import math function

In [1]:
```
x=sqrt(25)  #sqrt is build function
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[1], line 1
----> 1 x=sqrt(25)

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

In [4]:
```
import math  #math is module
x=math.sqrt(25)
x
```

Out[4]: 5.0

In [5]:
```
x1=math.sqrt(15)
x1
```

Out[5]: 3.872983346207417

In [9]:
```
x=math.sqrt(625)
x
```

Out[9]: 25.0

In [17]:
```
print(math.sqrt(524))
```

```
22.891046284519195
```

In [10]:
```
print(math.floor(6.89)) #floor - minimum or least value
```

```
6
```

In [11]:
```
print(math.ceil(3.89))  # ceil - maximum or highest value
```

```
4
```

In [12]:
```
print(math.pow(3,2))
```

```
9.0
```

In [13]:
```
print(math.pi) # these ae constant
```

```
3.141592653589793
```

In [14]:
```
print(math.e) # e - epsilon values
```

```
2.718281828459045
```

In [15]:
```
m.sqrt(25)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[15], line 1
----> 1 m.sqrt(25)

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

In [18]:
```
import math as m  # we need to use aliasing, instead of math we are suing as m
```

In [19]:
```
m.sqrt(25)
```

Out[19]:
```
5.0
```

In [21]:
```
from math import sqrt,pow # math has many function if we want to import specific function then use import for functions
print(pow(2,3))
print(m.sqrt(9))
```

```
8.0
3.0
```

In [23]:
```
from math import sqrt,pow # math has many function if we want to import specific function then use import for functions
print(pow(2,3))
print(m.sqrt(9))
print(math.floor(6.89))
print(math.ceil(3.89))
# we are using the above code for code optimization because in the above steps we are importing and writing the code in one li
```

```
8.0
3.0
6
4
```

In [31]:
```
from math import sqrt,pow

print(pow(2,3))
print(sqrt(10))
print(floor(2.3))
print(ceil(2.3))
```

```
8.0
3.1622776601683795
2
3
```

In [27]:
```
# we got the above error because floor and cceil functions are not called or defined
# if we for got the function then we can use import *
```

In [29]:
```
from math import *

print(pow(2,3))
print(sqrt(10))
print(floor(2.3))
print(ceil(2.3))
```

```
8.0
3.1622776601683795
2
3
```

In [33]:
```
round(pow(2,3))
```

Out[33]: 8

input functions in python

In [34]:
```
x=input()
x
```

Out[34]: '78'

In [35]:
```
x=input()
y=input()
z=x+y
print(z) # console is waitng fo ruser to enter input

# by default it is taking as a string, so we need to do type casting
```

```
8020
```

In [37]:
```
type(x)
```

Out[37]: str

In [39]:
```
x1=input('enter 1st number') #whenever you vworks in input function it always give you string
x2=input('enter 2st number') # it wont understand as arithmetic operator
z=x1+x2
print(z)
```

```
34
```

In [40]:
```
x1=input('user_name')
y1=input('password')
z1=x1+y1
print(z1)
```

```
rajeshwelcome
```

In [41]:
```
print(type(x1))
print(type(x2))
```

```
<class 'str'>
<class 'str'>
```

In [42]:
```
x1=input('enter 1st number')
a1=int(x1)
x2=input('enter 2st number')
b1=int(x2)
z=a1+b1
print(z)
```

```
6
```

In [44]:
```
x1=int(input('enter 1st number'))
x2=int(input('enter 2st number'))
z=x1+x2
print(z)
```

```
100
```

lets take input from the user in char format,but we dont have char format in python

In [45]:
```
st=input('enter a string')
print(st)
```

```
hello
```

In [46]:
```
print(st[0])
```

```
h
```

In [47]:
```
print(st[0:2])
```

```
he
```

In [48]:
```
print(st[2])
print(st[-1])
```

```
l
o
```

st=input('enter a string')[0] print(st)

In [50]:
```
st=input('enter a string')[2:]
print(st)
```

```
jesh
```

In [51]:
```
st=input('enter a string')[1:3]
print(st)
```

```
yt
```

entering the expression

In [52]:
```
result=input('enter an expression')
print(result)
```

```
2+3-5
```

In [53]:
```
result=int(input('enter an expression'))
print(result)
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
Cell In[53], line 1
----> 1 result=int(input('enter an expression'))
      2 print(result)

ValueError: invalid literal for int() with base 10: '2+6-5'
```

EVAL function using input

In [54]:
```
result=eval(input('enter an expression'))
print(result)
```

```
373
```

In [ ]:
```

```