number system

In [2]:
```
25
```

Out[2]: 25

In [4]:
```
bin(25)
```

Out[4]: '0b11001'

In [6]:
```
0b11001
```

Out[6]: 25

In [8]:
```
int(0b11001)
```

Out[8]: 25

In [10]:
```
bin(35)
```

Out[10]: '0b100011'

In [12]:
```
int(0b100011)
```

Out[12]: 35

In [14]:
```
bin(20)
```

Out[14]: '0b10100'

In [16]:
```
int(0b100011)
```

Out[16]: 35

In [18]:
```
bin(20)
```

Out[18]: '0b10100'

In [20]:
```
int(0b100011)
```

Out[20]: 35

In [22]:
```
bin(20)
```

Out[22]: '0b10100'

In [24]:
```
int(0b10100)
```

Out[24]: 20

In [26]:
```
0b1111
```

Out[26]: 15

In [28]:
```
oct(15)
```

Out[28]: '0o17'

In [30]:
```
hex(9)
```

Out[30]: '0x9'

In [32]:
```
hex(10)
```

Out[32]: '0xa'

In [34]:
```
0xa
```

Out[34]: 10

In [36]:
```
hex(25)
```

Out[36]: '0x19'

In [38]:
```
0x19
```

Out[38]: 25

In [40]:
```
0x15
```

Out[40]: 21

swap variable

In [61]:
```
a=5
b=6
```

In [63]:
```
a=b
b=a
```

In [65]:
```
a,b=b,a
```

In [67]:
```
print(a)
print(b)
```

```
6
6
```

In [69]:
```
a1=7
b1=8
```

In [71]:
```
temp=a1
a1=b1
b1=temp
```

In [73]:
```
print(a1)
print(b1)
```

```
8
7
```

In [75]:
```
a2=5
b2=6
```

In [77]:
```
a2=a2+b2
b2=a2-b2
a2=a2-b2
```

In [ ]:
```
print(a2)
print(b2)
```

In [79]:
```
print(0b101)
print(0b110)
```

```
5
6
```

In [81]:
```
print(bin(11))
print(0b1011)
```

```
0b1011
11
```

In [83]:
```
a2=a2^b2
b2=a2^b2
a2=a2^b2
```

In [85]:
```
print(a2)
print(b2)
```

```
5
6
```

In [87]:
```
print(a2)
print(b2)
```

```
5
6
```

In [89]:
```
a2,b2=b2,a2
```

In [91]:
```
print(a2)
print(b2)
```

```
6
5
```

bitwise operator

In [93]:
```
print(bin(12))
print(bin(13))
```

```
0b1100
0b1101
```

In [95]:
```
~45
```

Out[95]: -46

In [97]:
```
~12
```

Out[97]: -13

In [99]:
```
~6
```

Out[99]: -7

In [101…
```
~-6
```

Out[101… 5

In [103…
```
~-1
```

Out[103… 0

In [2]:
```
~10
```

Out[2]: -11

In [6]:
```
12&13
```

Out[6]: 12

In [105…
```
1&1
```

Out[105… 1

In [8]:
```
1&0
```

Out[8]: 0

In [10]:
```
1|0
```

Out[10]: 1

In [107…
```
12|13
```

Out[107… 13

In [21]:
```
print(bin(35))
print(bin(40))
```

```
0b100011
0b101000
```

In [23]:
```
35&40
```

Out[23]: 32

In [25]:
```
35|40
```

Out[25]: 43

In [27]:
```
35^40
```

Out[27]: 11

In [109…
```
12^13
```

Out[109… 1

In [111…
```
25^30
```

Out[111… 7

In [113…
```
bin(25)
```

Out[113… '0b11001'

In [ ]:
```
bin(30)
```

In [115…
```
int(0b000111)
```

Out[115… 7

In [117…
```
20<<4
```

Out[117… 320

In [31]:
```
10<<1
```

Out[31]: 20

In [119…
```
10>>2
```

Out[119… 2

In [121…
```
bin(20)
```

Out[121… '0b10100'

In [123…
```
20>>4
```

Out[123… 1

In [125…
```
x=sqrt(15)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[125], line 1
----> 1 x=sqrt(15)

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

In [127…
```
import math
```

In [129…
```
x=math.sqrt(25)
x
```

Out[129… 5.0

In [131…
```
x1=math.sqrt(15)
x1
```

Out[131… 3.872983346207417

In [133…
```
print(math.floor(2.9))
```

2

In [135…
```
print(math.ceil(2.9))
```

3

In [137…
```
print(math.pow(3,2))
```

9.0

In [139…
```
print(math.pi)
```

3.141592653589793

In [141…
```
print(math.e)
```

2.718281828459045

In [143…
```
import math as m
m.sqrt(10)
```

Out[143… 3.1622776601683795

In [145…
```
from math import sqrt,pow
pow(2,3)
```

Out[145… 8.0

In [160…
```
m.floor(7.8)
```

Out[160… 7

In [162…
```
round(pow(2,3))
```

Out[162… 8

In [166…
```
from math import *
```

In [168…
```
print(pow(9,2))
```

81.0

In [170…
```
print(floor(8.9))
```

8

user input function

In [173…
```
x=input()
y=input()
```

```
z=x+y
print(z)
```

```
34
```

In [175…
```
x1=input('enter the 1 st number')
y1=input('input the 2 nd number')
z1=x1+y1
print(z1)
```

```
68
```

In [177…
```
type(x1)
type(y1)
```

Out[177… str

In [189…
```
x1=input('input the 1 st number')
a1=int(x1)
y1=input('enter the 2 nd number')
b1=int(y1)
b=a1+b1
print(b)
```

```
17
```

In [191…
```
x2=int(input('enter the 1st number'))
y2=int(input('enter the 2nd number'))
z2=x2+y2
z2
```

Out[191… 18

In [197…
```
ch=input('enter a char')
```

In [199…
```
print(ch[0])
```

```
h
```

In [201…
```
print(ch[1])
```

```
e
```

In [203…
```
print(ch[-1])
```

```
o
```

In [205…
```
ch=input('entr a char')[0]
print(ch)
```

```
9
```

In [207…
```
ch=input('enter a char')[1:3]
print(ch)
```

```
el
```

In [211…
```
ch=input('enter a char')
print(ch)
```

```
hello
```

eval

In [216…
```
result=eval(input('enter an expr'))
print(result)
```

```
14
```

In [218…
```
a=eval(input('enter an expr'))
print(a)
```

```
139
```

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: