In [1]:

```
# Python Program to Find the Square Root

# Note: Change this value for a different result

num = 8

num_sqrt = num ** 0.5

print('The Square root of %0.3f is %0.3f' %(num, num_sqrt))
```

```
The Square root of 8.000 is 2.828
```

In [2]:

```
# Python Program to Find the Square Root

# Note: Change this value for a different result

num = float(input('Enter a number:'))

num_sqrt = num ** 0.5

print('The Square root of %0.3f is %0.3f' %(num, num_sqrt))
```

```
Enter a number:49
The Square root of 49.000 is 7.000
```

In [3]:

```
# Find square root of real or complex numbers
# Importing the complex math module

import cmath

num = 1+2j

num_sqrt = cmath.sqrt(num)

print('The Square root of {0} is {1:0.3f}+{2:0.3f}j'.format(num ,num_sqrt.real,num_sqrt.i
```

```
The Square root of (1+2j) is 1.272+0.786j
```

In [4]:

```
# Find square root of real or complex numbers
# Importing the complex math module

import cmath

num = 1+2j

num_sqrt = cmath.sqrt(num)

print('The Square root of {0} is {1}'.format(num ,num_sqrt))
```

```
The Square root of (1+2j) is (1.272019649514069+0.7861513777574233j)
```

In [5]:

```
# Find square root of real or complex numbers
# Importing the complex math module

import cmath

num = 1+2j

num_sqrt = cmath.sqrt(num)

uare root of %0.2f is %0.2f' %(num ,num_sqrt))
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-5-376c8744e56a> in <module>
      8 num_sqrt = cmath.sqrt(num)
      9 
---> 10 print('The Square root of %0.2f is %0.2f' %(num ,num_sqrt))

TypeError: can't convert complex to float
```

In [6]:

```
import math

math.sqrt(16)
```

Out[6]:

```
4.0
```

In [7]:

```
# Python3 program to demonstrate the
# sqrt() method

# import the math module
import math

# print the square root of  0
print(math.sqrt(0))

# print the square root of 4
print(math.sqrt(4))

# print the square root of 3.5
print(math.sqrt(3.5))
```

```
0.0
2.0
1.8708286933869707
```

In [8]:

```
# Python3 program to demonstrate the error in
# sqrt() method

# import the math module
import math

# print the error when x<0
print(math.sqrt(-1))
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-8-e43fa3178688> in <module>
      6 
      7 # print the error when x<0
----> 8 print(math.sqrt(-1))

ValueError: math domain error
```

In [9]:

```
# Using the pow() function
import math
num = float(input(" Enter a number: "))
sqRoot = math.pow(num, 0.5)
print("The square root of a given number {0} = {1}".format(num, sqRoot))
```

```
 Enter a number: 49
The square root of a given number 49.0 = 7.0
```

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In [10]:

```
# Using the exponent operator to calculate the square root in Python

def sqRoot(n):

    if n < 0:
        return
    else:
        return n**0.5
        print(sqRoot(36))
```

In [11]:

```
# Using the sqrt() function to calculate the square root in Python
import math
num = int(input("Enter a number:"))
sqRoot = math.sqrt(num)
print (f"The square root of {num} is " ,sqRoot)
```

```
Enter a number:81
The square root of 81 is  9.0
```

In [12]:

```
# Using the cmath module to calculate the square root of real or complex numbers in Pythor

import math

num = eval(input("Enter a number:"))

num_sqRoot = cmath.sqrt(num)

print(“The square root of {0} is {1:0.3f}+{2:0.3f}j”.format(num, num_sqRoot.real, num_sqRc
```

```
  File "<ipython-input-12-77b94f1744a8>", line 9
    print(“The square root of {0} is {1:0.3f}+{2:0.3f}j”.format(num, num_sqRoot.real, num_
sqRoot.imag))
             ^
SyntaxError: invalid character in identifier
```

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