Python Developer Assessment

Ques – Create a mini automated sales forecast generation project. Please follow the below instructions carefully -

1. Refer to the excel attached -

Inputs

2. Using Flask, upload the given excel into MongoDB.
3. Create an API to trigger forecast generation job.
4. Create an API to download output excel

Note –

1. Technologies to be used – Python, Flask, MongoDB, Celery, Angular 12 (if using frontend).
2. Refer to the logic below to generate forecast

Using the data given in the excel, you'll need to generate the forecast of each article for next 2 months (60 days).

Expected output to be in the following format -

Article	Week_no	Quantity
article1	12	3.78
article1	13	3.78
article1	14	4.37
article1	15	3.78
till 60 days for all the articles		

- Calculation of Quantity:

   Quantity = AvgSales * no of days in that week * BudgetFactor, where

   BudgetFactor = current week budget/previous week budget

- Illustration :
1. Budget Factor (week #12) = current week budget (week #12)/previous week budget (week #11)
2. article1 quantity (week #12) = 0.54 * 7 * 1
3. Budget Factor (week #13) = current week budget (week #13)/previous week budget (week #12)
4. article1 quantity (week #13) = 0.54 * 7 * 1
5. Budget Factor (week #14) = current week budget (week #14)/previous week budget (week #13)

6. article1 quantity (week #14) = 0.54 * 7 * 1.15
- Execution needs to be started from the current date, for example – if current date is 15/3/2024 then no of days in that week would be 3.

Submission guidelines -

1. Solutions to be submitted within 5 days from the date of receiving.
2. Share the solutions in ZIP format where code, screenshots, output file, ReadMe (if any) should be present.
3. Failure to follow these guidelines will lead to disqualification.