**CSF 2113 Lab 4.2 Functions**

1. **Using Functions in python**
2. Write a Python function which take a two numbers as input and return the sum of the numbers between these two numbers.

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| Def addition(x,y):  Z=0  For i in range(x,y+1):  Z+=i  Return z  L=int(input(“Enter lower number:”))  H=int(input(“Enter upper number:”))  Print(“Sum is”,addition(L,H)) |

1. What a Python function which take a two numbers as input and return the average of the numbers between these two numbers.

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| Def avg(x,y):  Z=(x+y)/2  Return z  L=int(input(“Enter lower number:”))  H=int(input(“Enter upper number:”))  Print(“Average is :”, avg(L,H)) |

1. Write a Python function which take a list as input and return a list which have listed all element twice.

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| Def dlist(z):  Return z\*2  A = [1,2,3]  B = [“Ali”,”Mohamed”,”Ahmed”  Print(dlist(A))  Print(dlist(B)) |

1. Write a Python function which take a list as input and return a list with element twice of original list.

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| Def doublelist(z):  For i in range(0,len(z)):  Z[i] = z[i]\*2  A = [1,2,3]  B = [“Ali”,”Mohamed”,”Ahmed”  Print(doublelist (A))  Print(doublelist (B)) |

1. Write a Python function which takes a list of numbers as input and calculate the sum and average of all elements of the list and add both (sum and average) at the end of the list and return the updated list.

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| Def sumAvg(z):  Sum=0  For i in range (0,len(z)):  Sum =z[i]  Avg=(sum/len(z))  z.append(sum)  z.append(avg)  a=[1,2,3]  sumAvg(a)  print(a) |

1. **Using Functions in Python**
2. Write the output of the code segment:

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| Code | Output |
|  | 8  10  10 |
|  | -3  11  12 |
|  | 3  18  0  10 |
|  | 6  25  0  15 |
|  | 9  12  0  18 |
|  | [1,3,5,1,3,5]  [1,5,4,2,1,5,4,2]  []  [3,9,4,2,3,9,4,2] |
|  | [2,6,10]  [2,10,8,4]  []  [6,18,8,4] |
|  | [1,3,5]  [1,2,4,5]  []  [2,3,4,9] |

**End of Lab**