Experiment – 1: Introduction to Python

Aim: Demonstrate and implement the basic syntax, flow control and looping statements.

Theory:
The basic syntax of python involves the following programming concepts:

- Identifiers and Keywords: Keywords are predefined words that have special meaning while identifiers are names given to variables, classes etc.
- Variables: Variable is a container to hold data
- Data Types: Datatypes specify the type of data that can be saved in the variables.
- Operators: Operators are special symbols that perform operations on variables and values.
- Input/Output Statements: The input can be taken using the input() function whereas the output can be displayed using print() function.

The flow control statements are used to handle the order of execution of the program scripts.

- if statement: The if statement evaluates the condition and if the condition is true then the body of the statement is executed.
- if and else statement: The if statement evaluates the condition and if the condition is true then the body of the if statement is executed and if the condition is false then the body of the else statement is executed.
- elif statement: The elif statement is used when a choice is to be made between two alternative choices.
- Continue statement: The break statement is used to terminate the loop immediately when it is encountered.
- Break statement: The continue statement is used to skip the current iteration of the loop and the control flow of the program goes to the next iteration.
- Pass statement: The pass statement is a null statement which can be used as a placeholder for future code.

The looping statements are used to repeatedly execute a block of code while iterating through an iterable object in python.

- While loop: The while loop is used to run a block code until a certain condition is met.
- do and while loop: The do while loop is used to check condition after executing the statement such that the code block is executed atleast once.
- for loop: The for loop is used to iterate a block of code over any sequences such as list, tuple, string, etc.

Conclusion:

Task for submission:
(Write comments for every statement of the program)

1. Write a python program which takes string as input and prints whether it is palindrome.
2. Input a number and print all prime numbers up to that number.
3. Write a program to take string S as an input and replace all vowels by *. Also print the modified string.
4. Write a program to take an integer N as an input and display the pattern.(e.g.N=5)

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