

SAKSHI PANDEY

MCAIII Semester

Y23272024

PYTHON ASSIGNMENT

## PYTHON INTERVIEW QUESTION

Q1 What is `--init--`?

`--init--` is a constructor method in Python and is automatically called to allocate memory when a new object/instance is created.

class Student:

def `--init--`(self, fname, lname, age, section):

self.firstname = fname

self.lastname = lname

self.age = age

self.section = section

stud = Student("Saro", "Ansh", 22, "A2")

Q2 What is the difference between Python arrays and lists?

⇒ Arrays in Python can only contain elements of same data types i.e. data type of array should be homogeneous. It is a thin wrapper around C language arrays and consumes far less memory than lists.

⇒ Lists in Python can contain elements of different data types i.e. data type of lists can be heterogeneous. It has the disadvantage of consuming large memory.



import array

a = array.array('i', [1, 2, 3])

for i in a:

print(i, end=' ')

a = array.array('i', [1, 2, 'string'])

a = [1, 2, 'string']

for i in a:

print(i, end=' ')

Q3 Explain how can you make a Python script executable on Unix?

Script file must begin with #!/usr/bin/perl  
python

Q4 What is slicing in Python?

As the name suggests, 'slicing' is taking parts of

• Syntax for slicing is [start: stop: step]

• start is the starting index from where to slice a list or tuple.

• stop is the ending index or where to stop.

• step is the number of steps to jump.

• Default value for start is 0, stop is number of items, step is 1.



- slicing can be done on strings, arrays, lists and tuples.

Q5 what is docstring in Python?

Documentation string or docstring is a multiline string used to document a specific code segment.

The docstring should describe what the function or method does.

Q6 what are unit tests in Python?

Unit test is a unit testing framework of Python.

Unit testing means testing different components of software separately.

Q7 what is break, continue and pass in Python?

Break:- The break statement terminates the loop immediately and the control flows to the statement after the body of the loop.



Continue:- The continue statement terminates the current iteration of the statement, skips the rest of the code in the current iteration, and the control flows to the next iteration of the loop.

Pass:- The pass keyword in Python is generally used to fill up empty blocks and is similar to empty statement.

```
put = [1, 2, 3, 4, 5, 3, 1, 0, 3]
```

```
for p in put:
```

```
    pass
```

```
    if (p == 0):
```

```
        current = p
```

```
        break
```

```
elif (p % 2 == 0):
```

```
    continue
```

```
    print(p)
```

```
print(current)
```

Q8 what is the use of self in Python?

Self is used to represent the instance of the class. with this keyword, you can access the attributes and methods of



the class in Python.

It binds the attributes with the given arguments.

Self is used in different places and often thought to be a keyword.

Q3 what are global, protected and private attributes in Python?

Global variables are public variables that are defined in the global scope. To use the variable in the global scope inside a function, we use the global keyword.

Protected attributes are attributes defined with an underscore prefixed to their identifier eg. \_area. They can still be accessed and modified from outside the class they are defined in but a responsible developer should refrain from doing so.

Private attributes are attributes with double underscore prefixed to their identifier eg. \_\_area. They cannot be

accessed or modified from file.  
outside directly and will result in an  
Attribute Error if such an attempt is  
made.

Qso what are modules and packages  
in Python?

Python packages and Python modules are  
two mechanisms that allow for modular  
programming in Python.

Modularizing has several advantages.

- Simplicity
- Maintainability
- Reusability
- Scoping

Modules are simply Python files with a .py  
extension and can have a set of functions,  
classes, or variables defined and  
implemented.

Packages allow for hierarchical structuring  
of the module namespace using dot  
notation.