



PUBLIC

Coding Exercise

Platform CoE Hiring 2023

Please find the description of the exercise as well as the way to send us your submission.

Description

Along with this document, you received a zip file containing a set of cities in JSON and CSV format. Your task is to build a small piece of software using this data with individual subtasks listed below. You can use either JavaScript, Java or Python to solve the exercises and you can leverage open-source libraries and frameworks as you see fit. Of course, you can also make use of SAP technology.

The data comprises of cities with population numbers and an area size in square miles.

Submission

Please submit your solution via a public repository on a platform of your choice (e.g., GitHub, GitLab, Bitbucket). Ideally you start by creating the repository and commit code as part of your development process. Please include a README with prerequisites and instructions how to run your application. Please also make sure that it is runnable.

Tasks

1. Build a web service that offers an endpoint which returns all cities from either the JSON or CSV.
2. Enhance the service to also include a density field, which should be number of people per sq km.
3. Add the capability to sort by name / population / area in descending or ascending manner.
4. Additionally, add a feature to filter the cities by name using a “contains” filter.
5. Create an endpoint to add new cities with name, population and area during runtime.
6. Create an UI which loads the full dataset from the service and shows it in a table with all 4 columns.
7. Improve the UI by highlighting rows of cities having a population over 1 million.

Thank you and looking forward to meeting you. www.sap.com.