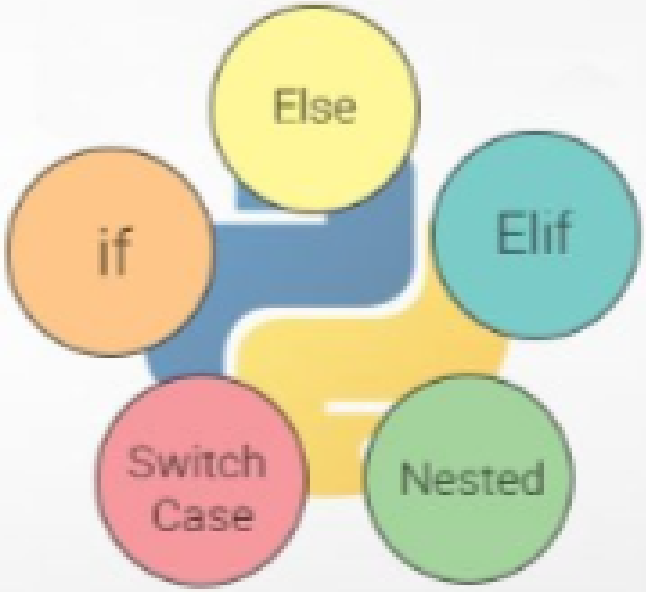
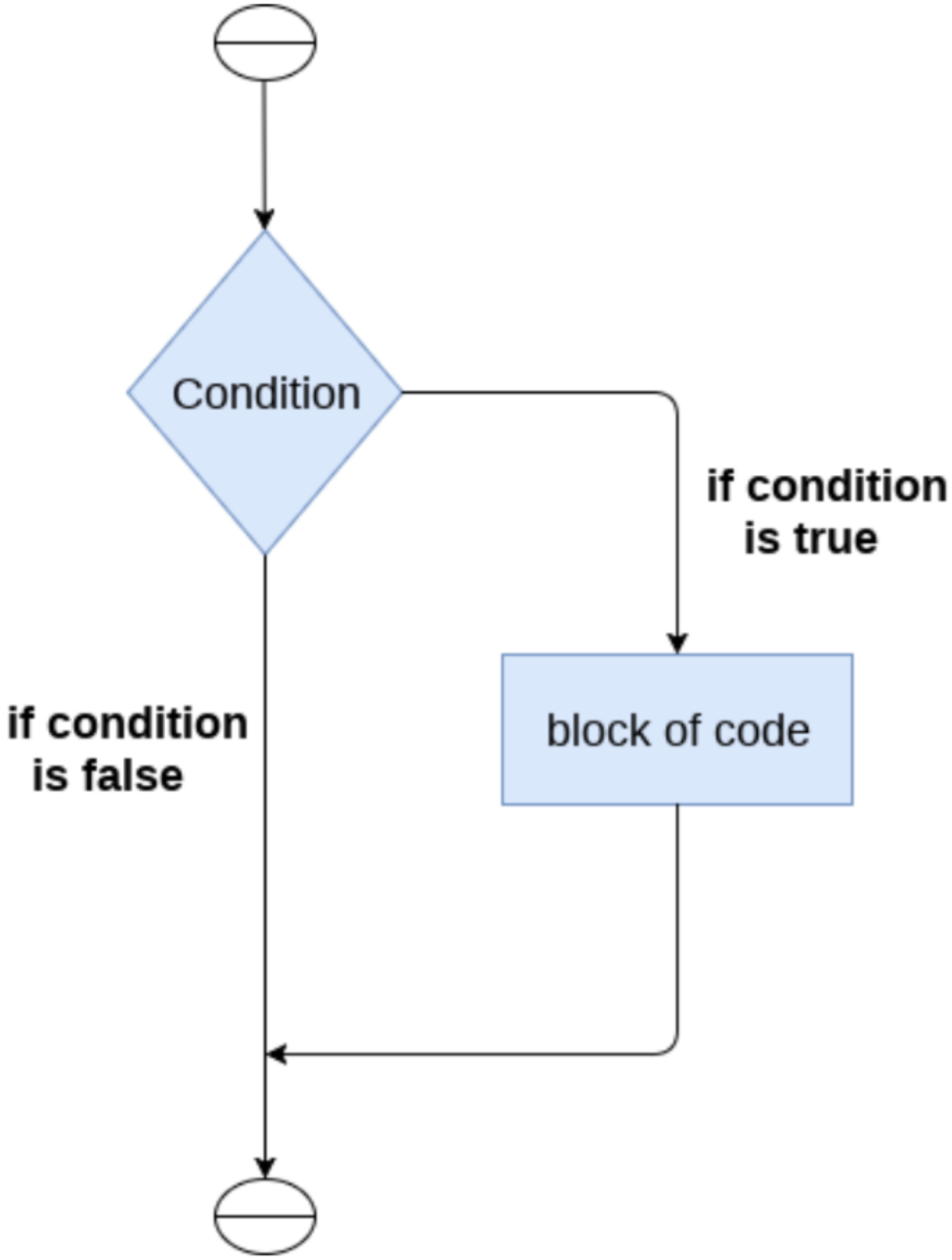
Python

