Good Morning

In [5]:
```
print('welcome')
print('good morning')
```

```
welcome
good morning
```

Operators:

Arithmetic operators

Assignment operators

Comparison operators

Logical operators

Identity operators

Membership operators

Bitwise operators

Arithmetic operators

+ , -, , /, %, *, //

In [9]:
```
a = 2
b = 3
print(a//b)
```

```
0
```

```
# Assignment operators
```

= , += , -=

In [10]:
```
a = 10
b = 20
a +=20 # a = a+20
print(a)
```

```
30
```

Compaison operators

In [16]:
```
a = 0
b = 10
print(a>=b)
```

```
False
```

Logical operators

In [18]:
```
# AND OR NOT
a = 10
b = 20
print((a==20 and b == 20))
```

```
False
```

In [21]:
```
print((a==20 or b == 30))
```

```
False
```

In [22]:
```
print(not(a==10))
```

```
False
```

Identity operators

In [26]:
```
# is , is not
a = 7
b = 7
print(a is not b)
```

```
False
```

Membership operators

In [30]:
```
# in , not in
print(5 not in [1,2,3,4,5])
```

```
False
```

Bitwise operators

In [31]:
```
# 1 = 00000001
# 2 = 00000010
# &,|,^,~,<<,>>
a = 10
b = 8
print(a&b)
# 10 = 1010
# 8  = 1000
# &  = 1000
# |  = 1010
# ^  = 0010
```

```
8
```

In [32]:
```
print(a|b)
```

```
10
```

In [33]:
```
print(a^b)
```

```
2
```

In [34]:
```
a = 8
print(~a)
# 00001000
# 11110111
# 00001000
#        1
# 00001001
```

```
-9
```

8 = 00001000 -8 = 11110111

```
    +       1
     11111000
```

In [91]:
```
# <<(left shift)
a = 255
print(a<<2)
# 16 = 00010000
# 16<<2 = 01000000
# 255 = 011111111
# 255 << 2 = 1111111100
512+256+128+64+32+16+8+4
```

```
1020
```

Out[91]:
```
1020
```

In [37]:
```
# 7      = 00000111
# 7 << 2 = 00011100
```

In [38]:
```
# >>(right shift)
a = 7
print(a>>2)
```

```
1
```

In [39]:
```
# 7 = 00000111
# 7>>2 = 00000001
```

In [40]:
```
7 / 2
```

Out[40]:
```
3.5
```

In [41]:
```
7 // 2
```

Out[41]:
```
3
```

In [43]:
```
2 ** 3
```

Out[43]:
```
8
```

Conditional statements

In [51]:
```
#if condition:
#    statements
a = 10
if a == 10:
    print('condition is true')
```

```
condition is true
```

In [52]:
```
if a != 10:
    print('condition is true')
else:
    print('condition is false')
```

```
condition is false
```

In [53]:
```
if a!=10:
    print('condition is true')
elif a == 10:
    print('ifelse condition is true')
else:
    print('no condition is true')
```

```
ifelse condition is true
```

In [55]:
```
if a == 10:
    print('outside')
    a = 20
    if a == 20:
        print('inside')
    print('outside')
```

```
outside
inside
outside
```

for government emp 1 unit = 10 rupees

for private emp

<= 50 1 unit = 5 rupees

> 50 <=150 1 unit = 7 rupees

> 150 1 unit = 10 rupees

In [57]:
```
emp = input('enter the employee is govt or private')
units = int(input('enter the units'))
if emp == 'govt':
    print('your electricity bill',units*10)
else:
    if units<=50:
        print('your electricity bill',units*5)
    elif units<=150:
        print('your electricity bill',units*7)
    else:
        print('your electricity bill',units*10)
```

```
enter the employee is govt or privateprivate
enter the units31
your electricity bill 155
```

Loops

for , while

In [70]:
```
for i in range(1,11):
    print(i)
```

```
1
2
3
4
5
6
7
8
9
10
```

In [72]:
```
for i in range(10,0,-1):
    print(i)
```

```
10
9
8
7
6
5
4
3
2
1
```

In [73]:
```
for i in range(2,11,2):
    print(i)
```

```
2
4
6
8
10
```

In [74]:
```
for i in range(1,10,2):
    print(i)
```

```
1
3
5
7
9
```

In [90]:
```
count = 0
for i in range(10):

    for i in range(i,3):
        count+=1
        print(i)

print(count)
print(count)
```

```
0
1
2
1
2
2
6
6
```

In [81]:
```
for i in range(1,51):
    if i%5 == 0:
        print(i)
```

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

In [83]:
```
for i in range(10):
    if i == 5:
        continue
    print(i)
```

```
0
1
2
3
4
6
7
8
9
```

In [ ]:
```
# while condition:
    #statements
i = 10
while i <= 15:
    print(i)
    i+=1 # i = i + 1
```

In [88]:
```
while True:
    pass
```

```
---------------------------------------------------------------------------
KeyboardInterrupt                         Traceback (most recent call last)
<ipython-input-88-b7133701d76c> in <module>
      1 while True:
----> 2     pass

KeyboardInterrupt:
```

good afternoon

In [92]:
```
print('welcome')
```

```
welcome
```

In [99]:
```
a = 10
print(a)
type(a)
```

```
10
```

Out[99]:
```
int
```

In [ ]:
```

```