**Conditional Handling AND Control Statement**

**Conditional Statement:** Conditional statement are used to decide whether code has to be executed or skip based on the evaluation of the condition.

After evaluating the condition it should return either it true or false.

1. **If**
2. **Else**
3. **Elif**
4. **Nested if**

If Statement: It is used for decision making in the code

It will check the statement and condition, if the condition is true then the code will be executed.

if the condition is False then the code will not execute and it will skip the If block.

**Syntax:**

If condition:

Statement1

Statement2

Eg:

a=47  
b=26  
if b<=a:  
 print("b is lesser")

Output: b is lesser

a=7  
b=2  
if a>b:  
 print("a is greater")

Output: a is greater

**If Else:** It is a control structure that allows conditional execution of code. If the specified condition is true then the code within the if block runs; otherwise the else block executes. We can check whether the statement is true or false.

**Syntax:**

If condition:

Statement1 🡪 True

Statement2

Else:

Statement1 🡪 False

Statement2

x=49  
y=76  
if (x>y):  
 print('x is larger')

else:  
 print('y is larger')

Output: y is larger

**If – elif – else:** sometimes a situation arises when there are several conditions to handle the situation python allows adding any number of elif clauses after an if and before an else clause.

**Syntax:**

If condition:

Statement1 🡪 True

Statement2

Elif:

Statement1 🡪 True

Statement2

Else:

Statement1 🡪 False

Statement2

a=58

if a<17:  
 print('a is false')

elif a<30:  
 print('a is false')

elif a<50:  
 print('a is false')

else:  
 print('a is true')

Output: a is true

**Nested if:** In nested conditional statements involve placing one ‘if’ or ‘if else’ statement inside another.

This allows for more complex decision making

**Syntax:**

If condition:

Statement1

Statement2

Else:

Statement1

Statement2

else:

if condition:

statement1

Statement2

else:

statement1

Statement2

a = 37  
  
if a > 0:  
 print("The number is positive.")

if a % 2 == 0:

print("It is an even number.")

else:  
 print("It is an odd number.")

elif a < 0:  
 print("The number is negative.")

else:  
 print("The number is zero.")

Output: The number is positive.

It is an odd number.