Python
Conditional Statements



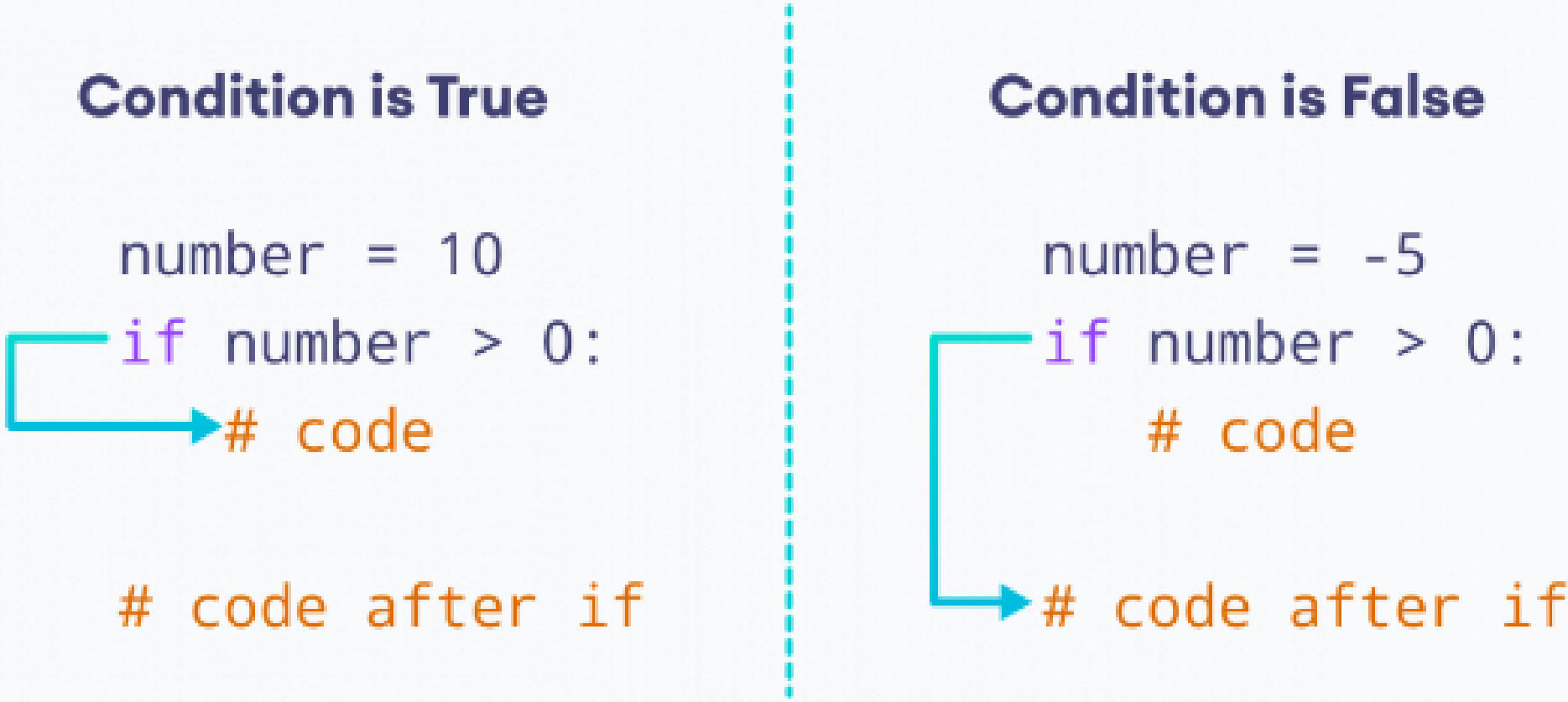
The if statement

The if statement is used to test a particular condition and if the condition is true, it executes a block of code known as if-block. The condition of if statement can be any valid logical expression which can be either evaluated to true or false.



