**Day 2 – VARIABLEs & DATA Types**

**Variables:**

A variable is initially declared to have a specific data type, and any value assigned to it during its lifetime must always have that type, a variable may be assigned a value of one type and then later re-assigned a value of a different type

Example: number\_of\_wheels = 2

Print(number\_of\_wheels)

Variables can store data of different types which has the capability to do different things.

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| **Text Type:** | str |
| **Numeric Types:** | int, float, complex |
| **Sequence Types:** | list, tuple, range |
| **Mapping Type:** | dict |
| **Set Types:** | set, frozenset |
| **Boolean Type:** | bool |
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| Integers: Example:  >>print(123123123123123123123123123123123123123123123123 + 1)  >>123123123123123123123123123123123123123123123124  Floating-point numbers:  Example: >> pie = 3.14  Complex numbers:  Complex numbers are specified as <real part>+<imaginary part>j. For Example:5+10j  Strings:  Strings are sequences of character data. The string type in Python is called str  Example: print(‘Atlas’)  Boolean: Objects of Boolean type may have one of two values True or False Assigning Values to Variables Python variables do not need explicit declaration to reserve memory space. The declaration happens automatically when you assign a value to a variable. The equal sign (=) is used to assign values to variables.  #!/usr/bin/python  number = 5 # An integer assignment  pie = 3.14 # A floating point  Player\_name = "Dhoni" # A string  print number  print pie  print Player\_name Multiple Assignment Python allows you to assign a single value to several variables simultaneously. For example −  **Assigning to a same value** -> a = b = c = 1  You can also assign multiple objects to multiple variables. For example −  a,b,c = 18,24,"Kohli"  **Exercise:**  1)Create three variables (a,b,c) to same value of any integer & do the following   1. Divide a by 10 2. Multiply b by 50 3. Add c value by 60   2)Create a String variable of 5 characters and replace the 3rd character with G  3)Create two values (a,b) of int,float data type & convert the vise versa, Hint : convert a from int to float datatype & b from float to int datatype |  |