========== int ========== =>'int' is one of pre-defined class and it is treated as Fundamental data type. =>The purpose of int data type is that " To Store Whole Numbers / Integral values / Integer Values (Numbers without Decimal Places) ". ---------- Examples: ---------- ---------- Python Instructions Outputs ---------- ---------- ---------- >>> a=100 >>> print(a)----------100 >>> type(a)---------- >>> sno=123 >>> print(sno,type(sno))----------123 ---------- >>> a=10 >>> b=20 >>> c=a+b >>> print(a,type(a))----------10 >>> print(b,type(b))----------20 >>> print(c,type(c))----------30 ---------- =>with int data type, we can also store Different Number System Values.In Industry, we have 4 types of Number Systems. They are 1) Decimal Number System 2) Binary Number System 3) Octal Number System 4) Hexa Decimal Number System ---------- 1) Decimal Number System ---------- =>It is one of the default number system where Human beings can understand. =>This Number System contains following Digits. Digits: 0 1 2 3 4 5 6 7 8 9 ------Total - (10) Base : 10 =>Base 10 Literals are called Decial Number System Values ---------- 2) Binary Number System ---------- =>Binary Number System Understandable by OS and Processor During Program Execution =>This Number System contains following Digits. Digits: 0 1 ------Total - (2) Base : 2 =>Base 2 Literals are called Binary Number System Values. =>In Python Programming, to store Binary Data, Binary Data Must be preceded a letter 0b or 0B =>Syntax: varname=0b Binary Data (OR) varname=0B Binary Data =>Even we store Binary Data in Python Programming Environment, Internally PVM Display binary data in the form Decimal Number System. Examples: ---------- >>> a=0b1101 >>> print(a,type(a))----------13 >>> bin(13)----------'0b1101' ---------- >>> a=0B1111 >>> print(a, type(a))----------15 >>> bin(15)----------'0b1111' ---------- >>> a=0B1010101011111000 >>> print(a, type(a))----------43768 >>> bin(43768)----------'0b1010101011111000' ---------- >>> print(0b1010)----------10 >>> print(0b1010+0B1111)----------25 ---------- 3) Octal Number System ---------- =>Octal Number System Understandable by Micro Processor Programming / Assembly Language Programming (8086). =>This Number System contains following Digits. Digits: 0 1 2 3 4 5 6 6 7 ------Total - (8) Base : 8 =>Base 8 Literals are called Octa Number System Values. =>In Python Programming, to store Octa Data, Octa Data Must be preceded a letter 0o or 0O =>Syntax: varname=0o Octa Data (OR) varname=0O Octa Data =>Even we store Octa Data in Python Programming Environment, Internally PVM Display Octa data in the form Decimal Number System. Examples: ---------- >>> a=0o34 >>> print(a,type(a))----------28 >>> oct(28)----------'0o34' >>> a=0o19----------SyntaxError: invalid digit '9' in octal literal >>> a=0o127 >>> print(a,type(a))---------87 >>> oct(87)----------'0o127' >>> oct(0b1010)----------'0o12' >>> ========== 4) Hexa Decimal Number System ---------- =>Hexa Decimal Number System Used in development of OSes =>This Number System contains following Digits. Digits: 0 1 2 3 4 5 6 6 7 8 9 A(10) B(11) C(12) D(13) E(14) F(15)------Total--- (16) Base : 16 =>Base 16 Literals are called Hexa Decimal Number System Values. =>In Python Programming, to store Hexa Decimal Data, Hexa Decimal Data Must be preceded a letter 0x or 0X =>Syntax: varname=0x Hexa Decimal Data (OR) varname=0X Hexa Decimal Data =>Even we store Hexa Decimal Data in Python Programming Environment, Internally PVM Display Hexa Decimal Data in the form Decimal Number System. ---------- Examples: ---------- >>> a=0xAC >>> print(a,type(a))----------172 >>> hex(172)----------'0xac' >>> a=0XAF >>> print(a,type(a))----------175 >>> hex(172)----------'0xac' >>> a=0XACCER----------SyntaxError: invalid hexadecimal literal >>> a=0xBEE >>>

print(a,type(a))----------3054 >>> a=0xBEER----------SyntaxError: invalid hexadecimal literal ==========x==========