The syntax of the if-statement is given below.

```
if expression:
    statement
```



Working of if Statement

```
num = int(input("enter the number?"))
if num%2 == 0:
    print("Number is even")
```

Output:

```
enter the number?10
Number is even
```

```
a = int(input("Enter a? "));
b = int(input("Enter b? "));
c = int(input("Enter c? "));
if a>b and a>c:
    print("a is largest");
if b>a and b>c:
    print("b is largest");
if c>a and c>b:
    print("c is largest");
```

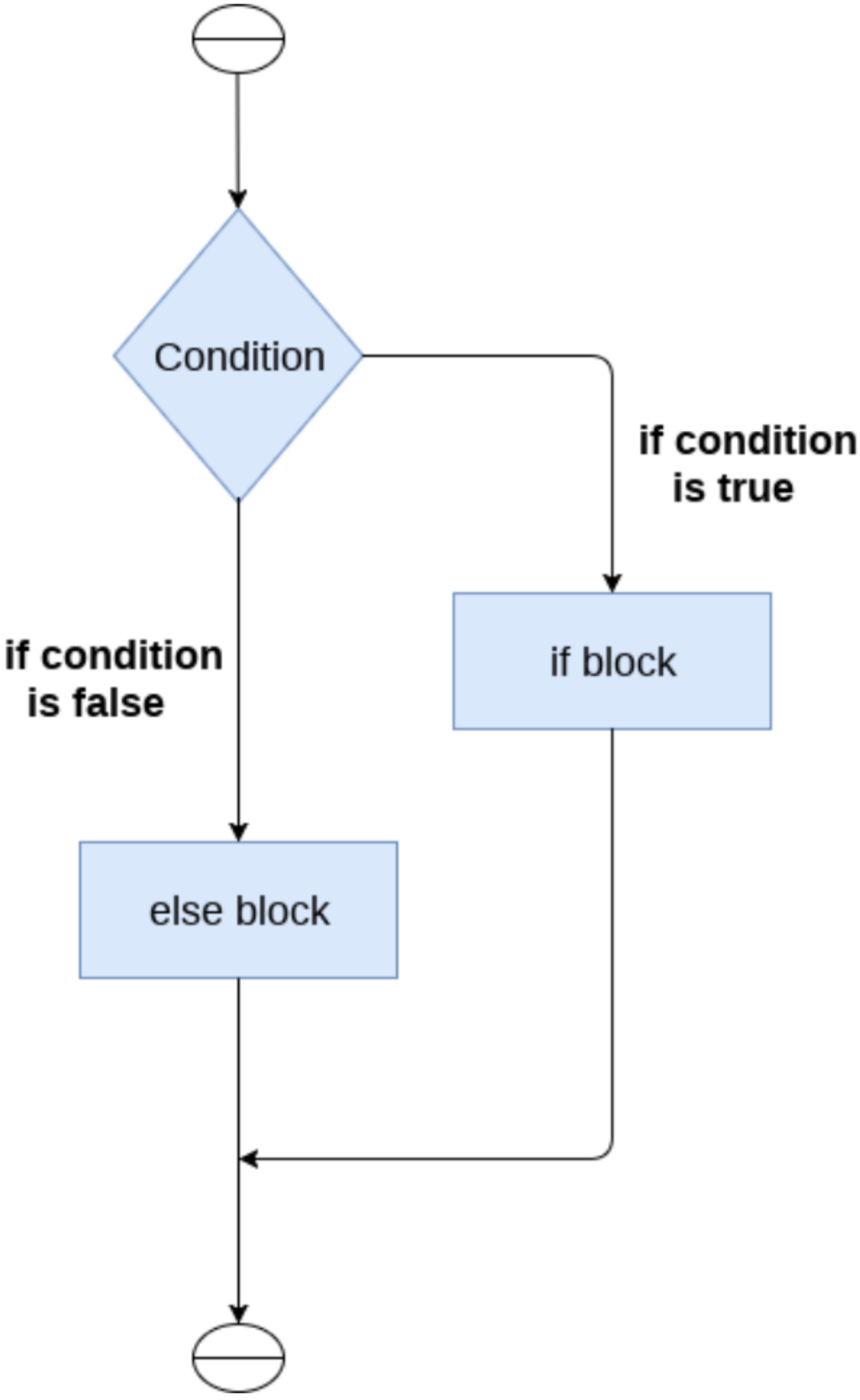
Output:

```
Enter a? 100
Enter b? 120
Enter c? 130
c is largest
```

