**Python Assignment 1**

1. Create following variables in Python and print the type of each variable and explain if you face any errors
   1. a = 23
   2. var1 = 12.9
   3. var2 = ‘hello’
   4. var3 = “I’m Good”
   5. 5 = ‘python’

Ans : Option e is false : cannot assign a literal to a number

1. Write a program to take following user inputs using input() function, print it’s type to stdout and explain if you face any errors
   1. 256
   2. 2 + 3j
   3. Hello World
   4. ‘Hello World’

Ans : All are string types

1. Repeat problem (2) using raw\_input() function

Ans : There is no raw\_input() in python 3.x hence used eval(input()) function .

a->int, b ->complex,[ c -> error], d->string

1. Write a program which takes 100, 256, ‘Hello’, ‘World’ inputs using input() function and print the following:
   1. Output of 100 + 256 using print statement
   2. Print Hello World using print statement (There is a space between Hello and World)
   3. Print HelloWorld using print statement (There is no space between Hello and World)
   4. Concatenate 100 and ‘Hello’ and explain the output
2. Repeat problem (4) using raw\_input() function

For both 4th and 5th questions, code :

p = input("a")

q = input("b")

r = input("c")

s = input("d")

print(eval(p)+eval(q))

print(r+" "+s)

print(r+s)

print(p+r)

1. Write a program which accepts user input and then prints whether it is even or odd integer

Ans :

p = eval(input('a'))

if (p%2)==0 :

print ("Even")

else:

print("Odd")

1. Write a program which takes user input and then does following:
   1. If value is greater than 0 then print ‘positive’
   2. If value is less than 0 then print ‘negative’
   3. If value is equal to 0 then print ‘zero’
   4. Else print ‘Error’

Ans :

a = eval(input('p'))

if a>0 :

print ("Positive")

elif a<0:

print("Negative")

elif a==0:

print ("Zero")

else:

print("Error")

1. Write a program to do the following:
   1. Create an empty string and print it to stdout
   2. Create a string variable and pass ‘pseudonymous’ using input()
   3. Print the length of value passed in (b)
   4. Iterate through the string created in (b) and print character and its corresponding index number onto stdout (like p, index is 0 – s, index is 1 etc.,)

Ans:

empty\_str = []

print (str)

var = input('string')

print(len(var))

i = 0

for x in var:

print("index is : "+str(i)+"-"+x )

i = i+1

1. What is slicing and membership in strings. Explain with examples

**Slicing:**

A python slice extracts elements , based on a start and stop. We take slices on many types in Python. We specify an optional first index, an optional last index, and an optional step.

**Example:**

values = [100,200,300,400,500 ]

# Get elements from second index to third index.

slice = values [1;3]

print(slice)

**output:** [200, 300]

**Member in string:**

The **membership operators**in Python are used to test whether a value is found within a sequence.

**Exmaple:**

#1/usr/bin/python

a = 10

b = 20

list = [1, 2, 3, 4, 5 ];

if ( a in list ):

print "Line 1 - a is available in the given list"

else:

print "Line 1 - a is not available in the given list"

if ( b not in list ):

print "Line 2 - b is not available in the given list"

else:

print "Line 2 - b is available in the given list"

a = 2

if ( a in list ):

print "Line 3 - a is available in the given list"

else:

print "Line 3 - a is not available in the given list"

**output:**

Line 1 - a is not available in the given list

Line 2 - b is not available in the given list

Line 3 - a is available in the given list