CHP 03 "Control Flow"

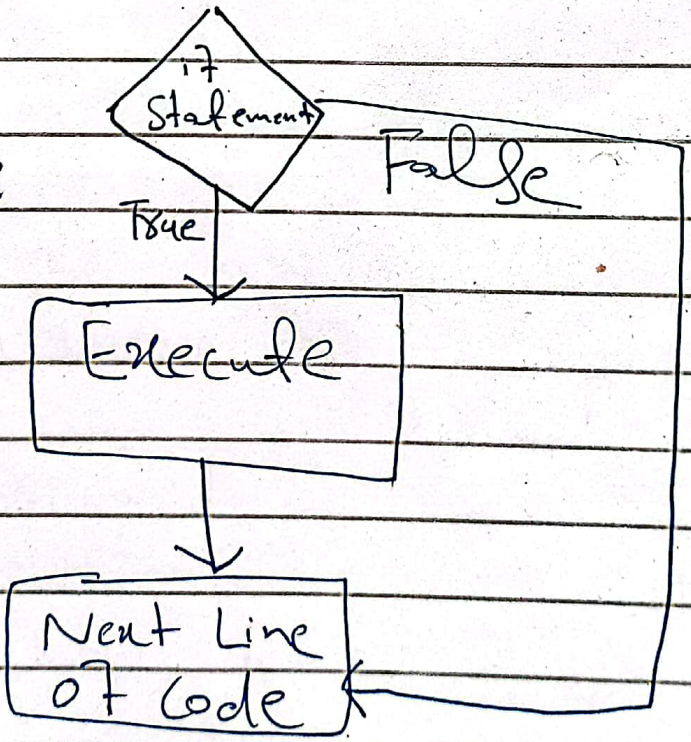
Conditional Statement

A conditional statement is a programming construct that allow you to make decisions in your Program.

1-If Statement :- If statement is used to check if a condition is true or not.

Syntax of if statement

```
if (condition):
    //Syntax
    or
    Code block
```



2- else Statement: The else statement is used to execute code if the condition is false

Syntax

```
if (condition == true):
    // This code will run
else:
    // This code will execute
```

3- elif Statement: The elif statement is used to check if an alternative condition is true.

Syntax

```
if (condition):
# code to be executed if condition is True
elif (condition2):
# code to be executed if condition2 is True
else:
# code to be executed if none of the condition is True
```

4- Match Case in Python

The match case takes an expression and compare it to a series of Patterns. It is similar to the switch statement in other programming languages but it is more powerful and flexible.

Syntax

```
match expression:
    case value:
    #code to be executed if
    expression is equal to value
    case value2:
    #code to be executed if
    expression is equal to value
    case _:
    #code to be executed if
    expression doesn't matching
    of the previous value.
```

5- While loop

While loop is a control flow statement that allows code to be executed repeatedly until a specific condition is met.

Syntax

```
while condition:
    #code to be executed repeatedly
```

6- For loop

For loop is a control flow statement that allow code to be executed repeatedly for a specific number of time or until a specific condition is met.

Syntax

```
num = [1, 2, 3, 4]
for item in num:
    print(item)
```

OR

```
for i in range(1, 6):
    print(i)
```

7- break statement:- Break Statement in Python that terminate the current loop.

Syntax

```
break
```

For exp

```
num = [1, 2, 3, 4]
for item in num:
    if item == 3:
        break
    Print(item)
```

8- Continue Statement:- Continue is a statement in Python that skip the current iteration of the loop and continue with the next iteration.

Syntax

```
continue
```

For exp

```
numbers = [1, 2, 3, 4, 5]
for number in numbers:
    if number == 3:
        continue
    Print(number)
```