ONE WEEK ONLINE SHORT TERM TRAINING PROGRAMME ON PYTHON PROGRAMMING

DR. SIVANTHI ADITANAR COLLEGE OF ENGINEERING

DEPARTMENT OF INFORMATION TECHNOLOGY

Python Lists:

The list is a most versatile datatype available in Python which can be written as a list of comma-separated values (items) between square brackets. Important thing about a list is that items in a list need not be of the same type. The elements in the list is mutable (ie) we can change the elements in the list.

List Slicing:

- Slice extracts elements, based on a start and stop.
- The slicing operator is COLON(:)
- Syntax: listname[start:end-1]

```
>>> t = [9, 41, 12, 3, 74, 15]

>>> t[1:3]

[41,12]

>>> t[ :4]

[9, 41, 12, 3]

>>> t[3: ]

[3, 74, 15]

>>> t[ : ]

[9, 41, 12, 3, 74, 15]
```

List Comprehension:

list comprehensions allow us to create new lists from lists.

Syntax : [expression for item in list]

Eg 1: [i*2 for i in [1,2,3,4]]

Output: [2,4,6,8]

Eg 2: [var**2 for var in range(1, 10)]

Output: [1, 4, 9, 16, 25, 36, 49, 64, 81]

Python Tuples:

A tuple is a collection of objects which ordered and immutable. Tuples are sequences, just like lists. The differences between tuples and lists are, the tuples cannot be changed unlike lists and tuples use parentheses, whereas lists use square brackets.

Modules:

Module is file consisting of related python functions as single file.

Module can define functions, classes and variables

Uses of Module:

Break down large programs into small manageable files

Reusability of Code

Types of Modules:

Two Types

1.Built-in Modules

Already Defined

2.User Defined Modules

Define our own Modules