'''

(1) write a program to create one array from another array.

'''

x= [343,55,63,2,2]

print("original array")

print(x)

y=[]

y[:] = x

print("New Array\n",y)

'''

(2) create a program to retrieve, display and update only a range of elements from an array using indexing and slicing in arrays.

'''

import numpy as np

array = np.array([43,55,22,3,533])

for x in array:

print(x)

array[0] = 500

print(array)

print(array[0:5:2])

*#note => range of elements word*

*'''*

*(3)=> write a program to understand various methods of array class mentioned: append, insert , remove , pop , index , tolist and count*

*'''*

*import array as arr*

*a = arr.array('i', [52,262,13,22,3,2,52,1])*

*print(a)*

*a.append(50)*

*print("array after append")*

*a.insert(1,633)*

*print("array after inserting 633 at 2nd position / 1st index\n",a)*

*a.remove(50)*

*print("remove 50 from array\n",a)*

*a.pop()*

*print("pop last element of array\n",a)*

*print("5th index of array",a[5])*

*print("Array to list=>",a.tolist())*

*print("Count of 52",a.count(52))*

*'''*

*(4)=> write a program to sort the array elemnts using bubble sort techniques.*

*'''*

*import array as a*

*def bubblesort(arr):*

*n = len(arr)*

*for i in range(n-1):*

*for j in range(0,n-i-1):*

*if arr[j] > arr[j+1]:*

*arr[j],arr[j+1] = arr[j+1],arr[j]*

*return arr*

*a= a.array('i',[53,6,2,2,26,6,263,1,2])*

*print(bubblesort(a))*

*'''*

*(5)=> create a program to search the position of an element in an array using index() method of array class.*

*'''*

*import array as np*

*a = np.array('i',[535,256,6,6,2,6,2,46,2])*

*pos = a.index(int(input("Enter Element from above list=>")))*

*print(pos)*

*'''*

*element= int(input("Enter the search element=>"))*

*try:*

*pos = a.index(element)*

*print(f"element {element} found at position {pos}")*

*except ValueError:*

*print(f" element {element} not found")*

*'''*

*'''*

*(6) => write a program to gnerate prime numbers with the help of a function to test prime or not.*

*'''*

*def checkprime():*

*num = int(input("Enter a number->"))*

*if num <= 1:*

*print(num, " is a not prime number")*

*return*

*c=0*

*for i in range(1,num+1):*

*if num % i == 0:*

*c += 1*

*if c == 2:*

*print(num," is a prime number")*

*else:*

*print(num, " is not a prime number")*

*checkprime()*

*'''*

*(7) => write a python program that remove any repeated items from a list so that each item appears at most once. for instance, the list [1,1,2,3,4,3,0,0] would become [1,2,3,4,0]*

*'''*

*list1 = [1,1,2,3,4,0,0]*

*list2= []*

*for i in list1:*

*if i not in list2:*

*list2.append(i)*

*'''*

*else:*

*print(i," value is repeating")*

*'''*

*print(list2)*

*'''*

*(8) write a program to pass list to a function and display it*

*'''*

*def display\_list(list1):*

*for i in list1:*

*print(i)*

*list1=[435,5,23,1,3]*

*display\_list(list1)*

*'''*

*(9)=> write a program to demostrate the use of Positional argument, keyword argument and default arguments*

*'''*

*'''*

*#Positonal Arguments*

*This type of argument structure means you must provide all values in the exact order expected by the function.*

*'''*

*def pos(x,y,z):*

*print(x,y,z)*

*pos("a","b","c")*

*#Keyword Argument*

*def kw(x,y,z):*

*print(x,y,z)*

*kw(z="c",y="e",x="o")*

*#Default argument*

*def da(x,y,z="c"):*

*print(x,y,z)*

*da("c","d")*

*da("a","b","d")*

*'''*

*(10)=> Write a program to show variable length argument and its use.*

*'''*

*def variable\_length(\*args):*

*for i in args:*

*print(i)*

*variable\_length([53,33,6,3,2])*

*def kwargs(\*\*kwargs):*

*for key,value in kwargs.items():*

*print("Key=>",key,"\nValue=>",value)*

*data = {"1":"abc","2":"xyz"}*

*kwargs(\*\*data)*