Home assignment

You are provided with the Titanic passenger data as a CSV file

1. Write a web service in Python that exposes the following functionality
2. Return a histogram (bar chart) of Fare prices in percentiles
3. X axis for percent
4. Y axis for counting how many of the prices falls under each percentile

b. Given a PassengerId return all passenger data in Json format

c. Given a PassengerId and attribute list, return only requested attribute list from passenger data in Json format

d. Return a list of all passengers in Json format

e. Show the web service APIs using Swagger (an OpenAPI implementation)

2. Use sqlite3 as a data source

a. Add support for multiple data source types to question 1

b. Read which data source to use from config file: CSV or SQLITE

c. Question 1 functionality should stay the same (code may change)

3. Use Non-blocking I/O to allow multiple concurrent requests to the web service.

Pro tasks

1. Expose the service as a docker container

2. Expose the data source that contains Titanic data as a docker container

3. Show how we can get question 1, 2 functionality with the 2 containers

Notes:

● You can use any library of your choice to complete the task in Python.

● Show how you test your code, find edge cases and handle exceptions accordingly

● Use clean coding principles to write your code