**1.What are mutable and immutable datatypes**

Python supports the below-mentioned built-in data types:

**Immutable data types:** Python Immutable data types are objects that cannot be modified and altered. This means after creating an object you can’t add new elements, remove an element, replace an element.

* Number
* String
* Tuple

**Mutable data types:**  Data types in python where the value assigned to a variable can be changed

* List
* Dictionary
* Set

**2.Different types of builtin datatypes**

Int,string,list,tuple,set,dictonary,boolean

**3.Difference between list and set**

Lists are Ordered.Sets are Unordered.Lists are Mutable.Sets are mutable but only stored immutable elements.Elements can be changed or replaced in Lists.Elements cannot be changed or replaced.

**4.What is dictionary**

**Dictionary**in Python is an unordered collection of data values, used to store data values like a map, which, unlike other Data Types that hold only a single value as an element, Dictionary holds **key:value** pair. Key-value is provided in the dictionary to make it more optimized.

**5.What are the methods available in list**

Sum(),Append(),Pop(),Remove(),max(),min(),del()

**6.What are the three main conditional statements in Python?**

if, elif, and else

**7.What are the comparison operators in Python?**

< Less than, > Greater than, <= Less than or equal to, >= Greater than or equal to, = Equal to, != not equal, o alternative not equal. Note a single = is NOT a Python comparison operator, it is an assignment operator only.

**8.What is meant by indentation**

Indentation in Python refers to the (spaces and tabs) that are used at the beginning of a statement . The statements with the same indentation belong to the same group called a suite

**9.What is nested if conditional statement**

if expression1:

statement(s)

if expression2:

statement(s)

elif expression3:

statement(s)

elif expression4:

statement(s)

else:

statement(s)

**10.What is iterator**

An iterator is an object that contains a countable number of values.

An iterator is an object that can be iterated upon, meaning that you can traverse through all the values.

**11.Types of looping statements**

**While Loop:**

In python, while loop is used to execute a block of statements repeatedly until a given a condition is satisfied. And when the condition becomes false, the line immediately after the loop in program is executed

**for in Loop:** For loops are used for sequential traversal. For example: traversing a list or string or array etc. In Python, there is no C style for loop, i.e., for (i=0; i<n; i++). There is “for in” loop which is similar to [for each](https://www.geeksforgeeks.org/g-fact-40-foreach-in-c-and-java/) loop in other languages. Let us learn how to use for in loop for sequential traversals.

**Nested Loops:**Python programming language allows to use one loop inside another loop. Following section shows few examples to illustrate the concept.

**12.What function can generate a list of numbers?**

Range

**13.What keyword is used to skip back to the beginning of a loop?**

continue

**14.What keyword is used to end looping completely?**

break

**15.What is recursion**

When a function makes a call to itself, it is termed [recursion](https://data-flair.training/blogs/recursion-in-python/). But then, in order for it to avoid forming an infinite loop, we must have a base condition.

**16.What are the types of function**

1. Python Function with no argument and no return value.
2. Function with no argument and with a Return value.
3. Python Function with argument and No Return value.
4. Function with argument and return value.

**17.What difference between logical and bitwise operators**

Bitwise operator is the type of operator provided by the programming language to perform computations.Logical Operator is a type of operator provided by the programming language to perform logic-based operations.**Functionality**

Bitwise operators work on bits and perform bit by bit operations.Logical operators are used to making a decision based on multiple conditions.**Themes**

Bitwise operators are &, |, ^, ~, <<, >>.Logical operators are &&, ||, !

**18.Types of operators**

1. Arithmetic Operators -
2. Bitwise Operators
3. Membership Operators
4. Identity Operators
5. Comparison Operators
6. Assignment Operators
7. Logical Operators

**19.What is lambda function**

A lambda function is a small anonymous function.A lambda function can take any number of arguments, but can only have one expression.

Syntax

lambda *arguments*: *expression*

**20.What is the method we used to get both keys and values?**

Items()

**21.What are map,filter,reduce**

These are three functions which facilitate a functional approach to programming.

Map applies a function to all the items in an input\_list. As the name suggests, filter creates a list of elements for which a function returns true. Reduce is a really useful function for performing some computation on a list and returning the result. It applies a rolling computation to sequential pairs of values in a list.