Design Challenge 8

Prof. Eduardo Guerra (UniBZ)

OPEN DATA HUB

https://opendatahub.com/

Open Data Hub is the cross-border digital platform that helps start-ups, companies and research institutes to develop digital solutions based on real data. It connects data from different data providers and makes this data easily available for data consumers.

Context	The Open Data Hub platform have databases with data from different domains, like currently mobility and tourism, and new ones should be incorporated soon. In some scenarios, a single API can be used to search for information that can be in one of the databases.
Open Data Hub	- Quick start guide https://opendatahub.com/quickstart/ - Data sets description https://opendatahub.com/datasets/ - If you have any doubts: help@opendatahub.com
Challenge	The challenge is to create a component that can access services from different bases of the Open Data Hub API and selecting the right one based on the search parameters. The component should provide only one API that select between implementations based on the parameters received. In some cases, the component can search for the element in both APIs to see if it could be found in one of them. The component should not be specific for a given service but should be general, and all the parameters and information needed should be read from a configuration file. As an example, that component could be used when retrieving points of interest or events from the mobility and tourism APIs.
Requirements	- Create a component that invoke two classes that call Open Data Hub APIs from different databases (these classes should have the same interface and should be plugged in). - The component should map the response from both classes to a common format that will be used in the response. This

	mapping should be done by configuration and cannot depend directly on the entities involved.
	• Parameters can be used to select the API to be used.
	• In case the parameters cannot be used to find the right API, the component should invoke each implementation until have some information returned.
To test	• Choose two Open Data Hub APIs, one from mobility and one tourism APIs, to test your solution.
	• Create tests that use your solution to retrieve data that are present in different databases.
Number of students	2
Lab Points	10 (max for each student)
Condition	If you take this challenge, you should create an open-source repository to share the code from your solution.