**Arrays**

1.Write a function to add integer values of an array

lst = []

num = int(input("Enter the size of the array: "))

print("Enter array elements: ")

for n in range(num):

numbers = int(input())

lst.append(numbers)

print("Sum:", sum(lst))

2. Write a function to calculate the average value of an array of integers

def Average(lst):

return sum(lst) / len(lst)

lst = [15, 9, 55, 41, 35, 20, 62, 49]

average = Average(lst)

print("Average of the list =", round(average, 2))

3. Write a program to find the index of an array element

list2 = ['cat', 'bat', 'mat', 'cat', 'pet']

print(list2.index('bat'))

4. Write a function to test if array contains a specific value

lst=[ 1, 6, 3, 5, 3, 4 ]

i=7

if i in lst:

print("exist")

else:

print("not exist")

5. Write a function to remove a specific element from an array

array = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

array.remove(40)

6. Write a function to insert an element at a specific position in the array

lis = ['Amity', 'Kolkata']

lis.insert(1, "University")

print(lis)

7. Write a function to find the minimum and maximum value of an array

def maxminposition(A, n):

minposition = A.index(min(A))

maxposition = A.index(max(A))

print ("The maximum is at position::", maxposition + 1)

print ("The minimum is at position::", minposition + 1)

A=list()

n=int(input("Enter the size of the List ::"))

print("Enter the Element ::")

for i in range(int(n)):

k=int(input(""))

A.append(k)

maxminposition(A,n)

8. Write a function to reverse an array of integer values

arr = [1, 2, 3, 4, 5];

print("Original array: ");

for i in range(0, len(arr)):

print(arr[i]),

print("Array in reverse order: ");

#Loop through the array in reverse order

for i in range(len(arr)-1, -1, -1):

print(arr[i]),

9. Write a program to find the common values between two arrays

import numpy as np

array1 = np.array([0, 10, 20, 40, 60])

print("Array1: ",array1)

array2 = [10, 30, 40]

print("Array2: ",array2)

print("Common values between two arrays:")

print(np.intersect1d(array1, array2))

10. Write a method to find the second largest number in an array

list1 = [10, 20, 4, 45, 99]

mx = max(list1[0], list1[1])

secondmax = min(list1[0], list1[1])

n = len(list1)

for i in range(2,n):

if list1[i] > mx:

secondmax = mx

mx = list1[i]

elif list1[i] > secondmax and \

mx != list1[i]:

secondmax = list1[i]

elif mx == secondmax and \

secondmax != list1[i]:

secondmax = list1[i]

print("Second highest number is : ",\

str(secondmax))