```
5
```

```
5
```

```
import keyword
keyword.kwlist
```

```
['False',
 'None',
 'True',
 'and',
 'as',
 'assert',
 'async',
 'await',
 'break',
 'class',
 'continue',
 'def',
 'del',
 'elif',
 'else',
 'except',
 'finally',
 'for',
 'from',
 'global',
 'if',
 'import',
 'in',
 'is',
 'lambda',
 'nonlocal',
 'not',
 'or',
 'pass',
 'raise',
 'return',
 'try',
 'while',
 'with',
 'yield']
```

```
len(keyword.kwlist)
```

```
35
```

```
a=10
a
```

```
10
```

```
type(a)
```

```
int
```

```
a=2e2
a
```

```
200.0
```

```
type(a)
```

```
float
```

```
a=True
b=False
```

```
a+b
```

```
1
```

```
a-b
```

```
1
```

```
a*b
```

```
0
```

```
a/b
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
<ipython-input-12-aae42d317509> in <cell line: 0>()
----> 1 a/b

ZeroDivisionError: division by zero
```

Next steps: Explain error

```
type(a)
```

```
bool
```

```
c=10+2j
```

```
type(c)
```

```
complex
```

```
c.real
```

```
10.0
```

```
c.imag
```

```
2.0
```

```
d=5+5j
```

```
c+d
```

```
(15+7j)
```

```
c-d
```

```
(5-3j)
```

```
c*d
```

```
(40+60j)
```

```
c/d
```

```
(1.2-0.8j)
```

```
s='Hello'
s
```

```
'Hello'
```

```
s='''hi,
hello world
'''
s
```

```
'hi,\nhello world\n'
```

```
int(2.3)
```

```
2
```

```
int(23.222222)
```

```
23
```

```
int(5+6j)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-23-0e0416630bb5> in <cell line: 0>()
----> 1 int(5+6j)

TypeError: int() argument must be a string, a bytes-like object or a real number, not 'complex'
```

Next steps: Explain error

```
int('hi')
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-60-af01c7eabe7b> in <cell line: 0>()
----> 1 int('hi')

ValueError: invalid literal for int() with base 10: 'hi'
```

Next steps: Explain error

```
int("10")
```

```
10
```

```
float(False)
```

```
0.0
```

```
float(6+5j)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-63-f9e6bae6f287> in <cell line: 0>()
----> 1 float(6+5j)

TypeError: float() argument must be a string or a real number, not 'complex'
```

Next steps: Explain error

```
float('hi')
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-64-4db454aaf92e> in <cell line: 0>()
----> 1 float('hi')

ValueError: could not convert string to float: 'hi'
```

Next steps: Explain error

```
float('10')
```

```
10.0
```

```
print(bool(9))
print(bool(9.9))
print(bool('9'))
print(bool(9 + 9j))
```

```
print(bool(_))
print(bool())
```

```
True
True
True
True
True
False
```

```
str(2)
```

```
'2'
```

```
str(2.2)
```

```
'2.2'
```

```
str(6+5j)
```

```
'(6+5j)'
```

```
str(False)
```

```
'False'
```

