DAY-3 – PYTHON INTERVIEW QUESTIONS

**TOPIC:- LIST, STRINGS AND DICTIONARIES**

THEORY QUESTIONS

**LIST:-**

**1.What is the difference between append( ) and extend( ) in a list?**

**Append( ) Extend( )**

1.Add single element at the end 1.Add multiple elements

in a list. from iterable to the end

2. If we append the list of elements of the current list.

by using append it will give out 2.But here by using extend

-put also in list form only. it will give the normal

Example: form.

a= [1,2,3] Example:

a.append([4,5]) a=[1,2,3]

print(a) a.extend([4,5])

output: [1,2,3[4,5] ] print(a) #[1,2,3,4,5]

**2.How is insert( ) different from append( )?**

Insert( ):- Inserting an element by using index of the list. And it takes two arguments index of an element and element which we give.

Example:

a=[10,20,30,40]

a.insert(1,50)

print(a) output:-[1,50,20,30,40]

Append( ):- Adding single element at the end of the element and it can given in list form only.

Example:

a=[1,2,3]

a.append([1,25])

print(a)

output:- [1, 2, 3, [1, 25]]

**3. What does pop() do in a list, and what happens if no index Is passed?**

Pop( ):- The pop( ) can be remove the last element of the list.

* It can be also performed by using index number to remove the element in the list.
* If no index is passed it can be removed the last element of the list.

Example:

abc= [1,2,3,4,5]

abc.pop( )

print(abc) # [1,2,3,4]

abc.pop(2)

print(abc) # [1,2,4]

**4. How do you remove all elements from a list?**

By using clear( ) method we can remove all elements / making list as empty.

a=[1,2,3,4]

a.clear( )

print(a)

Next method:-

a=[1,2,3,4]

a=[ ]

print(a)

**5.What is the difference between shallow copy and deep copy for lists?**

**Shallow copy:-** Outer list only.

**Deep Copy:-** Outer + nested lists recursively.

**6.** **Can a list contain duplicate values? How does Python handle them?**

Yes, In python lists can contain duplicate values.

Example:-

fruits = ["apple", "banana", "apple", "orange", "banana"]  
for i in fruits:

print(i)

Output:

apple

banana

apple

orange

banana

**7.How does list slicing work, and can you explain [::2]?**

* List slicing extracts parts of a list using start:stop:step.
* [::2] returns every second element from the list.

**STRINGS:-**

**8. Are strings mutable or immutable in Python? Why is this important?**

In python strings are immutable. Once string is created it can’t be changed. This can used easy for dictionary keys.

**9. What is the difference between strip(), rstrip(), and lstrip()?**

**Strip( ):-** Removes both sides of spaces in string.

**rstrip( ):-** Removes the left-side spaces in string.

**lstrip( ):-** Removes the right-side spaces in string.

**10. How does string slicing work in Python?**

Slicing creates a **new substring** by specifying [start:end:step], where start is inclusive, end is exclusive, and step (optional) picks every nth character including backwards with negative values without altering the original string.

**11. What is the difference between find() and index() in strings?**

**Find( ):-** If there is no letter in given variable it give as “-1”.

**Index( ):-** It can’t take another index of same value only first index can only give/get.

**12.How do you check if a substring exists in a string?**

Use the 'in' keyword, e.g., 'sub' in 'string'.

**13. Can strings be looped through using for loop? What does it return?**

* Yes string can be looped through using for loop.
* It return the each character I sequence.

**14.What does "Python".replace('P', 'J') return?**

It returns 'Jython', by replacing the first character 'P' with 'J'.

**DICTIONARY**

**15.How do dictionaries store data in Python?**

The dictionaries store data in the form key , value pair in python.

Key: value pair

**16. What happens if you try to access a key that doesn’t exist in a dictionary?**

If you try to access a key that doesn’t exist in a dictionary it will be given as Key Error in output.

**17. What is the difference between dict.get('key') and dict['key']?**

Dict.get(‘key’) return None.

Dict[‘key’] raises the KeyError if doesn’t exist the key.

**18. How can you add a new key-value pair to a dictionary?**

We can add a new key-value pair to a dictionary by using dict['new\_key'] = value.

**19.Can a dictionary have duplicate keys?**

No, A duplicate key will overwrite the previous value.

**20.What does the items() method return in a dictionary?**

Items() method return in a dictionary as view object of (key, value) pairs.

**Topic: Output-Based Questions – Lists, Strings, Dictionaries**

**LIST:-**

1. a= [1,2,3]

a.append([4,5])

print(a)

Output:- [1,2,3[4,5])

1. a= [1,2,3]

a.extend([4,5])

print(a)

Output:- [1,2,3,4,5]

1. a= [1,2,3]

print(a.pop( ))

print(a)

Output:- [1,2]

1. a= [1,2,3]

b=a

b.append(4)

print(a)

output:- [1,2,3,4]

1. a= [1,2,3,4,5]

print(a[: : -1])

output:- [5,4,3,2,1]

1. a= [1,2,3,4]

print(a[::2])

output:-[1,3]

1. a= [1,2]

b=a[:]

b.append(3)

print(a,b)

output:-[1,2] [1,2,3]

**STRINGS:-**

1. s= ”python”

print(s[0:3])

output:- pyt

1. s=” python ”

print(s.strip())

output:- “python”

1. s=” Python Programming”

print(s.lower( ).count(‘p’))

output:- 2

1. S=”Hello World”

Print(s.replace(“World”, “Python”))

Output:- “Hello Python”

1. s=”Hello”

Print(“e” in s)

Output:- True

1. s=”Python”

for char in s:

print(char, end=”-”)

output:-p-y-t-h-o-n

1. s=”abcabc”

print(s.find(“b”))

print(s.rfind(“b”))

output:- 1

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**DICTIONARIES:-**

1. d={“a”: 1, “b” : 2}

print(d[“a”])

output:- 1

1. d={“x” : 5}

print(d.get(“y”))

output:- syntax error

1. d={“a” : 1}

d[“b”] = 2

print(d)

output:- {'a': 1, 'b': 2}

1. d={“a”: 1, “b”:2}

for k, v in d.items( ):

print(k,v)

output:-a 1

b 2

1. d={“a”: 1, “b” : 2}

print(“c” in d)

output:- False

1. d = {}

d["list"] = [1, 2, 3]

print(d["list"][1])

output:- 2