This is a test line

This is a test ###line

In [1]:
```
t = 12 #t is a variable
```

In [2]:
```
t
```

Out[2]: 12

In [3]:
```
dat #since dat is not assigned anything
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-3-adcfbb3277ac> in <module>
----> 1 dat #since dat is not assigned anything

NameError: name 'dat' is not defined
```

This is a test line

hello

In [5]:
```
3+3
```

Out[5]: 6

Date Types

1. Boolean (True or False)
2. Texts
3. Numeric

True represents 1 and False represents 0

In [6]:
```
# Check if True = 1
True == 1 # Comparison Operator
```

Out[6]: True

In [7]:
```
True + True
```

Out[7]: 2

In [8]:
```
# Example 1

s ="abc123cba"
```

In [9]:
```
s
```

Out[9]: 'abc123cba'

In [10]:
```
type(s)#type of the dat or var used
```

Out[10]: str

In [13]:
```
s = 223
```

In [14]:
```
type(s)
```

Out[14]: int

In [15]:
```
s = "machine learning is fun"
```

In [16]:
```
# Replace function
# Replace a with 02

s.replace("a", "f")
```

Out[16]: 'mfchine lefrning is fun'

In [24]:
```
s.replace("a", "f",2)
```

Out[24]: 'mfchine lefrning is fun'

In [19]:
```
c = abc123cba
```

In [20]:
```
string = "Machine Learning"
```

In [21]:
```
# Basis Functions
string.upper()
```

Out[21]: 'MACHINE LEARNING'

In [22]:
```
# Lower Case
string.lower()
```

Out[22]: 'machine learning'

In [23]:
```
string.upper()
string.capitalize() # First word is capital
```

Out[23]: 'Machine learning'

In [25]:
```
print(string.upper())
```

```
MACHINE LEARNING
```

In [26]:
```
print(string.upper())
print(string.capitalize())
```

```
MACHINE LEARNING
Machine learning
```

Question

Take Input from user and store it in two variables. Take the sum and print the output

In [30]:
```
#Input Command

input("enter the first number")
```

```
enter the first number343.56
```

Out[30]: '343.56'

In [29]:
```
a = int(input("enter the first number")) #Type-casting # int is used so as to store the input value as interger
```

```
enter the first number34
```

In [31]:
```
b = int(input("enter the second number"))
```

```
enter the second number56
```

In [32]:
```
c = a+b
```

In [33]:
```
c
```

Out[33]: 90

In [34]:
```
x = int(input("enter the 1st value"))
y = int(input("enter the 2nd value"))
z = x+y
n = x-y
m = x/y
print(z,m,n)
```

```
enter the 1st value4
enter the 2nd value5
9 0.8 -1
```

In python counting starts from 0

In [36]:
```
string
```

Out[36]: 'Machine Learning'

In [35]:
```
string[1]
```

Out[35]: 'a'

In [38]:
```
string = "Machine Learning is Fun"
```

In [39]:
```
len(string)
```

Out[39]: 23

In [ ]:
```
string[1]
```

In [40]:
```
string[0:6]
```

Out[40]: 'Machin'

In [41]:
```
string[0:6]
```

Out[41]: 'Machin'

In [42]:
```
string[0:]
```

Out[42]: 'Machine Learning is Fun'

In [43]:
```
string[2:4]
```

Out[43]: 'ch'

In [44]:
```
string[:4]
```

Out[44]: 'Mach'

In [45]:
```
string[:0]
```

Out[45]: ''

In [46]:
```
string[-1] # help print the last letter/location value
```

Out[46]: 'n'

In [47]:
```
string[:-1]
```

Out[47]: 'Machine Learning is Fu'

In [48]:
```
len(string)
```

Out[48]: 23

In [51]:
```
first_word = "Machine"
second_word = "Learning"
first_word + ' ' +second_word    # concatenation of two words
# here concat means joining of two words
```

Out[51]: 'Machine Learning'

Multiple variables

In [52]:
```
a1 = a2 = a3 = a4 = 4
```

Question : the height and weight of a person should be inputed by the user

you will have to calculate BMI bmi = weight/height**2

In [53]:
```
h = float(input("enter the height"))
w = float(input("enter the weight"))
bmi = w/(h**2)
print("The BmI of the person is " ,bmi)
```

```
enter the height2.4
enter the weight34.6
The BmI of the person is  6.006944444444445
```

If condition

In [54]:
```
a = 20
b = 39

if(b>a) :        #logical test
```

```
  File "<ipython-input-54-b095a3a6deab>", line 4
    if(b>a) :        #logical test
                                  ^
SyntaxError: unexpected EOF while parsing
```

In [55]:
```
a = 20
b = 39

if(b>a) :        #logical test
    print("b is greater")
```

```
b is greater
```

In [56]:
```
a = 40
b = 39

if(b>a) :        #logical test
    print("b is greater")
else:                           # else is in line with if statement
    print("a is greater")
```

```
a is greater
```

In [57]:
```
a = 12                # find which one is greater, incomplete for now
b = 24
c = 32

if(a<b) :
    if(a>c) :
        print("a is greater")
    if(a<c) :
        print("c is greater")
```

```
c is greater
```

In [ ]:
```
# AND operator

# 1 and 1 = 1
# 1 and 0 = 0
# 0 and 1 = 0
# 0 and 0 = 0
```

In [58]:
```
a= 50
b = 56
c = 40
```

In [59]:
```
if a < b and b >c:
    print("hello you are right!")

else :
    print("true")
```

```
hello you are right!
```

In [60]:
```
if a < b and b < c:
    print("hello you are right!")

else :
    print("you are wrong!")
```

```
you are wrong!
```

*** Thanks for Learning **