If else statement

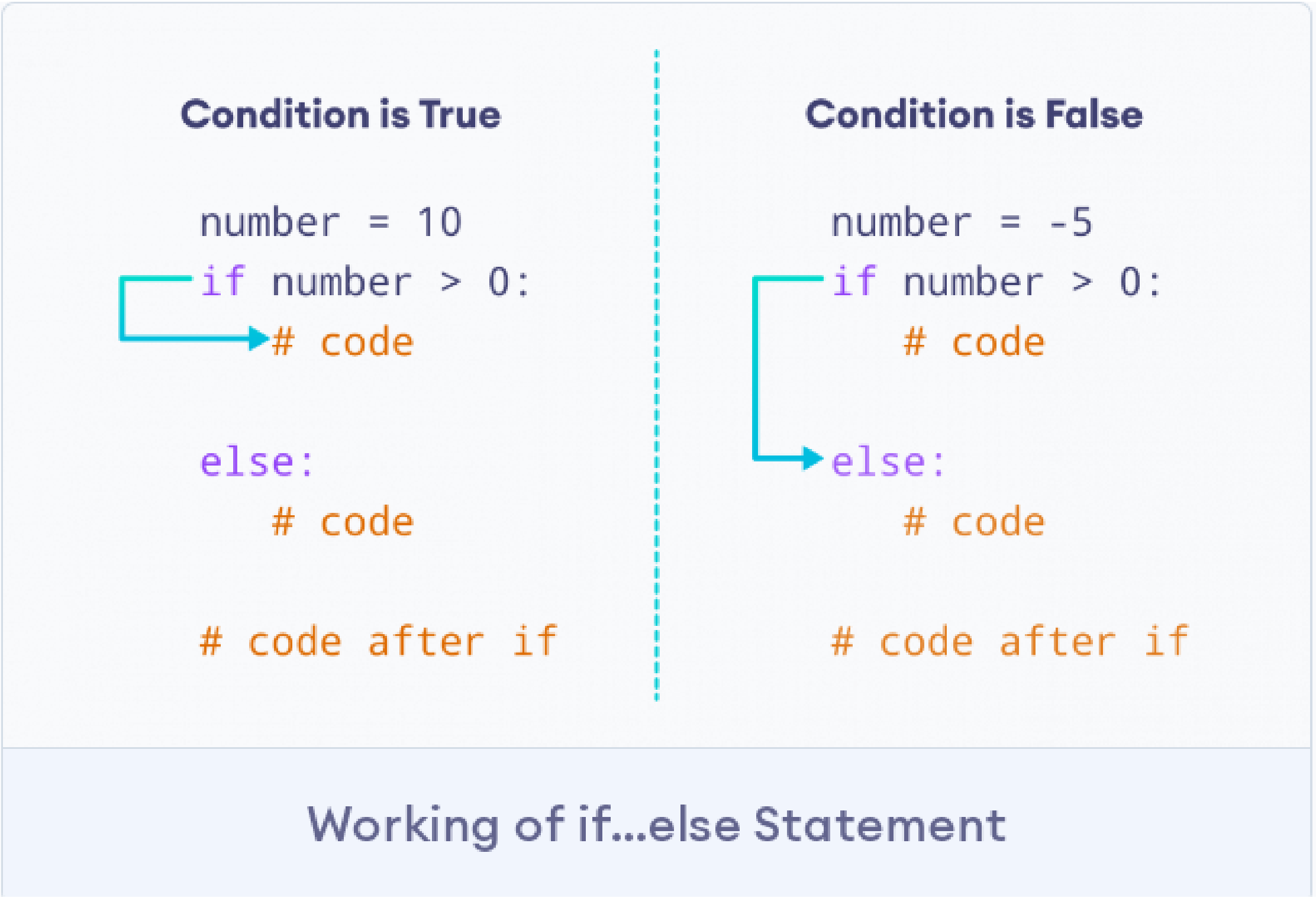
The if-else statement provides an else block combined with the if statement which is executed in the false case of the condition.

If the condition is true, then the if-block is executed. Otherwise, the else-block is executed.


