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COMPASS

Date : 19/06/20

ASSIGNMENT-2

1. What are the different data types in python ? Explain

A) There are various datatypes in python. The following are :

a) int : Integer can be of any length, it is only limited by the memory available. All the positive numbers come under integer.

```
Ex :  a = 2
      print (a, type (a))
O/P :
      2  <class 'int'>
```

b) float : A floating point number is accurate upto to 15 decimal places. It consists of point between the numbers.

```
Ex :  a = 12.3
      print (a, type (a))
O/P :
      12.3  <class 'float'>
```

c) String : All the characters within the apostrophes(' ' or " ").

```
Ex :  a = 'Hello'
      print (a, type (a))
O/P :
      'Hello'  <class 'str'>
```

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2. Briefly explain history of Python.

A) Python is a widely used general-purpose, high-level programming language. It was initially designed by **Guido van Rossum** in 1991 and developed by Python Software Foundation. It was mainly development for emphasis on code readability.

The inspiration for the name came from BBC's TV Show - **'Monty Python's Flying Circus'**, as he was a big fan of the TV show and also he wanted a short unique and slightly mysterious name for his invention and hence he named it Python!

3. Explain all the operators in Python.

A) **Python consists of many operators. The following are:**

a) **Addition (+):**

Adds values on the either of the operator.

```
Ex: a=5                    o/p: 15
    b=10
    print (a+b)
```

b) **Substraction(-):**

Subtracts right hand operand from left hand operand.

```
Ex: a=50                   o/p: 35
    b=15
    print (a-b)
```

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c) **Multiplication (*)**: Multiplies values on the either side of the operator.

Ex: a = 10
b = 5
print (a * b)
O/P 50

d) **Modulus (%)**: Divides left hand operator by right hand ~~operato~~ operand and returns remainder

Ex: a = 50
b = 4
print (a % b)
O/P: 2

e) **Division (/)**: Divides left hand operand ~~and returns~~ by right hand operand.

Ex: a = 8
b = 4
print (a / b)
O/P: 2

f) **Exponent (**)**: Performs exponential (power) calculations on operators

Ex
a, b = 2, 3
print (a ** b)
O/P: 8

e) **Floor division (//)**: The division of operands where the results is the quotient in which the digits after the decimal point is removed. But if the no. is negative, it is floored.

Ex: a = 50
b = 3
print (a // b)
O/P: 16

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4. Explain the features of Python.

A) Python provides lots of features that are listed below:

a) Easy to learn and use
b) Expressive language.
c) Interpreted language
d) cross-platform language
e) Free and open source
f) Object-oriented language
g) Extensible
h) Large Standard Library
i) GUI Programming support
j) Integrated

5. Justify why python is interactive interpreted language.

A) Python is an interpreted object-oriented programming language. By interpreted it means that each time a program is run the interpreter checks through the code for errors and then interprets the instructions into machine-readable byte code.