Module: Python

**Q1. Write code to convert the below Dictionary in Pandas Dataframe:**

      Dictionary:  `dct = [{'2022-03-31': {'A': 12323, 'B': 123123}},{'2021-03-31': {'A': 12, 'B': 123}}]`  
        
Expected Output:df is dataframe  
```         
>> df  
            Date         A         B

    0 2022-03-31 12323 123123

    1 2021-03-31     12         123  
```

**Code:**

import pandas as pd

dct = [{'2022-03-31': {'A': 12323, 'B': 123123}}, {'2021-03-31': {'A': 12, 'B': 123}}]

dataList = []

for entry in dct:

    date, valueDict = list(entry.items())[0]

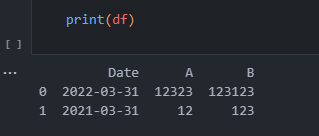
    valueDict['Date'] = date

    dataList.append(valueDict)

df = pd.DataFrame(dataList)

df = df[['Date', 'A', 'B']]

print(df)

**Output:   
**

**Q2. Write a Python code to count the Sum of positive and negative numbers that are below 40 in the below list**.

list = [10,-20,30,40,-50,60,12,-12,11,1,90,-20,-10,-5,-4]  
  
Expected Output:  
```  
The sum of positive elements in the list below 40: X  
The sum of negative elements in the list below is 40: Y  
```

**Code:**

list = [10, -20, 30, 40, -50, 60, 12, -12, 11, 1, 90, -20, -10, -5, -4]

positivesum = 0

negativesum = 0

for num in list:

    if num < 40:

        if num > 0:

            positivesum += num

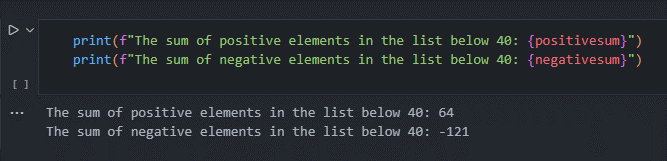
        elif num < 0:

            negativesum += num

print(f"The sum of positive elements in the list below 40: {positivesum}")

print(f"The sum of negative elements in the list below 40: {negativesum}")

**Output:**



Module: Linux

**Q1. Write a Shell script that will do the following.  
      i) Check Linux OS, which Linux distribution is present in the machine. E.g., Ubuntu, Cent OS  
      ii) Check whether application ‘httpd’ is installed or not on the Linux machine,  
      iii) If ‘httpd’ is not installed, install httpd  
      iv) check the status of the httpd application whether its status is running or not  
      v) If the status of the ‘httpd’ application is not running then start the application**

Code:

Output:

**Q2. i) Write Linux commands to check the storage of each folder present in ‘/home’ directory.  
      ii) Write a Linux command to check CPU Utilization, RAM, and Number of CPU Cores.**  
Code:

Output: