# types of statements:-

# (1) empty statement:-

the simplest statement is empty statement i.e,

statement which does nothing.in python an empty statement is pass statement in the flow of control.

pass

# (2)simple statement:-

any single excutable statement is a simple statement in python.for example, following is simple statement in python:

name = input(“your name”)

# (3)compound statement:-

a compound statement represents a group of statements executed as a unit. the compound statement of python are written in a specific pattern as shown below:

<compound statement header>

<indented body containing multiple simple

and /or compound statement>

statement in flow of control:-

## (1)sequence (2)selection (3)iteration(looping)

# Program Logic Development Tool A program has following development stages:

## 1.Identification of the problem 2.Analysis of problem 3.Writing Algorithm or Designing Flowchart 4.Writing Code 5.Testing and Debugging 6.Implementation 7.Maintenance

# Algorithm

• A process or set of rules to be followed in problemsolving operations is an algorithm.

For ex Algorithm to add two numbers is as under

## 1. Input First Number 2. Input Second Number 3. Add First Number with Second Number and store into Third number. 4. Display Third number

# Flowcharts

• A flowchart is a graphical representation of an algorithm,

workflow or process. The flowchart shows the steps as boxes of

various kinds, and their order by connecting the boxes with

arrows.

# if Statement:-

• In Python, if statement is used to select statement

for processing. If execution of a statement is to be

done on the basis of a condition, if statement is to be used. Its syntax is-

if <condition>:

statement(s)

# if-else Statement

• If out of two statements, it is required to select one

statement for processing on the basis of a condition,

if-else statement is to be used. Its syntax is-

if <condition>:

statement(s) when condition is true

else:

statement(s) when condition is false

# if-elif Statements:-

• If out of multiple statements, it is required to select

one statement for processing on the basis of a

condition, if-elif statement is to be used. Its syntax

is-

if <condition1>:

statement(s) when condition1 is true

elif <condition2>:

statement(s) when condition2 is true

elif <condition3>:

statement(s) when condition3 is true

else:

# Loop/ Repetition/ Iteration:-

These control structures are used for repeated

execution of statement(s) on the basis of a condition.

Loop has 3 main components1. Start (initialization of loop)

2. Step (moving forward in loop )

3. Stop (ending of loop)

# Python has following loops:

– for loop

– while loop

# range () Function

• In Python, an important function is range( ). its

syntax isrange ( <lower limit>,<upper limit>)

If we write — range (0,5 )

Then a list will be created with the values [0,1,2,3,4] i.e. from

lower limit to the value one less than ending limit.

range (0,10,2) will have the list [0,2,4,6,8].

range (5,0,-1) will have the list [5,4,3,2,1].

# in and not in operator:-

• in operator3 in [1,2,3,4] will return True.

5 in [1,2,3,4] will return False.

– not in operator5 not in [1,2,3,4] will return True.

Table of a number by For loop:

Syntax of For Loop

for <var> in <sequence>:

<statements to repeat>

num=int(input(“enter a number”)

for y in range(1,11):

print(num,”x”,y,”=”,num\*y)

# Table of a number by while loop:-

Syntax of While Loop

While <LogicalExpression>:

<loop body with increment

or decrement>

n=int(input(“enter a number”)

c=1

while c<11:

print(n,”x”,c,”=”,n\*c)

c+=1

# Jump Statements:- break Statement

while <test-condition>:

statement1

if <condition>:

break

statement2

statement3

Statement4

statement5

# Jump Statements

continue Statement

while <test-condition>:

statement1

if <condition>:

continue

statement2

statement3

Statement4

statement5