Darshan UNIVERSITY
योग: कर्मसु कौशलम्

Python Programming - 2301CS404

Lab - 6

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Tuple

01) WAP to find sum of tuple elements.

In [1]:
```python
t1 = (1,2,3,4,5)
sum = 0
for i in t1:
    sum += i

print("Sum = ",sum)
```

Sum = 15

02) WAP to find Maximum and Minimum K elements in a given tuple.

In [6]:
```python
t1 = (1,2,3,4,5,6,7,8,9,10)
l = list(t1)
l.sort()
t1 = tuple(l)
k = int(input("Enter the Number : "))
print(f"{k} Minimum Numbers is : ")
for i in range(0,k):
        print(t1[i])

print(f"{k} Maximum Numbers is : ")
for i in range(-1,-k-1,-1):
        print(t1[i])
```

```
2 Minimum Numbers is :
1
2
2 Maximum Numbers is :
10
9
```

03) WAP to find tuples which have all elements divisible by K from a list of tuples.

```
In [10]:  def allAreDevisible(t,k):
              for i in t:
                  if (i % k != 0):
                      return False
              else:
                  return True


          t1 = (6,7,8,9,10)
          t2 = (2,4,6,8,10)
          t3 = (3,6,9)
          t4 = (4,8)

          l = [t1,t2,t3,t4]
          k = int(input("Enter the Number : "))
          for i in t:
              if( allAreDevisible(i,k)):
                  print(i)
```

```
(2, 4, 6, 8, 10)
(4, 8)
```

04) WAP to create a list of tuples from given list having number and its cube in each tuple.

```
In [16]:  l = [1,2,3,4,5]

          # First Way
          l1 = []
          for i in l:
              l1.append((i,i**3))
          print(l1)

          # Another Way
          l2 = [(i,i**3) for i in l]
          print(l2)
```

```
[(1, 1), (2, 8), (3, 27), (4, 64), (5, 125)]
[(1, 1), (2, 8), (3, 27), (4, 64), (5, 125)]
```

05) WAP to find tuples with all positive elements from the given list of tuples.

```
In [20]:  def allArePositive(t):
              for i in t:
                  if (i < 0):
                      return False
              else:
```

```
        return True

t1 = (-6,7,-8,9,10)
t2 = (2,4,6,8,10)
t3 = (3,6,-9)
t4 = (4,8)
l = [t1,t2,t3,t4]

for i in l:
    if(allArePositive(i)):
        print(i)
```

```
(2, 4, 6, 8, 10)
(4, 8)
```

06) WAP to add tuple to list and vice – versa.

In [23]:
```
t1 = (1,2,3)
t2 = (4,5,6,7,8)
t3 = (3,6,-9)
l = [t1,t2,t3]
print(l)

# vice-verasa
l1 = [1,2,3]
l2 = [4,5,6,7,8]
l3 = [3,6,-9]
t = (l1,l2,l3)
print(t)
```

```
[(1, 2, 3), (4, 5, 6, 7, 8), (3, 6, -9)]
([1, 2, 3], [4, 5, 6, 7, 8], [3, 6, -9])
```

07) WAP to remove tuples of length K.

In [24]:
```
t1 = (-6,7,-8,9,10)
t2 = (2,4,6,8,10)
t3 = (3,6,-9)
t4 = (4,8)
l = [t1,t2,t3,t4]
k = int(input("Enter the length : "))
for i in l:
    if(len(i) == k):
        l.remove(i)

print(l)
```

```
[(-6, 7, -8, 9, 10), (2, 4, 6, 8, 10), (4, 8)]
```

08) WAP to remove duplicates from tuple.

In [26]:
```
t = (1,2,3,1,2,4,5,6,2,3,5)
s = set(t)
t = tuple(s)
print(t)
```

```
(1, 2, 3, 4, 5, 6)
```

09) WAP to multiply adjacent elements of a tuple and print that resultant tuple.

In [37]:
```python
t = (1, 2, 3, 4, 5, 6)
l1 = []
l = list(t)
prev = l[0]
for i in range(1,len(l)):
    l1.append(l[i]*prev)
    prev = l[i]

t = tuple(l1)
print(t)
```

(2, 6, 12, 20, 30)

10) WAP to test if the given tuple is distinct or not.

In [43]:
```python
t1 = (1,2,3,4,5)
t2 = (1,2,3,4,5)

if (len(t1) != len(t2)):
    print("tuples is Not distinct.")

else:
    for i in range(0,len(t1)):
        if (t1[i] != t2[i]):
            print("tuples is Not distinct.")
            break
        else :
            print("tuples is distinct.")
```

tuples is distinct.