

Parayya, Sridharshini - Pure Storage

OJT - Python Excercise - Paper1

1. What are the differences between list and tuple? Which is faster and why?
2. What is the lambda function in python? Explain with examples.
3. What is monkey patching and what is the use of monkey patch?
4. What is the importance of PEP rules
5. Can we order a dictionary? How?
6. Write a python program to right rotate a List by n
Enter position to rotate list item: **3**
Sample input: [10, 20, 30, 40, 50, 60, 70]
Expected output: [50, 60, 70, 10, 20, 30, 40]
7. Difference between append and extend operations of list
8. Create a dictionary where the key is an even number from the given list and the value will be the occurrence of that element in the list. input= [1,2,3,2,4,2,4,7,8,4,5,8,6,9,2]
9. Write a function **swap_element** that contains **two args** which will be the position of elements present in the list. The function must swap the elements present in those positions.
Input: [1,2,3,4,5,6,7,8] function: **swap_element(arg1, arg2)**
10. Write the output of the program:
match = 'version', input='Upgraded_image_version_8.0.4.3'
if match in input:
 print('YES')
else:
 print('NO')
11. Rewrite the program to get proper output
Match = 'version'
input=8
print(Match+input)
12. How is memory management done in python?
13. Give a real time example for multithreading. Is it a good idea to use multi-thread to speed your Python code?
14. When do you use generators in python? Give an example
15. Give the scenarios, when you will get 'ValueError'
16. Write a program to multiply two given number without using "*" operation and any in built function
17. Write a program to find the count of alphabet alone in the given alphanumeric string for
Ex1: **input='abb24ccc8ddbbca1' output='a1b224c3d2b2c1a11'**
Ex2: **input = 'abc23' output='a1b1c123'**

18. Write a python program where for every two hours it prints the pattern without using sleep function

```
*****
*****
*****
***
*
```

19. Write a program using decorators to print the traffic signal messages

Expected output -

RED : STOP

YELLOW : SLOW DOWN

GREEN : GO

The decorator should be working in this order

20. Write a python program for sort the given below list based last character of each word
names_list = ['Prabhu', 'Rahul', 'Arunesh', 'Sonali', 'Rakshit']
21. How do you open a file of large size, say around 10GB? So that program should not crash
22. Write a function where month and year are taken as arguments which returns the output with all the dates of saturdays occuring the month
23. Find the highest sum of the string by removing the duplicates for each iteration
input='1211'
24. Write a python script to copy files from a directory **D1** based on timestamp(current_date) to another directory **D2** and delete the source directory **D1**. Whenever the script is called this program must run.
25. Write a program to send a mail notification to customers regarding the arrival of goods on a daily basis. The admin email has a separate domain email address owned by your company. Do not forget to add cc candidates in customer's mail.
26. You are given a string **S**. Your task is to find the indices of the start and end of string **k** in **S**
The first line contains the string **S**. The second line contains the string **k**.
Print the tuple in this format: (**start_index**, **end_index**). If no match is found, print (-1, -1).

| Sample Input | Sample Output |
|--------------|---------------|
| aaadaa | (0, 1) |
| aa | (1, 2) |
| | (4, 5) |

27. Write a Python class to check the validity of a string of parentheses, '(', ')', '{', '}', '[' and ']'. These brackets must be closed in the correct order, for example "()" and "()[{}]" are valid but "[)", "([)]" and "{{{" are invalid

28. Write a Python program to remove the parenthesis area in a string **using Regular Expression**

Sample data : ["example (.com)", "MSys", "github (.com)", "keka (.com)"]

Expected Output:

Example

MSys

github

keka

29. Write a regular expression to find the html tags that are more than 4 letters.

Note: Html tags can be found inside <> characters and closing html tags can be found in the same format after / character. </>

i.e.: <param> </param>

30. How does the context manager work in python? Explain the internal methods. Write a custom sample context manager.