Python Training: Week 1 Day 3 (27th March,2020)  
NUMBERS AND VARIABLES  
  
  
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**Q1. Create three variables in a single line and assign different values to them and make sure their data types are different. Like one is int, another one is float and the last one is a string.  
🡪** a,b,c = 2,3.8,”March”  
  
**Q2. Create a variable of value type complex and swap it with another variable whose value is an integer**.  
**🡪** u=10+20j  
 v=5  
 u,v=v,u  
  
**Q3. Swap two numbers using the third variable as result name and do the same task without using any third variable**.   
**🡪** Using third variable  
 a,b = 2,5  
 c = a  
 a = b

b = c **🡪** Without using third variable  
 a,b = 2,5  
 a,b = b,a  
  
**Q4. Write a program to print the value given by the user by using both Python 2.x and Python 3.x Version.  
🡪** Using Python 2.x  
 x = raw\_input(“Enter Login ID: ”)Enter Login ID: 1234  
 print x  
  
🡪 Using Python 3.x  
 x = input(“Enter Login ID: ”)  
 Enter Login ID: 1234  
 Print(x)

**Q5. Write a program to complete the task given below:  
-Ask the user to enter any 2 numbers in between 1-10 and add both of them to another variable call z.  
-Use z for adding 30 into it and print the final result by using variable result.**  
**🡪** Using Python 3.x  
 a = eval(input(“Enter any number between 1 to 10: ”))  
 Enter any number between 1 to 10: 5  
 b = eval(input(“Enter another number between 1 to 10: ”))  
 Enter another number between 1 to 10: 7  
 z = a + b  
 z = z +30  
 result = z  
 print(result)  
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**Q6. Write a program to check the data type of the entered values. HINT: Printed output should say - The input value data type is: int/float/string/etc**

* Using Python 3.x  
  Case1: Using type() function  
  print(“Create three variables with different value types”)  
  Create three variables with different value types  
  a,b,c = 12,2.34,”xyz”  
  d,e,f = type(a) , type(b) , type(c)  
  print(“The input data types are ” + str(d)+ “, “ + str(e)+ ‘, ’ + str(f) + “ respectively”)  
    
  **OUTPUT: “The input data types are <class’int’>, <class’float’>, <class’str’> respectively”**  
  Case 2 : Using eval() function   
  a = input(“Enter Your Name: ”))  
  Enter Your Name: abc  
  c = type(a)  
    
  b = eval(input(“Enter Your Age: ”))  
  Enter Your Age: 22.4  
  d = type(b)  
    
  print(“The input value data types are ” + str(c) + “, ” + str(d) + “ respectively” )  
  **OUTPUT: “The input data types are <class ‘str’>, <class ‘float’> respectively”**

**Q7.** **Create Variable using CamelCase, LadderCase and UPPERCASE. (Refer:** [**https://capitalizemytitle.com/camel-case/**](https://capitalizemytitle.com/camel-case/)**) - Variable Conventions to write  
🡪**  Camelcase = 10  
 lowerCamelcase = 20  
 UPPERCASE = 30  
  
**Q8. If one data type value is assigned to ‘a’ variable and then a different data type value is assigned to ‘a’ again. Will it change the value. If Yes then Why?  
🡪** Yes variable “a” will have its value changed. The variable acts as a reference to memory address where value is stored. We can have multiple variables whose value is exactly same act as pointers to the one location where value is stored but it doesn’t work if the value/type of value being assigned to a variable are different as no two values (either of the same/different type) can share a memory location.