Python Developer – Coding Assignment

1. Create an application in **Django/Flask**

2. Create two REST API's.

    a. API name: 'api/zip-codes' and Methods: GET

    b. API name 'api/data' and Methods: GET, POST, PUT

3. Save the CSV file (uszips.csv) in a static directory.

4. If we call 'api/zip-codes' GET API, the Django/Flask server should return all zip codes (only zip codes) as JSON response.

5. If we call 'api/data/<ZIP_CODE>' GET API, the Django/Flask server should return the corresponding ZIP Code details as JSON response.

6. Should be able to update the "population" column in CSV using the 'api/data' PUT API.

7. Should be able to add a new row in the CSV with a new ZIP code. If the zip code already exists in the csv it should return proper messages.

8. Return warning messages if the request data is invalid (check for data type and min max data length).

9. All file processing must be handled using **Pandas** library.

10. All responses must have proper HTTP codes in response.

11. CSV data row add/update (POST/PUT) must be processed asynchronously with **RQ/Celery**. The response should not wait for the update in CSV data, but it should check for initial validation of request data.

12. Lastly all API calls (API name, API call time, API call success/fail status) must be logged in a **sqlite3** database (Use any ORM- Django/SQLAlchemy). This process should also be in an asynchronous queue (RQ/Celery)

You can add more features if you like. The first ten points will fetch you 100 marks and the next two points will get you 25 marks each. The code should have proper comments/tests/reduce-code-lines. A **readme.md** file should be added with all instructions to run the application.

Please send an email to message@logicplum.com if you have any questions. The maximum time limit to complete this assignment is 48 hours. You will have to submit the assignment back in 48 hours.

Visit the same page you used to download this assignment to submit the assignment.

Important points to note

- **You have 48 hours to complete the assignment from the time of download.**
- Please do not upload this assignment to any public code repositories such as GitHub
- The completed assignment should be well documented with proper comments and a readme file with instructions to run (if applicable)
- Please mention the version of software or packages you use in the documentation to make the assessment easier.
- You can download the assignment multiple times. However, the time of the first download will be considered for evaluation.