**PYTHON ASSIGNMENT**

**ASSIGNMENT – 01**

**Q. Python is a interpreted language but it is also contradictory .Why?**

* An interpreter takes the code you write an executes (runs) whatever actions you specified, creates the variables you created, and does a lot of behind-the-scenes work to ensure it runs smoothly or tells you about errors.
* Python is called an interpreted language because it goes through an interpreter, which turns code you write into the language understood by your computer’s processor. Later on when you work on a project on your own computer, you will download and use the Python interpreter to be able to write Python code and execute it on your own!
* An interpreter executes the statements of code “one-by-one” whereas the compiler executes the code entirely and lists all possible errors at a time.
* That’s why python shows only one error message even though your code has multiple errors. This will help you to clear errors easily and it definitely will increase the execution speed.

**ASSIGNMENT – 02**

**Q. Evaluate 3+4\*\*6-9\*10/2 .**

def isOperand(c):

return (c >= '0' and c <= '9');

def value(c):

return ord(c) - ord('0');

def evaluate(exp):

len1 = len(exp);

if (len1 == 0):

return -1;

res = value(exp[0]);

for i in range(1,len1,2):

opr = exp[i];

opd = exp[i + 1];

if (isOperand(opd)==False):

return -1;

if (opr == '+'):

res += int(value(opd));

if (opr == '\*\*'):

res \*\*= int(value(opd));

elif (opr == '-'):

res -= int(value(opd));

elif (opr == '\*'):

res \*= int(value(opd));

elif (opr == '/'):

res /= int(value(opd));

else:

return res;

expr1 = "3+4\*\*6-9\*10/2";

res = evaluate(expr1);

print(expr1,"is Invalid") if (res == -1) else print("Value of",expr1,"is",res);

**OUTPUT:**

4054

**Q. Let’s say I have some string”Hello this side Regex”. Find out the count of the total vowels.**

def vowel\_count(str):

count = 0

vowel = set("aeiouAEIOU")

for alphabet in str:

if alphabet in vowel:

count = count + 1

print("No. of vowels :", count)

str = "Hello this side Regex"

vowel\_count(str)

**OUTPUT:**

No. of vowels : 7

**Q. Program to find out the area of triangle.**

a = 3

b = 4

c = 5

s = (a + b + c) / 2

area = (s\*(s-a)\*(s-b)\*(s-c)) \*\* 0.5

print('The area of the triangle is %0.2f' %area)

**OUTPUT:**

The area of the triangle is 6.00