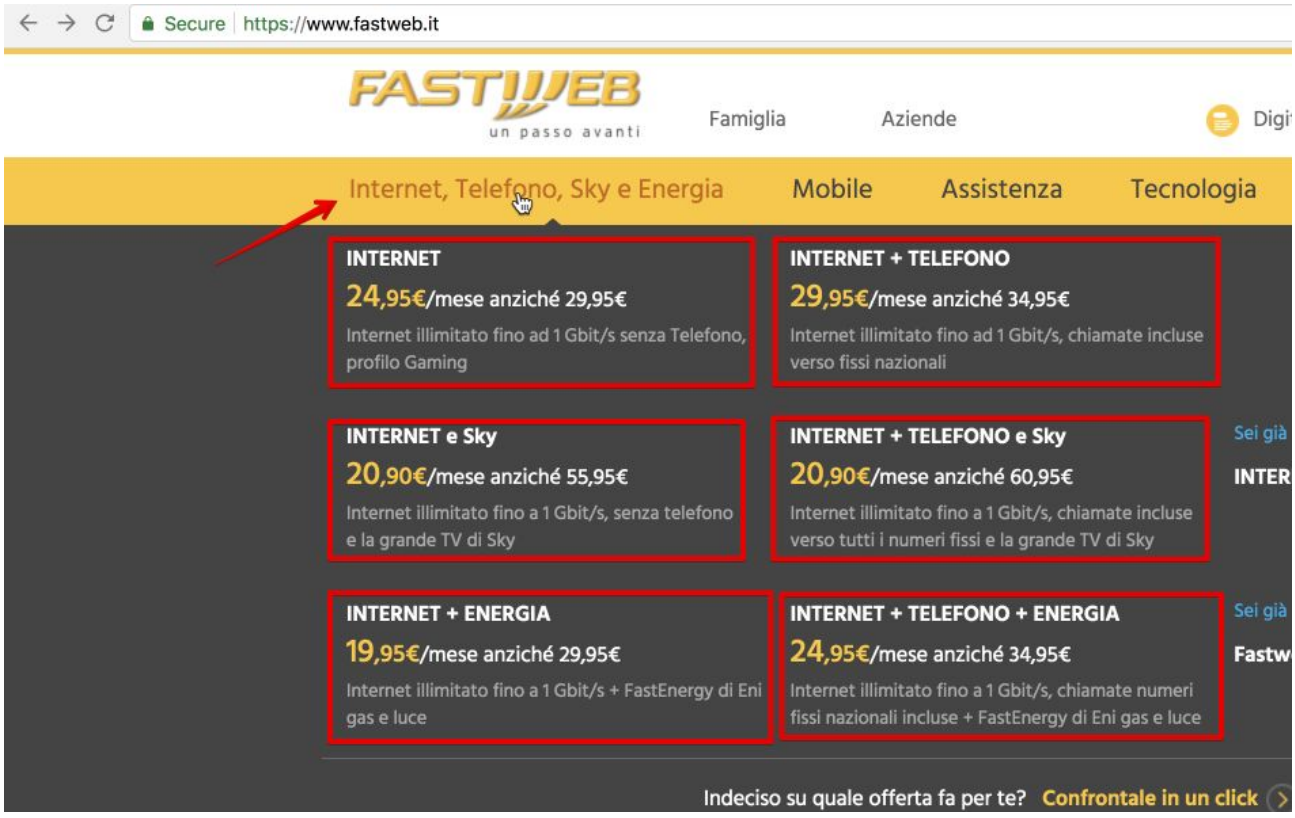
The Goal

Have a web interface and an API for our apps to display the available plans from a specific carrier. This way, our users will know which plans they can choose from that carrier easily. In order to keep the plan database up-to-date, we want to fetch the plans directly from carrier's website, avoiding waste of time on managing it.

