ", item\_total

Print "GST | ", gst

Print "--------------------------------------------------"

Print "Grand Total | ", grand\_total

Print "Total Profit Earned | ", profit

Q4:  
Initialize an array of 64 bits

Declare 3 variables count=0, r, num

Take user input in num

While num>0:

r=num%2

num = num/2

array[count] = r

Count++

Run a reverse loop over array from count to start

For i = count – 1 to 0:

Print array[i]