Condition
if condition is true
if block
if condition is false
else block

Syntax :

```
if condition:
    #block of statements
else:
    #another block of statements (else-block)
```



Working of if...else Statement

```
age = int (input("Enter your age? "))
if age>=18:
    print("You are eligible to vote !!");
else:
    print("Sorry! you have to wait !!");
```

Output :

```
Enter your age? 90
You are eligible to vote !!
```

```
num = int(input("enter the number?"))
if num%2 == 0:
    print("Number is even...")
else:
    print("Number is odd...")
```

Output:

```
enter the number?10
Number is even
```

The elif statement

The elif statement enables us to check multiple conditions and execute the specific block of statements depending upon the true condition among them. We can have any number of elif statements in our program depending upon our need. However, using elif is optional.

The elif statement works like an if-else-if ladder statement in C. It must be succeeded by an if statement.

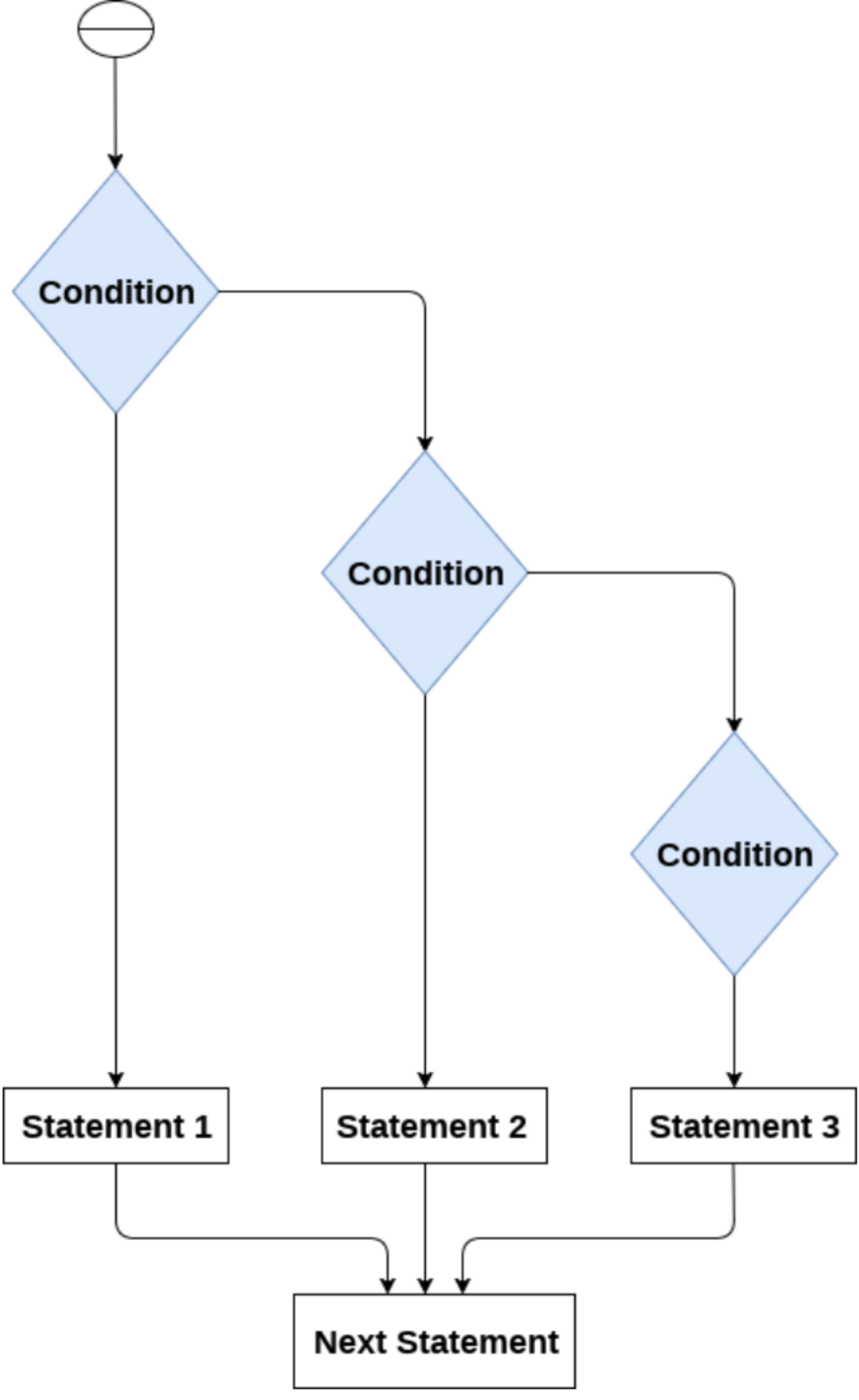
The syntax of the elif statement is given below.

