

## Difference between Append and Extend methods in List?

Append	Extend
Append() method adds an argument at the end of the list as a single element.	Extend() method iterates over its argument adding each element to the list, and extending the list.
Ex: list1 =  ['tomato','potato','carrot']  list1.append('cucumber')  Output: list1 = ['tomato','potato','carrot', 'cucumber']	Ex: list1 =  ['tomato','potato','carrot']  list1.extend('toy')  Output: list1 = ['tomato','potato','carrot','t','o','y']

## How do you find the square root of a number using python?

A) Python has a sqrt() inbuilt function that returns the square root of any number.

```
Ex: import math  
print(math.sqrt(4))
```

## How do you print six random integers between 5 and 25 using NumPy?

A) we use the random.randint() function to generate random numbers using NumPy.

Ex: Import NumPy as np

```
rand_r=np.random.randint(5,  
25,5)Print(rand_r)
```

## Explain how Map, Reduce and Filter Functions Work?

Map	Reduce	Filter
Applies the given function to all the iterables and returns a new list.	Applies the same operation to items of a sequence	Filters item out of a sequence

Applies the same function to each element of a sequence	Uses the result of operations as first param of next operation	Used to filter the given iterables (list, sets, tuple) with the help of another function passed as an argument to test all the elements to be true or false
Returns the modified list	Returns an item, not a list	Returns the filtered list
[1,2,3,4]->def f(x):return x*2->[2,4,6,8]	List[x,y,z] function,f()->reduce->f(f(x,y),z)	List[x,y,z] condition->filter->[x,y] if condition is true

### 1) Difference between range, xrange, and arange?

range	xrange	arange
It returns a Python list object, which is of integers.	It returns a range object.	It is a function in the Numpy library. It can return fractional values as well.

### Difference between del(),clear(),remove() and pop()?

del()	clear()	remove()	pop()
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It deletes with respect to the position of the value. It does not return which value is deleted.  It also changes the index towards the right by decreasing one value.	It clears the list.	if you know which particular value to delete. We can use the remove() function.	by default removes the last element and also returns back which value is deleted. We can store this deleted return value in a variable and use it in the future.
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### **What Are Errors And Exceptions In Python Programs?**

A) Errors are coding issues in a program that may cause it to exit abnormally.

On the contrary, exceptions happen due to the occurrence of an external event that interrupts the normal flow of the program.

### **What Is The Difference Between An Iterator And Iterable?**

A) The collection type like a list, tuple, dictionary and set are all iterable objects whereas they are also iterable containers that return an iterator while traversing.

### **1) What Is the Main Function of Python? How do you invoke it?**

In the world of programming languages, the main is considered as an entry point of execution for a program. But in python, it is known that the interpreter serially interprets the file line-by-line. This means that python doesn't provide main() function explicitly. But this doesn't mean that we cannot simulate the execution of main. This can be done by defining user-defined main() function and by using the

`__name__` property of python file. This `__name__` variable is a special built-in variable that points to the name of the current module. This can be done as shown below:

#### **Example:**

```
def main():

print("Hi Interviewbit!")

if __name__ == "__main__":
main()
```

- Python's **in** and **not in** operators allow you to quickly determine if a given value is or isn't part of a collection of values. This type of check is common in programming, and it's generally known as a **membership test** in Python. Therefore, these operators are known as **membership operators**

### What is Tkinter?

**Tkinter** is the inbuilt python module that is used to create GUI applications. It is one of the most commonly used modules for creating GUI applications in Python as it is simple and easy to work with. You don't need to worry about the installation of the Tkinter module separately as it comes with Python already.

### What is a Unicode string in Python?

- Since Python 3.0, the language's str type contains Unicode characters, meaning any string created using "unicode rocks!", 'unicode rocks!', or the triple-quoted string syntax is stored as Unicode. The default encoding for Python source code is UTF-8, so you can simply include a Unicode character in a string literal

### What is Python's parameter passing mechanism?

(Asked in Amazon Interview)

Pass by references: Every parameter(argument) is passed "by reference" to the functions by default. However, incase you modify the value of the parameter in the function, the impact can also be reflected in the called function.

## What is scope resolution?

Asked in Infosys Interview)

The :: (scope resolution) operator is used to get hidden names due to variable scopes so that you can still use them. The scope resolution operator can be used as both unary and binary.

## What is shuffle() in python

(Asked in TCS Interview)

The shuffle() method takes a sequence, like a list, and reorganizes the order of the items. Note: This method changes the original list, it does not return a new

## How to create a Unicode string in python?

(Asked in HCL Interview)

In Python 3, all strings are sequences of

Unicode characters. You have two

options to create Unicode strings in

Python. Either use decode(), or create

a new Unicode string with UTF-8

encoding by unicode(). The unicode()

method is unicode(string[, encoding,

errors]) , its arguments should be 8-bit strings. The first argument is converted to Unicode using the specified encoding, if encoding argument left, the ASCII encoding is used for the conversion.

### What is a flask in python (Asked in Tcs Interview)

Flask is a micro web framework written in Python. It is classified as a microframework because it does not require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions

### What is the purpose of not operator in python? (Asked in HCL Interview)

Python's not operator allows you to invert the truth value of Boolean expressions and objects. You can use

this operator in Boolean contexts, such as if statements and while loops. It also works in non-Boolean contexts, which allows you to invert the truth value of your variable

## What is regression ?

(Asked in TCS Interview)

Regression is a statistical method used in finance, investing, and other disciplines that attempts to determine the strength and character of the relationship between one dependent variable (usually denoted by Y) and a series of other variables (known as independent variables).

## How do you make use of arrays in python?

(Asked in Amazon Interview)

Python has a number of built-in data structures, such as arrays. Arrays give us a way to store and organize data, and we can use the built-in Python methods to retrieve or change that data. For example, if you have a list of student names that you want to store, you may want to store them in an array

## What are different environmental variables available in python? (Asked in Wipro Interview)

Environment variables is the set of key-value pairs for the current user environment. They are generally set by the operating system and the current user-specific configurations.

## is django in python?(Asked in Wipro Interview)

Django is a high-level Python web framework that enables rapid development of secure and maintainable websites. Built by experienced developers, Django takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel.

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