Ananta
Consulting Group

Test Time: 02 Hours

Please answer the following questions. You can prepare .py file for each question and send them in email.

1) Multiprocessing Task - Prepare a script which reads given multiple csv files from zip files in multiprocessing and combines data in single file and outputs the csv file.
   Note: Sample data has been given for 12 days. Each day has one zip file. You only need to read data from a file which has following keyword **"60d_DAM_PTPObligationBidAwards"** in file name. Each file should have same list of columns. You need to combine data from all files and write one csv file.

2) PyQt Application - Create a PyQt application using widgets mentioned below with sample data (send .py, .ui for this question)
   a. Combo box with checkbox selection
   b. Table widget with radio button in each row
   c. Table widget with combo box in each row
   d. Pushbutton with some print message on click.
   e. Create multiple tabs with tab widget.
   f. Use different layouts and group boxes as required.

3) Pandas based script - Read given csv file and perform below mentioned operation on the data:
   a. Temperature in the file is in degree Celsius. Convert it to Fahrenheit for all operations.
   b. Prepare a table which gives Max temperature by Zone, by Date and combine unique Report Type in a row as shown below:

Zone	Date	Temperature	ReportType
A	4/1/2020	53.96	FM-15, FM-16, SOD, SOM

   c. Prepare a table which has average temperature by Zone across all day from table created above.

Zone	Temperature	ReportType
A	53.15	FM-15, FM-16, SOD, SOM

4) Create html table with any sample data and write a script in Python to send an email to any recipient. You can send email from any domain of your choice.

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5) Using the following table, write a SQL query that retrieves the hour of the day with the second lowest average price.

Point	DateTime	Price
PointA	4/1/2020 1:00	25.69
PointA	4/1/2020 1:30	33.88
PointA	4/1/2020 2:00	66.57
PointA	4/1/2020 2:30	46.95
PointA	4/1/2020 3:00	9.95
PointA	4/1/2020 3:30	23.45
PointA	4/1/2020 4:00	23.22
PointA	4/1/2020 4:30	6.43
PointB	4/1/2020 1:00	17.77
PointB	4/1/2020 1:30	34.99
PointB	4/1/2020 2:00	86.23
PointB	4/1/2020 2:30	50.05
PointB	4/1/2020 3:00	80.69
PointB	4/1/2020 3:30	22.44
PointB	4/1/2020 4:00	63.5
PointB	4/1/2020 4:30	36.96

Find the hour with second lowest avg price

The expected result is: ***2020-04-01 04:00***