rhabit

Build an Organizational Relationship API

Problem Overview:

Companies often work in hierarchies, and visually the way they represent these relationships is in the form of an organizational chart. In this exercise, we'd like you to build a RESTful web API and a simple front-end experience that allows users to create, read, update, and destroy organizational relationship data that would be used to build an organizational chart.

Solution Requirements:

The API should support a number of methods, with the goal of providing functionality that includes:

- Adding a new user not included in the pre-populated dataset.
- Removing an existing user.
- Updating an existing user.
- Returning an entire organization's relationships (as a JSON object).
- Returning a subsection of an organization's relations, e.g. a manager and all of their direct reports (as a JSON object)
- BONUS: Render a graphical representation of the organization's relationships (organizational chart) using the data returned from the API

The solution should be built using Ruby on Rails, because this is our current technical stack and it's what you'll be working with at Rhabit. For the front end, we recommend you implement this using React.js. The visual styling is completely at your discretion and should be viewed as an opportunity for you to express whatever stylistic approach you feel is appropriate or interesting to you.

Submission:

Please create a GitHub repository and upload your solution there, then add a simple README detailing setup and usage.

Follow-Up:

Be prepared to talk about your solution with our team as the next step after submission. We'll want to have a conversation about your experience solving the

problem and we'll be asking you to speak to the choices you made around implementation and why you made them.

Example organizational relationship output:

```
[
  {
    "id": 1,
    "name": "Dade Murphy",
    "title": "CEO",
    "direct_reports": [
      {
        "id": 2,
        "name": "Kate Libby",
        "position": "CTO",
        "direct_reports": [
          ...
        ]
      },
      {
        "id": 3,
        "name": "Edward Vedder",
        "position": "CFO",
        "direct_reports": [
          ...
        ]
      },
      {
        "id": 4,
        "name": "Margo",
        "position": "VP of Public Relations",
        "direct_reports": [
          ...
        ]
      }
    ]
  }
]
```

Appendix:

Initial Userlist (Please Seed the Application with these users):
UserID, Firstname, Lastname, Title, ManagerUserID
1,Dade,Murphy,CEO,null
2,Kate,Libby,CTO,1
3,Edward,Vedder,CFO,1
4,Margo,Wallace,VP of Public Relations,1
5,Eugene,Belfort,VP of Engineering,2
6,Richard,Gill,Public Relations Manager,4
7,Emmanuel,Goldstein,Lead Software Engineer,5
8,Paul,Cook,Software Engineer,5
9,Joey,Pardella,Junior Software Engineer,8
10,Agnes,Pardella,Project Manager,4
11,Ramon,Sanchez,Software Engineer,8

Org Chart Visual Example (for reference only, no need to mimic precisely):