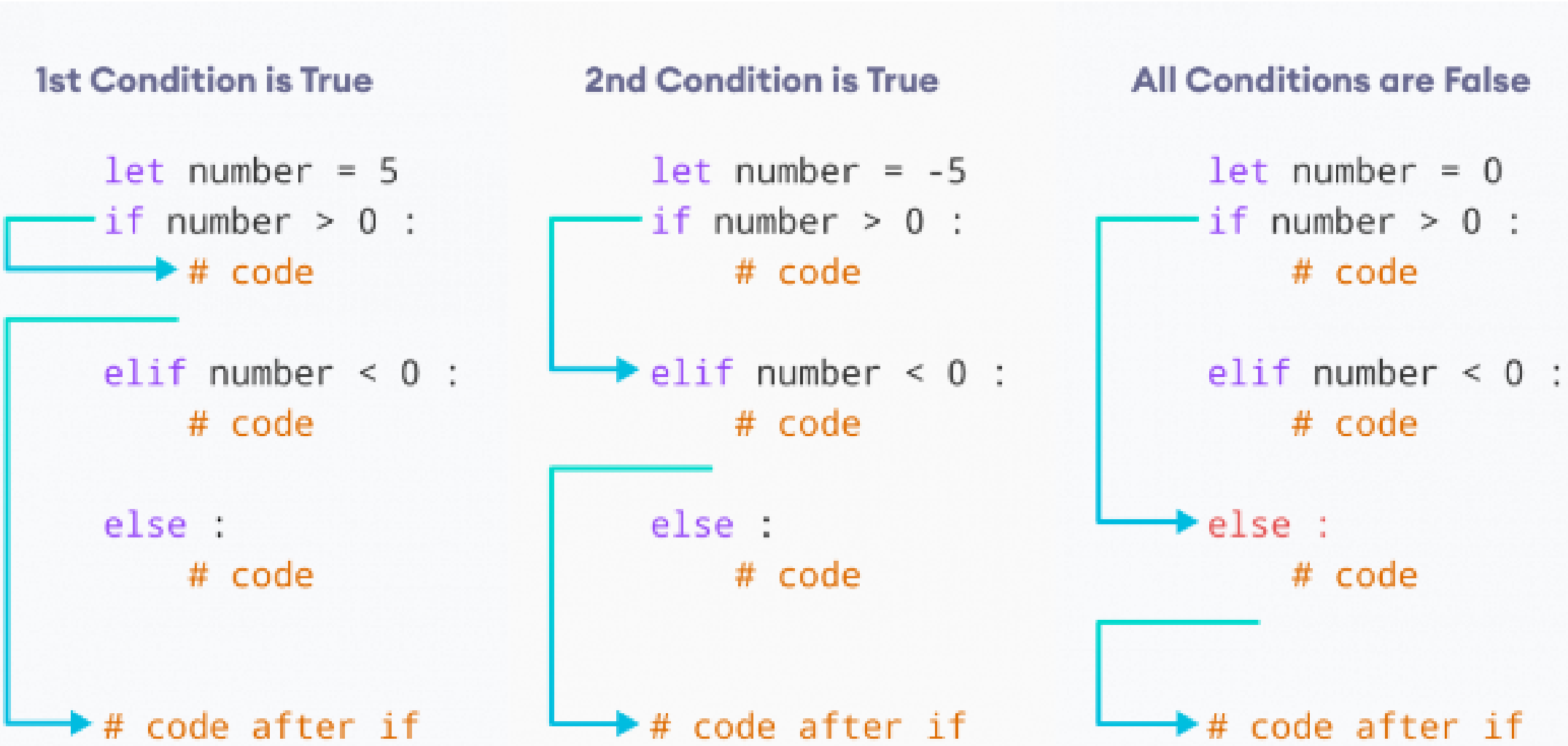
```
if expression 1:
    # block of statements

elif expression 2:
    # block of statements

elif expression 3:
    # block of statements

else:
    # block of statements
```


Condition
Condition
Condition
Statement 1
Statement 2
Statement 3
Next Statement



Working of if...elif Statement

```
number = int(input("Enter the number?"))
if number==10:
    print("number is equals to 10")
elif number==50:
    print("number is equal to 50");
elif number==100:
    print("number is equal to 100");
else:
    print("number is not equal to 10, 50 or 100");
```

Output:

```
Enter the number?15
number is not equal to 10, 50 or 100
```