PYTHON ASSIGNMENT BOOK

MAKE A MOVE TO PYTHON

ASSIGNMENTS

TASK THREE: DATA STRUCTURES

Submitted By

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1. Create a list of the 10 elements of four different types of Data Type like int, string, complex and float.

```
x= [2,4,6,3.5,2j,5j,6.5,8,9,'Onna']
print (x)
```

2. Create a list of size 5 and execute the slicing structure.

```
x=[1,2,3,4,5]
print (x [1:4:2])
```

3. Write a program to get the sum and multiply of all the items in a given list.

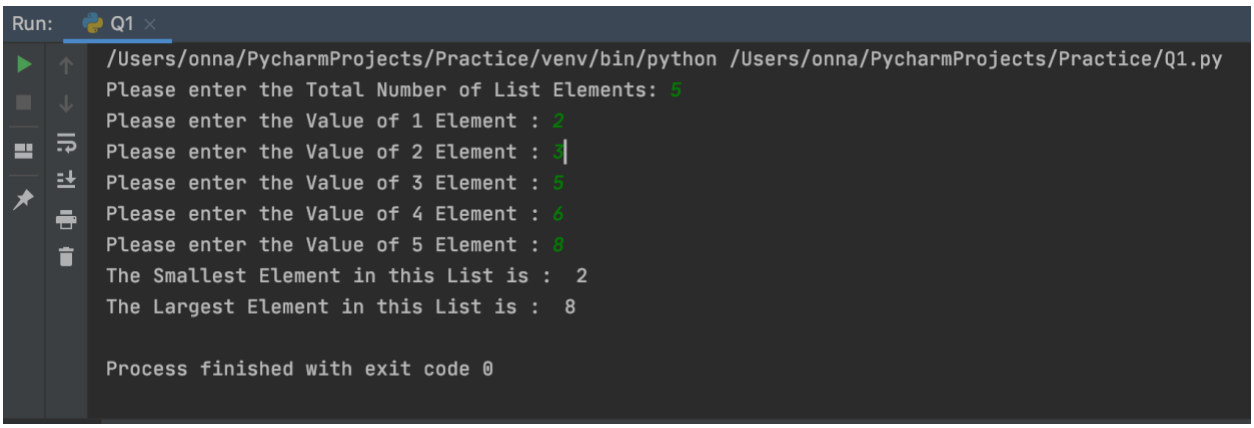
```
x= [5,10,15,20,25,30,35,40]
print(sum(x))

def multiply(numbers):
    total = 1
    for x in numbers:
        total *= x
    return total
print(multiply((5,10,15,20,25,30,35,40)))
```

4. Find the largest and smallest number from a given list.

```
NumList = []
Number = int(input("Please enter the Total Number of List Elements: "))
for i in range(1, Number + 1):
    value = int(input("Please enter the Value of %d Element : " %i))
    NumList.append(value)

print("The Smallest Element in this List is : ", min(NumList))
print("The Largest Element in this List is : ", max(NumList))
```



5. Create a new list which contains the specified numbers after removing the even numbers from a predefined list.

```
num = [5,10, 96, 25, 32, 20,45,8,63]
num = [x for x in num if x%2!=0]
print(num)
```

6. Create a list of first and last 5 elements where the values are square of numbers between 1 and 30 (both included).

```
def printValues():
  l = list()
  for i in range(1,30):
    l.append(i**2)
  print(l[:5])
  print(l[-5:])

printValues()
```

7. Write a program to replace the last element in a list with another list.

```
num1, num2 = [[1,3,5,7,9,10], [2,4,6,8]]
num1[-1:] = num2
print(num1)
```

8. Create a new dictionary by concatenating the following two dictionaries:

```
dic1={1:10, 2:20}
dic2={3:30, 4:40}
dic3 = {}
for d in (dic1, dic2): dic3.update(d)
print(dic3)
```

9. Create a dictionary that contains a number (between 1 and n) in the form(x,x*x).
Sample data (n=5)
Expected Output: {1:1,2:4,3:9,4:16,5:25}

```
n=int(input("Input a number "))
d = dict()
for x in range(1,n+1):
   d[x]=x*x
print(d)
```

10. Write a program which accepts a sequence of comma-separated numbers from console and generate a list and a tuple which contains every number. Suppose the following input is supplied to the program:

```
values = input("Input some comma separated numbers : ")
list = values.split(",")
tuple = tuple(list)
print('List : ',list)
print('Tuple : ',tuple)
```