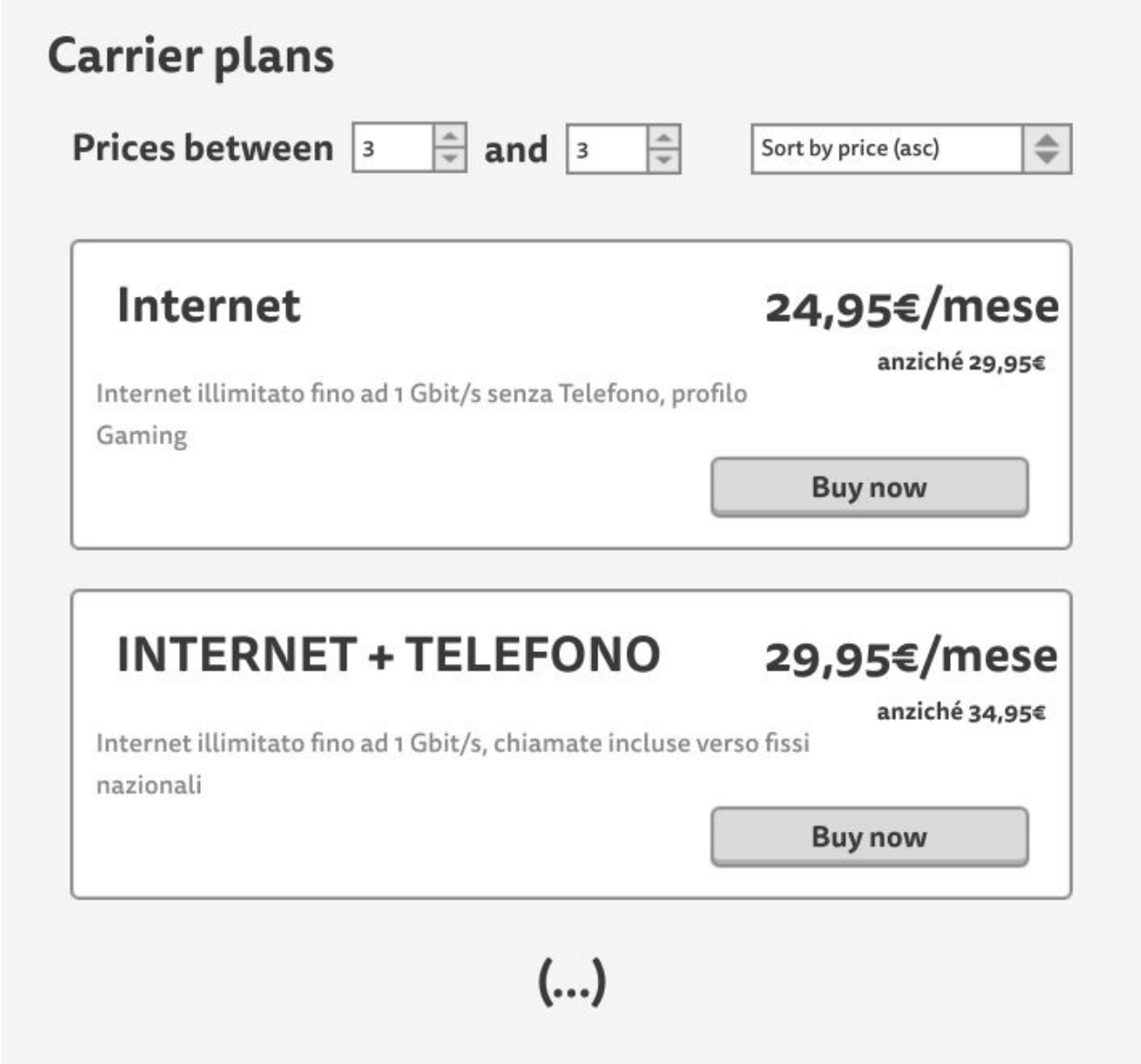
Description

The best solution for this case would be to create a simple crawler that uses carrier's website (https://www.fastweb.it/) to get the list of plans. The plans are listed under the menu "Internet, Telefono Sky e Energia", as shown in the screenshot below



In this screenshot, each red square is a tariff that we want to make available for the user

Apart from the backend of this application, user needs a web interface to be able to see the tariffs, with a filter per price and allowing the user to sort by price and by name.
The interface should follow this wireframe:



Don't forget that we need make this data available for the apps also. So, you will need to create an API for the apps to get the plans and make it easy for them to filter and sort the data. Explain mobile developers how to use this API.

Since we want to understand user's behaviours and interests to provide them the best plans, we need also to track which users click on the "buy now" button (it will be only action of the button), and what they filtered to get the list of plans. In the future, we will analyse this data to improve our interface and suggestion algorithms.

What we evaluate

For this project, it is required that you use some backend technology (in order of preference: Django, any other Python web framework or Ruby in last case) with an ORM library to save the plans in a database (preferably, PostgreSQL or MySQL). You need to use Docker to setup your architecture.

For the frontend, it should work fine both on desktop and mobile. We prefer that you use a modern framework for the frontend (React or, in case you don't feel comfortable with it, Angular or Vue.js), but using simple JQuery should be fine also. **But keep in mind that it is mandatory to use at least ES6, LESS/SCSS/SASS and some building process** (webkit, parcel, gulp… you name it).

You should share with us also a description on how you would deploy this project (we use Amazon AWS, but if you describe how you would do it on Google Cloud or Azure it's fine also). Keep in mind that this application might need scale to thousands of simultaneous users, but will also have some periods with few simultaneous users (people don't usually search for a new a phone plan at 4 am in Italy).

In any case, we want to see clear code, good test coverage and good documentation. You should also put the project in a public git repo, and provide some documentation for us on how to run the project and the tests.

Disclaimer

This is an hypothetical scenario, not a real business requirement. Your code will not be used by us.

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