# Find outputs (Home work)

a = "Rama Rao"

print(a) #Rama Rao

print(type(a)) # class string

print(id(a)) #some address value

b = 'Hyd'

print(b) #Hyd

c = '''Hyd is green city.

Hyd is hitec city.

Hyd is beautiful city.'''

print(c) #Hyd is green city.

Hyd is hitec city.

Hyd is beautiful city

# Index demo program (Home work)

a = 'Hyd'

print(How to print 'H' of object 'a') #a[0]

print(How to print 'y' of object 'a') #a[1]

print(How to print 'd' of object 'a') #a[2]

print(a[3]) # invalid index

print(How to print 'd' of object 'a') #

print(How to print 'y' of object 'a')

print(How to print 'H' of object 'a')

print(a[-4])

print(a[0] == a[-3])

a[2] = 'c'

print(25[0])

print('25'[0])

print(True[1])

print('True'[1])

# Find outputs (Home work)

a = 'Hyd'

print(a \* 3) #HydHydHyd

print(a \* 2) #HydHyd

print(a \* 1) #Hyd

print(a \* 0) #(empty string)

print(a \* -1) # (empty string)

print(25 \* 3) #75

print('25' \* 3) #252525

print('25' \* 4.0) #invalid

print(3 \* 'Hyd') #HydHydHyd

print('25' \* True) #25

# Find outputs (Home work)

a = 'Hyd'

print(a , id(a)) # Hyd some number

a = a \* 3

print(a , id(a)) #HydHydHyd new number

# len() function (Home work)

print(len('Hyd')) #3

print(len('Rama Rao')) #8

print(len('9247')) #4

print(len('')) #0

print(len(' ')) #1

print(len(689)) #invalid

# Find outputs (Home work)

a = """"Hyd"""

print(a) #invalid

print(len(a)) #3

print(a[0]) #H

print("""Hyd"""")

b = """""Hyd"""

print(b)

print(len(b))

# Find outputs

a = 'Sankar Dayal Sarma'

print(a[7 : 12]) #Dayal

print(a[7 : ]) # Dayal Sarma

print(a[ : 6]) # Sankar

print(a[ : ]) # a[ 0 : 18 : 1] ---> string from indexes 0 to 17 in steps of 1 i.e. Sankar<space>Dayal<space>Sarma

print(a[: : ]) #Sankar Dayal Sarma

print(a[1 : 10 : 2]) #aka a a

print(a[0 : : 2]) #SnkrDylsrm

print(a[1 : : 2]) #aai aa aa

print(a[-5 : -1]) #sarm

print(a[::-1]) #amras lay a rakas

print(a[-1:-5:-1]) #amra

print(a[ : : -2]) # a[-1 : -19 : -2] ---> string from indexes -1 to -18 in steps of -2 i.e. arSlyDrka

print(a[3 : -3]) #kar Dayal Sa

print(a[2 : -5]) #nkar Dayal Sa

print(a[-1:-5]) #empty

print(a[3 : 3]) #empty

# Find outputs (Home work)

a = 'A'

print(a[1]) #invalid

print(a[1:]) #empty

# int() function demo program

print(int(10.8)) # Converts float object 10.8 to int #object 10

print(int(True)) # Converts bool object True to int #object 1

print(int(False))#

print(int('25')) #25

print(int('0075')) #75

print(int(0B11010)) #26

print(0B11010) #26

print(int(0O6247)) #3239

print(0O6247) #3239

print(int(0XA7B9)) #42937

print(0XA7B9) #42937

print(int(3 + 4j)) #invalid

print(int('25.4')) #invalid

print(int('Ten')) #invalid

'''

int() function

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1) What does int(x) do ? ---> Converts object 'x' to integer

# float() function demo program

print(float(25)) # Converts int object 25 to float object 25.0

print(float(True)) # Converts bool object True to float object 1.0

print(float(False)) #0.0

print(float('92')) #92.0

print(float('36.4')) #36.4

print(float('0075')) #75.0

print(float(0B1010101)) #85.0

print(float(0O6247))

print(float(0XA7B9))

print(float(3 + 4j))

print(float('Ten'))

'''

float() function

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1) What does float(x) do ? ---> Converts object 'x' to float

# complex() function demo program

print(complex(3 , 4)) #(3+4j)

print(complex(0 , 4)) #4j

print(complex(3)) #(3+0j)

print(complex(3.8 , 4.6)) (3.8 +4.6j)

print(complex(3.8))

print(complex(3 , 4.5))

print(complex(True , False)) # (1+oj)

print(complex(True))#(1+oj)

print(complex(False)) #0j

print(complex(True , 4))

print(complex('3'))

print(complex('3.8'))

print(complex(3 , '4')) #invalid

print(complex('3' , 4))

print(complex('3' , '4'))

print(complex('Ten'))

# bool() function demo program

print(bool(0)) # False

print(bool(10)) # True : 10 is non-zero

print(bool(-25)) #True

print(bool(0.0)) #False

print(bool(0.1)) #true

print(bool(0 + 0j)) #False

print(bool(10 + 20j)) #True

print(bool(-15j)) #true

print(bool('False')) #True

print(bool('')) #true

print(bool('Hyd')) #True

print(bool(' ')) #true

print(bool('True')) #True

'''

bool() function

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1) What does bool(x) do ? ---> Converts object 'x' to True / False

2) Is 0 True (or) False ? ---> False

What about non-zero ? ---> True

3) Is ''(i.e. Empty string) True (or) False ? ---> False

What about non-empty string ? ---> True

4) When is x + yj treated as False ? ---> When both 'x' and 'y' are zeroes

When is x + yj treated as True ? ---> When either 'x' is non-zero (or) 'y' is non-zero

'''

# str() function demo program

print(str(25)) # Converts 25 to '25'

print(str(10.8)) #’10.8’

print(str(3 + 4j)) #(3+4j)

print(str(True)) #True

print(str(False)) #False

print(str(None)) #None

'''

What does str(x) do ? ---> Converts object 'x' to string

'''

# oct() function demo program

print(oct(195)) #0o303

print(oct(0B10101110010)) # 0o1352

print(oct(0xA7B9)) #0o24771

'''

oct() function

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1) What does oct(x) do ? ---> Converts object 'x' to octal number where

'x' can be binary / decimal / hexa-decimal number

# hex() function demo program

print(hex(25)) #0x19

print(hex(0B10101111010111)) #0x2bd7

print(hex(0O6247)) #0xCAF

'''

hex() function

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1) What does hex(x) do ? ---> Converts object 'x' to hexa-decimal number where

'x' can be binary / decimal / octal number