III B.Tech.
Computer Science & Engineering

CSE304: PYTHON PROGRAMMING WITH WEB FRAMEWORKS

UNIT – I: Tuples

By
Mrs. S. KAMAKSHI, AP-III / CSE
School of Computing

Tuples

- Ordered collection of heterogeneous items
- Immutable
- Parentheses are used to delimit the tuples
- Eg.

  ()   - empty tuple
  (4,)   - one item tuple
  (4, 5, 7)   - tuple with 3 items
  ('dir', 89, True, (23, 64), [2, 5]) – tuple with heterogeneous items

Referring Tuple Items

- Flowers = ('Rose', 'Lilly', 'Jasmine', 'Lotus')
- T = (45, 60.9, (45, 'Raja'), ['Red', 'Blue', 'Yellow', 'White'])
- Flowers[0]:   'Rose'
- T[2][0]: 45
- T[3][2]: 'Yellow'
- Colors = ['Red', 'Blue', 'Yellow', 'White']
- T1 = (Flowers, Colors)
- T1[0][2]: 'Jasmine'
- T1[1][1]: 'Blue'
- Colors[1] = 'Black'

Working with Tuples

```
T=(1, 2, 3)
a, b, c = T          #unpacks T and makes position-wise assign
x=10
y=20
z=30
T1 = (x, y, z)       # place references to objects 10, 20, and 30
x=50                 # changes x to point to new object 50
print (T1)           # prints (10, 20, 30)
T2 = 4, 6, 10        # Parentheses are optional
print (T2)           # prints (4, 6, 10)
T2 += (7, 8)         # concatenation
print(T2)            # prints (4, 6, 10, 7, 8)
T2 *= 2              # repetition operation
print(T2)            # prints (4, 6, 10, 7, 8, 4, 6, 10, 7, 8)
```