

```
#!/usr/bin/python3
```

```
times = 80
```

```
print("[1]:Creating a tuple, Method 1")
print("Empty tuple")
T = ()
print("T:", T)
print("Tuple with single element")
T = (1,)
print("T:", T)
print("Tuple can contain elements of any objects")
T = (1, 3.14, "Hello", [1,2,3], {'a':1, 'b':2, 'c':3}, (10,20,30))
print("T:", T)
print("Another syntax")
T = 1, 2, 3.14, [10,20,30]
print("T:", T)
print("-" * times)
```

```
print("[2]:Creating a tuple, Method 2")
T = tuple("Tuple")
print("T:", T)
print("-" * times)
```

```
print("[3]:Length of a tuple")
T = tuple('SPAM')
print("T:", T, "len(T):", len(T))
print("-" * times)
```

```
print("[4]:Concatenation of tuples")
T1 = (1, 2, 3)
T2 = ('a', 'b', 'c')
print("T1:", T1)
print("T2:", T2)
T = T1 + T2
print("T:", T)
print("-" * times)
```

```
print("[5]:Multiplication of tuple by a scalar")
T = (1, 2, 3)
print("T:", T)
T1 = T * 3
print("T1 after T1 = T * 3, T1:", T1)
print("-" * times)
```

```
print("[6]:Indexing a tuple")
T = tuple("string")
print("T:", T)
print("T[0]:", T[0])
print("T[1]:", T[1])
print("T[2]:", T[2])
print("T[3]:", T[3])
```

```
print ("T[4]:", T[4])
print ("T[5]:", T[5])
print ("Accessing tuple by for x in")
for x in T:
    print (x)
print ("Accessing tuple by index")
for i in range (len (T)):
    print ("T[" + i + "]:", T[i])
print ("- " * times)

print ("[7]:Slicing a tuple")
T = (0, 1, 2, 3, 4, 5, 6, 7, 8, 9)
print ("T:", T)
print ("T[0:4]:", T[0:4])
print ("T[:2]:", T[:2])
print ("T[1:2]:", T[1:2])
print ("T[2:9:3]:", T[2:9:3])
print ("- " * times)

print ("[8]:Converging tuple into list")
T = (1, 2, 3, 4, 5)
print ("T:", T)
L = list (T)
print ("After L=list (T), L:", L)
print ("- " * times)

print ("[9]:Sorting a tuple")
T = (5, 4, 3, 2, 1)
print ("Method 1:Convert to list and invoke sort on list")
print ("T:", T)
L = list (T)
print ("L:", L)
L.sort ()
print ("After L.sort (), L:", L)
print ("Method 2:Calling sorted function")
L = sorted (T)
print ("After L=sorted (T), L:", L, "type(L):", type (L))
print ("- " * times)

print ("[11]:Index of an existing data")
T = (5, 4, 2, 2, 5, 4, 6, 34, 76, 2)
print ("T:", T)
print ("34 in T:", 34 in T)
print ("345 in T:", 345 in T)
print ("T.index (5):", T.index (5))
print ("T.index (2):", T.index (2))
print ("T.index (2,2):", T.index (2,2))
print ("T.index (2,3):", T.index (2,3))
print ("T.index (2,4):", T.index (2,4))
print ("- " * times)

print ("[12]:Count method")
```

```
T = (5, 4, 2, 2, 5, 4, 6, 34, 76, 2)
print ("T:", T)
print ("T.count (5):", T.count (5))
print ("T.count (2):", T.count (2))
print ("T.count(34):", T.count (34))
print ("T.count (500):", T.count (500))
print ("- " * times)
```