1. **What is python?**

->Python is an interpreted, object-oriented, high-level programming language ,is used to develop web application,handling data,software development complex creations.

**Interpreted:** The program code executes step by step in the python. I.e it executes instructions directly and freely.

**object-oriented:**It is a programming paradigm (a mode / a pattern) that relies on the concept of ****classes**** and ****objects.**** It is used to structure a software program into simple, reusable pieces of code blueprints (usually called classes), which are used to create individual instances of objects.

**high-level programming language:**it is user friendly. It is easy to understand,it is simple to debug.

Python is ****dynamically typed****, this means that you don’t need to state the types of variables when you declare them or anything like that. You can do things like x=111 and then x="I'm a string" without error

### ****What is pep 8?** Ans:**PEP stands for**Python Enhancement Proposal**. It is a set of rules that specify how to format Python code for maximum readability.

**2. What are the keywords in python?**

-> True, False, for, if, continue, def, del, elsif, else, global,class, break, import, from,try,none,pass,lambda,raise,while.....etc.

**3.What is literal and types of literals in python?**

-> Literals are the constants assigned to a variable.

Types: 1. String literals..... name="Jay"

2. Numeric....int, float, complex

3. Boolean....True or False

4. Literal collections..... list, tuple, dictionary and set

5. Special literal......valu2=none

**4. What is dictionary and its example.**

-> It is a unordered collection of elements and these elements are stored as key-value pairs.

e.x. my\_dict={"fruit\_name":("Mango","Orange","apple")}

my\_dict

o/p:

{'fruits\_name': ('orange', 'apple', 'mango', 'Guava')}

my\_dict.keys()

dict\_keys(['fruits\_name'])

**5. What is class and objects in python?**

->Class is nothing but a user defined blueprint from which objects are created which are real world entities.

Class e.x : blueprint or object constructor for creating objects.

Objects are: variable, function,list,tuple,dictionary set...etc.

class human:

name="jay"

age=30

def get\_name(self):

1. What are list & tuples?

|  |  |
| --- | --- |
| ****LIST**** | ****TUPLES**** |
| Lists are mutable i.e they can be edited. | Tuples are immutable (tuples are lists which can’t be edited). |
| Lists are slower than tuples. | Tuples are faster than list. |
| Syntax: list\_1 = [10, ‘Chelsea’, 20] | Syntax: tup\_1 = (10, ‘Chelsea’ , 20) |

4. What is difference between Del, Remove, & Pop in python list?

5. What is difference between list, tuple,set and dictionary?

6. What is "pass" keyword in python?

Ans: The pass statement is a null statement. But the difference between pass and comment is that comment is ignored by the interpreter whereas pass is not ignored. The pass statement is generally used as a placeholder i.e. when the user does not know what code to write.

7. What are set built-in-methods in python?

Ans add(), clear(), copy(), pop(),remove(),update()...etc.

1. **What are the common built-in data types in Python?**
2. Ans: List, tuple, set and dictionary,string,boolean and numbers.

9. What is difference between class and object in pyhton?

Ans: **Class:** A class is the building block that leads to Object-Oriented Programming.

It is a user-defined data type, that holds its own data members and member functions,

which can be accessed and used by creating an instance of that class. It is the blueprint of any object.

**Object:** An object is an instance of a class. All data members and member functions of the class can be accessed with the help of objects.

When a class is defined, no memory is allocated but when it is instantiated (i.e. an object is created), memory is allocated.

For example, considering the objects for the Account class is Saving account, Current account, etc.

****10.What are Python namespaces?****

****Ans:**** A namespace is a system that has a unique name for each and every object in Python. An object might be a variable or a method.Python itself maintains a namespace in the form of a Python dictionary.

Namespace is a collection of currently defined symbolic names along with information about the object that each name references. You can think of a namespace as a [dictionary](https://realpython.com/python-dicts) in which the keys are the object names and the values are the objects themselves.

**E.g: (Syntax)**

**var1 = 5 ………………………….> # var1 is in the global namespace**

**def some\_func():**

**var2 = 6 ………………………> # var2 is in the local namespace**

**def some\_inner\_func(): ……………………….> var3 is in the nested local namespace**

**var3 = 7**

1. ****Built-in namespace****– These namespaces contain all the built in objects in python and are available whenever python is running.
2. ****Global namespace****– These are namespaces for all the objects created at the level of the main program.
3. ****Enclosing namespaces****– These namespaces are at the higher level or outer function.
4. ****Local namespaces****– These namespaces are at the local or inner function.

### ****What are python modules? Name some commonly used built-in modules in Python?****

### ****Ans:****Python modules are files containing Python code. This code can either be functions, classes or variables. A Python module is a .py file containing executable code.

Some of the commonly used built-in modules are:

* os
* sys
* math
* random
* data time
* JSON

### 11.****What are local variables and global variables in Python?****

****Global Variables:****

Variables declared outside a function or in global space are called global variables. These variables can be accessed by any function in the program.

****Local Variables:****

Any variable declared inside a function is known as a local variable. This variable is present in the local space and not in the global space.

### ****12.What is the difference between Python Arrays and lists?****

****Ans:****Arrays and lists, in Python, have the same way of storing data. But, arrays can hold only a single data type elements whereas lists can hold any data type elements.

**E.x:import** array as arr

My\_Array**=**arr.array('i',[1,2,3,4])

My\_list**=**[1,'abc',1.20]

print(My\_Array)

print(My\_list)

Output:array(‘i’, [1, 2, 3, 4]) [1, ‘abc’, 1.2]