CODE CRAFT ZOBAER

Machine Learning with Python
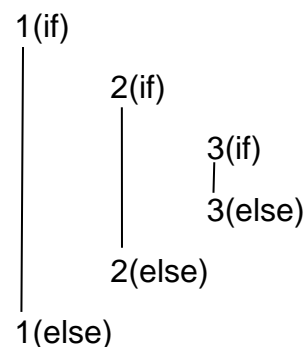
Conditional Statement

Control flow in Python refers to the order in which individual statements, instructions, or function calls are executed or evaluated in a program. Python, like other programming languages, provides constructs that allow developers to manage the flow of execution in a program based on conditions and loops.

- **If Else:**

  In Python, the if-else statement is a control flow structure that allows you to execute certain blocks of code based on conditions. If the condition provided in the if statement evaluates to True, the code inside the if block is executed. If the condition is False, the code inside the else block is executed (if an else block is provided).

```
if condition:

    # Code to execute if condition is True

else:

    # Code to execute if condition is False
```

```
1(if)
    2(if)
        3(if)          Follow the tab line
        3(else)
    2(else)
1(else)
```

IF-ELSE FLOW

- ### *While:*

  In Python, the while loop is a control flow statement that repeatedly executes a block of code as long as a given condition is True. It checks the condition before each iteration, and if the condition evaluates to True, the loop

  ```
  while condition:

      # Code to execute repeatedly as long as the condition is True
  ```

  continues; if the condition is False, the loop terminates.

- ### **Nested If-else:**

  A **nested if-else** statement in Python refers to an if-else block that is placed inside another if, elif, or else block. It allows for more complex decision-making, where multiple conditions are evaluated in a hierarchical or dependent manner.

  ```
  if condition1:

      # Executes if condition1 is True

      if condition2:

          # Executes if condition1 and condition2 are True

      else:

          # Executes if condition1 is True and condition2 is False

  else:

      # Executes if condition1 is False
  ```