

3.

10. What are modules and packages in python?

\* Modules: Modules having a single codes and single file with extension of .py

Exp: `import math`  
`x = [25, 26]`

```
print(x)
y = math.sqrt(x)
print(y)
```

\* packages: package is a multiple modules.  
a group of code with extension of  
\_init\_.py

3. what are list and tuple in python.

List: List is a mutable which means in list we can change values flexibly using different data type (int, float, bool)



Ex:  $x = \text{list}[0, 1, 2, 3, 4, 5]$

$x = \text{list}['a', 1, 2, 2]$

\* while Assigning values in the variable we use Square bracket.

Tuple: tuple is an immutable, which means we can't change the values once assigned. here tuple ~~are~~ represented as round bracket ( ).

Ex:  $x = \text{tuple}(0, 1, 2, 3)$

4. what are the common built-in data types in python.

There are 7 built-in datatypes

- |           |                                     |          |
|-----------|-------------------------------------|----------|
| 1. none   | 2. Numeric<br>(int, float, complex) | 3. List  |
| 4. Tuple  | 5. Set                              | 6. Range |
| 7. String | 8. dictionary.                      |          |



2.

Python is a interpreted language which executes code line by line.

6. Python Arrays and list?

Array

List

\* Array has one dimensional  
two dimensional

\* ~~But~~ list has only  
single dimension

\* Array it allows only  
one data type at a  
time

\* In list it allows  
multiple data types  
~~in~~ at a  
time

\* ~~Ex~~ While coming to Array  
we have to import the  
Array library

\* But in list  
it is built-in

\* Ex: from array import \*

x = array([0, 1, 2, 3])

x = list([0, 1, 2, 3])



## 8. Break, Continue, Pass.

**Break:** Break Statement mainly used in loop or if condition, when we set particular stage if that stage satisfied, in that movement, when applying break statement it will stop the loop and print the value.

Ex:  $n=0$   
 if  $n == 2$ :  
     print (2)  
     break  
      $n = n + 1$  //

**Continue:** It will continue the loop when if statement ~~is~~ satisfied and it won't print the particular condition:  $n = 1, 2, 3, 4$

Ex:  $n=0$   
 if  $n == 3$   
      $n = n + 1$   
     print (not available)  
     continue  
      $n = n + 1$   
 output 1, 2, 4



\* pass: the pass is a simple statement to pass code iteration to the next line.

Exp:  $n = 0, 1, 2, 3, 4$   
if  $n == 4$

pass

$n = n + 1$

print(0, 1, 2, 3, 4)

12. what are Negative Indexes.

when we Assigning a value in the Variable  
- i.e. each b.t has its index value in  
some particular data-types ex. list, set  
the negative index is it will assigned in  
values reversed manner.

Ex  $x = \overset{-14}{\text{'Smart Enovations'}} \overset{-4 \quad -3 \quad -2 \quad -1}{\text{'s'}}$   
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

$y = x[-1]$   $\rightarrow$  Here it will give  
last character of  
the string.

$y = x[-1::]$

[start : stop : step]

[1 : 5 : 2]

1 2 3 4 5

11. The arguments passed by values mainly used in dictionary using keys and values

Ex:

② `user = dict (name: 'raj', password = 1234)`

`Print (user.get (name))`

or

`user = {'name': 'raj', 'password': 1234}`

`def func1 ((A, B) A=10, B=20):`

`Result = A+B`

`Return Result`

`func1 ()`

`func1 (A=30, B=40)`

`func1 (20A, B)`

`A = [1, (2, 3), 4, 5, 6, 7]`

`[2:5]`

