20 INTERVIEW QUESTIONS FOR DATATYPES, OPERATORS, CONDITIONAL STATEMENT, LOOPING STATEMENT, FUNCTIONS IN PYTHON

Question 1:

What are the common built-in data types in python?

Answer:

There are different kinds of built-in data types in python. We can classify them as follows:

Text Type: str

Numeric Types: int, float, complex

Sequence Types: list, tuple, range

Mapping Type: dict

Set Types: set, frozenset

Boolean Type: bool

Binary Types: bytes, bytearray, memoryview

None Type: NoneType

Question 2:

What are the immutable data types in python?

Answer:

An immutable data type is a type of object which cannot be modified after its creation. Integer, float, strings and tuples are immutable data types in python.

Question 3:

What does sequence mean and which three types of data fall into this category?

Answer:

A sequence data type is a collection of objects ordered by a specific position. In Python, Strings, lists, and tuples are the data types based on sequences. The Sequences share common sequence operations, such as indexing, concatenation, and slicing.

Question 4:

What does mapping mean and what kind of data type is based on mapping?

Answer:

The term mapping refers to an object that maps keys to associated values. The Python dictionary is the only type of mapping data type. Mappings do not maintain any left-to-right position order; they support access to stored data by key.

Question 5:

What are the difference between list and tuple?

Answer:

i) Lists are mutable where as tuples are immutable.

ii) Lists consume more memory where as tuple consume less memory as compared to the list.

iii) Implication of iteration of list is time consuming where as the implication of iteration of tuple is comparatively faster.

Question 6:

What is the use of // operator in Python?

Answer:

It is a Floor Division operator, division that results into whole number adjusted to the left in the number line.

Question 7:

What is the use of ** operator in Python?

Answer:

It is an Exponent operator i.e. left operand raised to the power of right.

Question 8:

What is the use of % operator in python?

Answer:

It is Modulus Operator, remainder of the division of left operand by the right.

Question 9:

What is a dictionary in python?

Answer:

Python dictionary is an unordered collection of items. While other compound data types have only value as an element, a dictionary has a key: value pair. Dictionaries are optimized to retrieve values when the key is known.

Creating a dictionary is as simple as placing items inside curly braces {} separated by comma. An item has a key and the corresponding value expressed as a pair, key: value.

Question 10:

When do you choose a list over a tuple?

Answer:

When there is an immutable ordered list of elements we choose tuple. Because we cannot add/ remove an element from the tuple. On the other hand, we can add elements to a list using append () or extend () or insert (), etc., and delete elements from a list using remove () or pop (). Simple tuples are immutable, and lists are not.

Question 11:

What is a Built-in function that python uses to iterate over a number sequence?

Answer:

Range () generates a list of numbers, which is used to iterate over for loops.

The range () function accompanies two sets of parameters.

range (stop)

Stop: It is the no. of integers to generate and starts from zero. E.g. range (3) == [0, 1, 2].

range ([start], stop[, step])

Start: It is the starting no. of the sequence.

Stop: It specifies the upper limit of the sequence.

Step: It is the incrementing factor for generating the sequence.

Question 12:

How does for loop and while loop differ in python and when do you choose to use them?

Answer:

For loop is generally used to iterate through the elements of various collection types such as List, Tuple, Set, and Dictionary.

While loop is the actual looping feature with start, increment and stop criteria.

Question 13:

What is pass in python?

Answer:

Pass means, no-operation Python statement, or in other words it is a place holder in compound statement, where there should be a blank left and nothing has to be written there.

Question 14:

What does continue do in python?

Answer:

The continue is a jump statement in Python which moves the control to execute the next iteration in a loop leaving all the remaining instructions in the block unexecuted. The continue statement is applicable for both the “while” and “for” loops.

Question 15:

When should you use the Break in python?

Answer:

Python provides a break statement to exit from a loop. Whenever the break hits in the code, the control of the program immediately exits from the body of the loop. The break statement in a nested loop causes the control to exit from the inner iterative block.

Question 16:

What is the difference between pass and continue in python?

Answer:

The continue statement makes the loop to resume from the next iteration.

On the contrary, the pass statement instructs to do nothing, and the remainder of the code executes as usual.

Question 17:

What is lambda in python?

Answer:

Anonymous function means that a function without a name. As we already know that def keyword is used to define the normal functions and the lambda keyword is used to create anonymous functions.

` Syntax:

lambda arguments: expression

Question 18:

What is the use of the split function in python?

Answer:

The use of the split function in Python is that it breaks a string into shorter strings using the defined separator. It gives a list of all words present in the string.

Question 19:

What will append () and extend () methods do?

Answer:

Append () adds the element at the end.

Extend () adds the elements of a different list at the end.

Question 20:

What is a string in python?

Answer:

A string in Python is a sequence of alpha-numeric characters. They are immutable objects. It means that they don't allow modification once they get assigned a value. Python provides several methods, such as join (), replace (), or split () to alter strings. But none of these change the original object.