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int :

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=>'int' is one of the pre-defined class <class,'int'> and it is treated as data type.

=>The purpose of 'int' data type is that to store Integer Data (Or) Integral Values (or) whole numbers ( Values without decimal places )

Example:- stno empno htno adcno...etc

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Example: Output

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>>> a=100

>>> print(a)----------------------------------100

>>> type(a)------------------------------<class 'int'>

>>> b=123

>>> print(b)------------------------------123

>>> type(b)--------------------------<class 'int'>

>>>print( type(a), type(b) )-------<class 'int'> <class 'int'>

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=>with 'int' data type, we can also store Binary , Octal and Hexa Decimal data also.

=>In other words, we have 4 types Number Systems which are fully supported in Python Language.They are

1. Decimal Number System (default number)

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=>Digits---->0,1,2,3,4,5,6,7,8,9 (or) (0-9)

=>Base--->10

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2. Binary Number System

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=>Digits---> 0, 1

=>Base ---> 2

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3. Octal Number System

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=>Digits-->0,1,2,3,4,5,6,7

=>Base---> 8

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4. Hexa Decimal Number System

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=>Digits---> 0,1,2,3,4,5,6,7,8,9

A(10) B(11) C(12) D(13) E(14) F(15)

=>Base--- 16

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=>Storing Binary Literals in Python with int data type:

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=>To store the binary literals / values in python environment, The binary values must be preceded with 0b (or) 0B

=>Syntax:

varname=0b binary data

(OR)

varname=0B binary Data

Example:

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>>> a=111

>>> print(a)----------------------111

>>> a=0b111

>>> print(a)--------------------7

>>> print(type(a))-----------------<class 'int'>

>>> b=0B1111

>>> print(b)---------------------15

>>> print(type(b))------------------<class 'int'>

>>> a=0b10104--------------SyntaxError: invalid digit '4' in binary literal

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=>Storing Octal Literals in Python with int data type:

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=>To store the Octal literals / values in python environment, The Octal values must be preceded with 0o (or) 0O

=>Syntax:

varname=0o Octal data

(OR)

varname=0O Octal Data

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Examples:

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>>> a=0o22

>>> print(a)------18

>>> a=0o8---------SyntaxError: invalid digit '8' in octal literal

>>> print(a)-------

a=0o234

>>> print(a)------156

>>> type(a)---------<class 'int'>

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=>Storing Hexa Decimal Literals in Python with int data type:

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=>To store the Hexa Decimal literals / values in python environment, The Hexa Decimal values must be preceded with 0x (or) 0X

=>Syntax:

varname=0x Hexa Decimal data

(OR)

varname=0X Hexa Decimal Data

Examples:

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>>> x=0xAB

>>> print(x)----------171

>>> type(x)----------<class 'int'>

>>> a=0x1A

>>> print(a)

26

>>> type(a)-------<class 'int'>

>>> a=0xBEE

>>> print(a)---------------3054

>>> a=0xFACE

>>> print(a)----------64206

>>> type(a)---------<class 'int'>

>>> a=0xACER------->SyntaxError: invalid syntax