### 5. Membership Operators:

in : Checks if a value is present in a sequence (e.g., list, tuple, string) not in : Checks if a value is not present in a sequence 6. Identity Operators:

### 6. Identity Operators:

is : Checks if two objects are the same object (memory location) is not : Checks if two objects are not the same object

### Python has several build bata type:

### Numeric Types:

int: Represents integers (whole numbers), e.g., 1, 2, -10.

float: Represents floating-point numbers (numbers with decimal points), e.g., 3.14, -2.7.

complex: Represents complex numbers, e.g., 2 + 3j.



# code to execute if the condition is true

### 2. if-else statement:

If condition:

# code to execute if the condition is true

else:

# code to execute if the condition is false

3. if-elif-else statement:

If condition1:

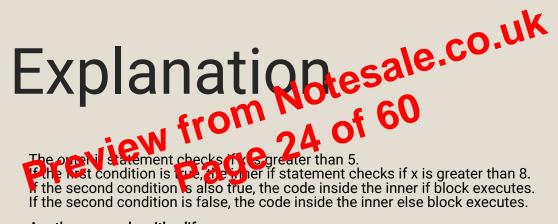
# code to execute if condition1 is true

elif condition2:

# code to execute if condition2 is true

else:

# code to execute if none of the above conditions are true



Another example with elif:

Num = 15

if num > 0:

print("Number is positive")

if num % 2 == 0:

print("Number is even")

else:

print("Number is odd")

else:

print("Number is not positive")

### Example X = 10if x > 15: print("ie yleater than 26 of 60 elif x > 5:

print("x is greater than 5 but less than or equal to 15") else:

```
print("x is less than or equal to 5")
```

Output

x is greater than 5 but less than or equal to 15

# Key point Sotesale.co.uk from of 60 poue an have prattice elif statements following an if statement.

Python will evaluate the conditions in order, and execute the code block associated with the first true condition.

If none of the conditions are true, the else block will execute, if present.

If you only need to check one condition, you can use a simple if statement.

If you need to check multiple conditions, and execute different code for each, elif is a powerful tool.



The object you want to loop through.

Item:

A variable that takes on the value of each element in the sequence during the loop. Code Block:

The indented code that is executed for each item in the sequence.

## Nested for loop statement

over a sequence, and for each iteration, the inner loop executes completely.

Syntex:

For outer\_variable in outer\_sequence:

# Code to execute in the outer loop

for inner\_variable in inner\_sequence:

# Code to execute in the inner loop

### Example

```
For i in range(1, 4): # Outer loop
for j in range(1, 4): # Inner loop
   print(i, j)
```

### Explanation:

def: The keyword used to define a function. Function\_name: A unique name to identify the function. Parameters (optional): Inpervalues that the function can accept. Docstring (optional): A brief description of the function's purpose. Code to be executed: The body of the function containing the instructions to perform the task. Pattern (optional) able keyword used to return a value from the function.

Example:

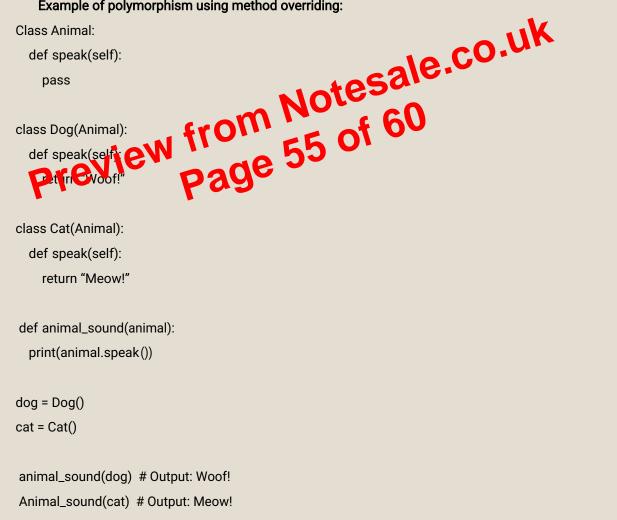
Def greet(name):

"""This function greets the user."""

print("Hello,", name)

greet("Alice") # Output: Hello, Alice

Built-in Polymorphism: Many built-in functions and operators in Python exhibit polymorphic behavior. For example, the len() function works on strings, lists, tuples, and other sequence types. Example of polymorphism using method overriding:



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## Thank you