Conditional statements in python

```
if True:
  print("Hello")
```

```
Hello
```

```
if False:
  print("Hello")
```

```
if True:
  print('hello')
print('world')
```

```
hello
world
```

```
x=10
y=x%2
if y==0:
  print('yes')
```

```
yes
```

```
x = 5
r = x % 2

if r == 0:
    print('Even number')
print('odd number')
```

```
odd number
```

```
x = 19
r = x % 2

if r == 0:
    print('Even number')

if r != 0:
    print('odd number')
```

```
odd number
```

```
x = 4
r = x % 2

if r == 0:
    print('Even number')
    if x>5:
        print('greater number')

else:
    print('Odd Number')
```

```
Even number
```

```
x = 9

if x == 1:
    print('one')
elif x == 2:
    print('Two')
elif x == 3:
    print('Three')
elif x == 4:
    print('four')

else:
    print('number not found')
```

```
number not found
```

```
i = 1

while i<=5:
    print('data science')
    j = 1
    while j<=4:
        print('technology')
        j = j + 1

    i = i + 1
    print()
```

```
data science
technology
technology
technology
technology

data science
technology
technology
technology
technology

data science
technology
technology
technology
technology

data science
technology
technology
technology
technology

data science
technology
technology
technology
technology
```

```
i = 1

while i <= 2 :
    j = 0
    while  j <= 2 :
        print(i*j, end=" ")
```

```
            j += 1
        print()
        i += 1
```

```
0 1 2
0 2 4
```

```
name = 'Shyamili'

for i in name:
    print(i)
```

```
S
h
y
a
m
i
l
i
```

```
for i in [2, 3, 7.8, 'hi']:
    print(i)
```

```
2
3
7.8
hi
```

```
for i in range(1,51):

    if i%5==0 :
        print(i)
```

```
5
10
15
20
25
30
35
40
45
50
```

```
for i in range(1,51):

    if i%5!=0 :
        print(i)
```

```
1
2
3
4
6
7
8
9
11
12
13
14
16
17
18
19
21
22
23
24
26
27
28
29
31
32
33
34
```

```
36
37
38
39
41
42
43
44
46
47
48
49
```

```
for i in range(1,5):
    i=i+1
    print('# # # # ')
```

```
 # # # #
 # # # #
 # # # #
 # # # #
```

```
for j in range(4):
    print('#', end=" ")

for j in range(4):
    print(' #', end=" ")
```

```
 # # # #  #  #  #  #
```

```
for j in range(4):
    print('#', end="  ")

print()

for j in range(4):
    print('#', end="  ")

print()

for j in range(4):
    print('#', end="  ")

print()

for j in range(4):
    print('#', end="  ")
```

```
 #  #  #  #
 #  #  #  #
 #  #  #  #
 #  #  #  #
```

```
for i in range(4):
    for j in range(i+1):
        print('#', end = " ")
    print()
```

```
 #
 # #
 # # #
 # # # #
```

```
for i in range(1,5):
  print('#'*i)
```

```
 #
 ##
 ###
 ####
```

```
for i in range(1,5):

    for j in range(4):
        if i>j:
            print("#",end=" ")
```

```
    print()
```

```
#
# #
# # #
# # # #
```

```
for i in range(4):
    for j in range(i):
        print('#', end="  ")
    print()
```

```

#
#  #
#  #  #
```

```
for i in range(4):
    for j in range(4-i):
        print('#', end="  ")
    print()
```

```
#  #  #  #
#  #  #
#  #
#
```

```
nums = [12,14,18,21,25,20]

for num in nums:
    if num % 5 == 0:
        print(num)
```

```
25
20
```

```
nums = [12,14,18,21,20,25]

for num in nums:
    if num % 5 == 0:
        print(num)
        break
```

```
20
```

```
nums = [7,14,18,21,23,27]

for num in nums:
    if num % 5 == 0:
        print(num)
        break
    else:
        print('Number Not Found')
```

```
Number Not Found
Number Not Found
Number Not Found
Number Not Found
Number Not Found
Number Not Found
```

```
nums = [7,14,18,21,23,27]

for num in nums:
    if num % 5 == 0:
        print(num)
        break
else:
        print('Number Not Found')
```

```
Number Not Found
```

```
from array import *
arr = array('i',[])
```

```
n = int(input('Enter the length of the array'))

for i in range(5):
    x = int(input('Enter the next value'))
    arr.append(x)
print(arr)
```

```
Enter the length of the array5
Enter the next value5
Enter the next value5
Enter the next value5
Enter the next value5
Enter the next value4
array('i', [5, 5, 5, 5, 4])
```

```
from array import *
arr = array('i',[])

n = int(input('Enter the length of the array'))

for i in range(5):
    x = int(input('Enter the next value'))
    arr.append(x)
print(arr)
```

```
Enter the length of the array6
Enter the next value1
Enter the next value2
Enter the next value3
Enter the next value4
Enter the next value5
array('i', [1, 2, 3, 4, 5])
```

```
5
```