Day 21 Class of DevOps

Agenda – Learn Python with simple program topics regarding .format, math module, % Operator, If and elsif, and else statement, while looping, greater than and less than condition, List usage in the program.

1. Learn Python with a simple program

To print the variables we need to print() function to get an output

For Example: print(“Hello World”)

Output: Hello World

If the user needs to enter the unknown value we need to write a statement with the input() function

Example: Value = input(“Enter the value:”)

print(“Given value is :”,value)

Output:

Enter the value: “Here we can enter any value it would be printed as output”

Enter the value: Hello

Hello

If we give any data type before the input function we need to provide a related data type input to the output if you provide a different output unrelated to the data type it gets a type error

Example:

Value = int(input(“Enter the value”))

print(“Given value is :”,Value)

Note: Here we need to provide input as an int value because before input we mention int. Int is a datatype for integer value while you provide the input value it only prefers the integer value like I,2,3,4,5, etc.

Output:

Enter the value: 23

23

1. .format() method

.format method is used to format strings. It allows to construct strings by embedding variables and expressions within string literals

* Curly braces {} are the placeholder within the string for .format
* Values are passed to the ‘.format()’ method and are interested in place of the placeholders

Example:

num1 = float(input("Enter first number \n"))

num2 = float(input("Enter second number \n"))

sum = num1+num2

print("The sum of {0} and {1} is {2}".format(num1, num2, sum))

.format placeholders

Output:

Enter first number:

2

Enter second number:

3

The sum of 2 and 3 is 5

In .format method have different types of placeholders, arguments, formatting

1. math module:

What is a module in Python?

A module in Python is a file containing Python definitions and statements. Modules allow you to organize and reuse code by grouping related functions classes, and variables for modules we can import from the package or we create the module in Python

Math module in Python provides access to mathematical functions and constants. This module allows you to perform mathematical operations, such as Special Functions, Angle conversion, trigonometric calculation, logarithms, square roots, Basic mathematical functions and much more.

How to use the module in Python programming?

We need to import the module which we want and is suitable for the program

Here I use the math module so I need to import math module so need to use the import statement

Example:

import math

print(math.tan(float(input("Enter the value: "))))

Output:

Enter the value: 2

-2.185039863261519

1. Operators:

Operators in Python are special symbols or keywords that are used to perform operations on variables and values. Python supports several types of operators.

Modulus Operator is used for :

* You can use the modulus operator to check if a number is even or odd.
* Determine if one number is a multiple of another.
* Use modulus to cycle through a range of values.

We have different types of operators to categorize for a given operation but here using the modulus operation to know about Even or Odd

num = int(input("Enter a Number: "))

if num % 2 == 0:

print("Given number is Even")

else:

print("Given number is Odd")

Output:

Enter a Number: 3

Given number is Odd

1. If , elsif, and else statement:

* IF statement – The if statement is a conditional statement in Python used to determine whether a block of code will be executed. If the program finds the condition defined in the if statement true, it will execute the code block inside the if statement
* elsif statement: The elsif statement is used to execute both the true part and the false part of a given condition. If the condition is true, the if block code is executed and if the condition is false, the else block code is executed
* else statement: The else statement is used in conditional statements (if statements), and decides what to do if the condition is false.

Example:

#Using code to know the largest number

num1 = float(input("Enter first number: \n"))

num2 = float(input("Enter second number: \n"))

num3 = float(input("Enter third number: \n"))

if (num1 >=num2) and (num1 >= num3):

print("the largest number is \n", num1)

elif (num2 >= num1) and (num2 >=num3):

print("the largest number is \n", num2)

else:

print ("the largest number is \n", num3)

1. What is a loop statement?

Loop statements execute a sequence of statements multiple times. The LOOP and END LOOP keywords enclose the statements. In Python is a control flow statement as long as the condition is satisfied.

1. How many types are in loop statements and how to use loop statements

There are two types of loop statements in Python

* + 1. For loop
    2. While loop
* For Loops in Python are used to iterate over a data structure or sequence of elements, such as a list, string, or dictionary. The loop iterates through each item in the sequence and executes the block of code for each item until the sequence is exhausted.

fruits = ["apple", "banana", "cherry"]

for fruit in fruits:

print(fruit)

Output:

apple

banana

cherry

* While Loops in Python are used to execute a set of statements as long as a condition is true. The condition is evaluated before executing the loop body. If the condition is true, the loop body will be executed. Once the condition becomes false, the loop stops.