CODING CHALLENGE

FULL-STACK DEVELOPER (Amsterdam)

For this vacancy, we are looking for full-stack Developers who have experience or affinity with the data domain. To speed up and strengthen the data revolution we are searching for the best engineers to join us.

We prepared a coding challenge for you to show your skills to us and understand what kind challenges you will see if you join us. This assessment could take 3-5 hours.

We would like you to deliver a solution to visualize a small graph data with the following data:

Sample graph data


```
{
   "data":[
      {
         "name":"A",
         "description":"This is a description of A",
         "parent":""
      },
      {
         "name":"B",
         "description":"This is a description of B",
         "parent":"A"
      },
      {
         "name":"C",
         "description":"This is a description of C",
         "parent":"A"
      },
      {
         "name":"D",
         "description":"This is a description of D",
         "parent":"A"
      },
      {
         "name":"B-1",
         "description":"This is a description of B-1",
         "parent":"B"
      },
      {
         "name":"B-2",
         "description":"This is a description of B-2",
         "parent":"B"
      },
      {
         "name":"B-3",
         "description":"This is a description of B-3",
         "parent":"B"
      }
   ]
}
```

USER STORY

As a user, I would like to see the hierarchy of the provided data.

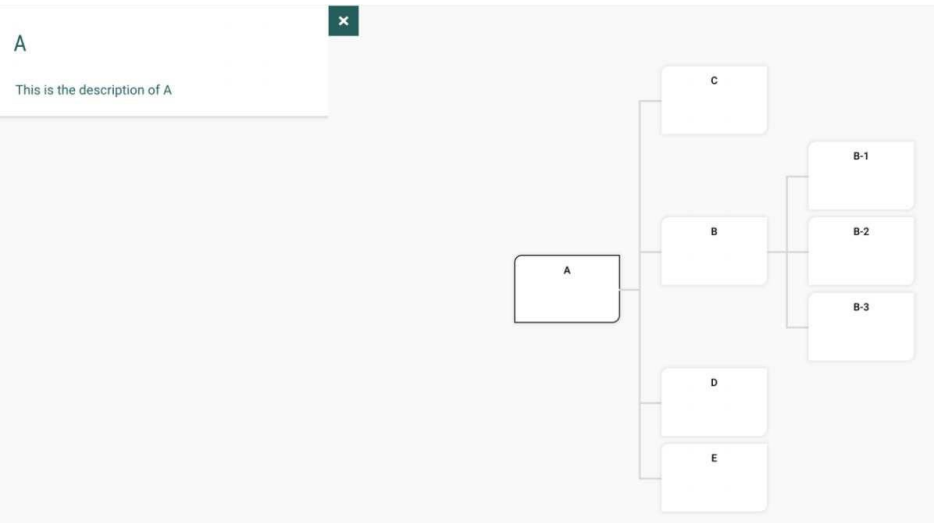
ACCEPTANCE CRITERIA

- Clicking one of the nodes, displays the detail of that node.
    - Selected node should be visible on the layout
    - Description and the name should be visible in a sidebar or popup
- Hierarchy should be visible and understandable by the user
- Tree layout could be from top to right or left to right
- User should be able to deselect a node. (In the sample design, user can click the cross icon and deselect it)

DESIGN

UI and style is not the most important thing for this task. Because of that we don’t provide any pixel perfect design.

You can use this image to imagine how you could visualize the data.



NON FUNCTIONAL REQUIREMENTS

- This assignment should contain the source files in one repository.
- You can read the data from a database or copy the data into your code.
- As a data store we recommend you to use graph database you are comfortable with.
- We expect from you to create a express.js server which has a GET endpoint which serves the data with correct hierarchy.
- Read the data from database and serve it to frontend with JSON format.
- Read the data from Backend via GET endpoint
- Please feel free to use a front-end visualization library like D3.js.
- You can use plain VanillaJS or VueJS in the Frontend and Node.js or Python in the Backend
- Usage of TypeScript, Sass, Webpack is your consideration

ADDITIONAL POINTS

Deploy the code in Azure or any major public cloud (you build it, you deploy it, you run it).

EVALUATION CRITERIA SORTED BY IMPORTANCE

(Inspired by this article: https://blog.indorse.io/heres-what-we-learned-from-4500-code-reviews-6c9ea3069d0e)

- Code quality
- Readability
- Extensibility
- Knowledge of Design Patterns and best practices
- Test coverage

ASSESSMENT REQUIREMENTS

- Share a public git repository with source code
- Git Repo should contain a README that describes how to use the application.