**MODULE 7 DA – INTRODUCTION TO PYTHON.**

1. What are the types of applications?

Ans: web browser, database, word processor, graphic software etc.

1. What is programming?

Ans: Programming is a problem solving approach, set of instructions that system will do certain task to solve that problem.

1. What is Python?

Ans: python is high level, interpreted, object-oriented programming language. It contains high level built in data structure also supports modules and packages which encourage code reusability. Python is used in web development, game development, machine learning and data analytics.

1. How memory is managed in python?

Ans: memory Is managed by python memory manager. It consist of two parts

1. Stack memory: All the local variables, function call, method call , primitive datatypes are included in stack memory.
2. Private heap: All the global variable, non primitive datatypes are included in private heap.

Python has built in garbage collector it recycle the unused memory for private heap.

1. What is the purpose continuing statement in python?

Ans: The continue statement will skip the current iteration and continue to next iteration.

1. What are negative indexes and why are they used?

Ans: Negative indexes are the indices from backwards and they are used for manipulation of sequence like list, arrays, string etc.

1. What is List? How will you reverse a list?

Ans: List is collection of items can contains different data types. It is mutable and ordered data structured. List can be reverse with help of reverse method or by slicing.

1. How will you remove last object from a list?

Ans: By using pop method we can remove last object from the list. We can also remove last object by using remove and del.

For ex:

X = [1,2,3,4,5]

x.pop()

x.remove(5)

del x[-1]

1. Differentiate between append () and extend () methods.

Ans: Append method is used to add the single item to the end of the sequence and can be invoked using the dot notation. While extend method is used to add multiple item from an iterator to the end of the list.

1. How will you compare two lists?

Ans: By equality check list1 == list2

Identity check if list1 is list2

Membership check if all(elem in list2 for elem in list1) and all(elem in list1 for elem in list2)

1. What is tuple? Difference between list and tuple.

Ans: Tuple is collection of items and it is comma separated.

List is mutable data structures while tuple are immutable.

List has many built-in methods while tuple have less built-in methods compare to list.

List take more memory in comparison to tuple.

1. How many basic types of function available in python?

Ans: There are two types of function available in python:

Built in functions: These functions already defined in python like print, sum, max, min, zip etc.

User defined function: These are the functions that create by user to perform the task. They are defined by def as a keyword.

1. What is File function in python? What are keywords to create and write file.

Ans: File function is related to handling of files in python. The open function is a way to work with this file. Keywords to create and write the file is “w”.

1. Explain Exception handling? What is an Error in Python?

Ans: Error is a sign that problem is occurred that alter the flow of control. It comes with exception.

Exception handling is a mechanism to handle the runtime errors, maintain the normal flow of program.

Key concepts in exception handling.

Exceptions are errors that detected during execution. This can be caused by various reasons like divide by zero, file not found etc.

Try-except: The try block contains code that might throw an exception. The except block catches and handles the exception.

Finally: This block contains code that will run no matter whether an exception was thrown or not, typically used for cleanup actions.

Else: this block contains code that will run if no exceptions are thrown in the try block.

1. How many except statements can a try-except block have? Name Some built-in exception classes:

Ans: python can handle multiple except statements. This allows to handle many different types of exceptions.

Some common built in exceptions classes are Exception, Zero Division error, Value error, Type error, Index error, Key error, FileNotfounderror and Permission error.

1. When will the else part of try-except-else be executed?

Ans: Else part is executed when no exceptions is thrown in try block.

1. Can one block of except statements handle multiple exception?

Ans: yes

1. When is the finally block executed?

Ans: The finally is always executed no matter what exceptions thrown or not.

1. What happens when „1‟== 1 is executed?

Ans: it return the false since we can’t compare string to integer.