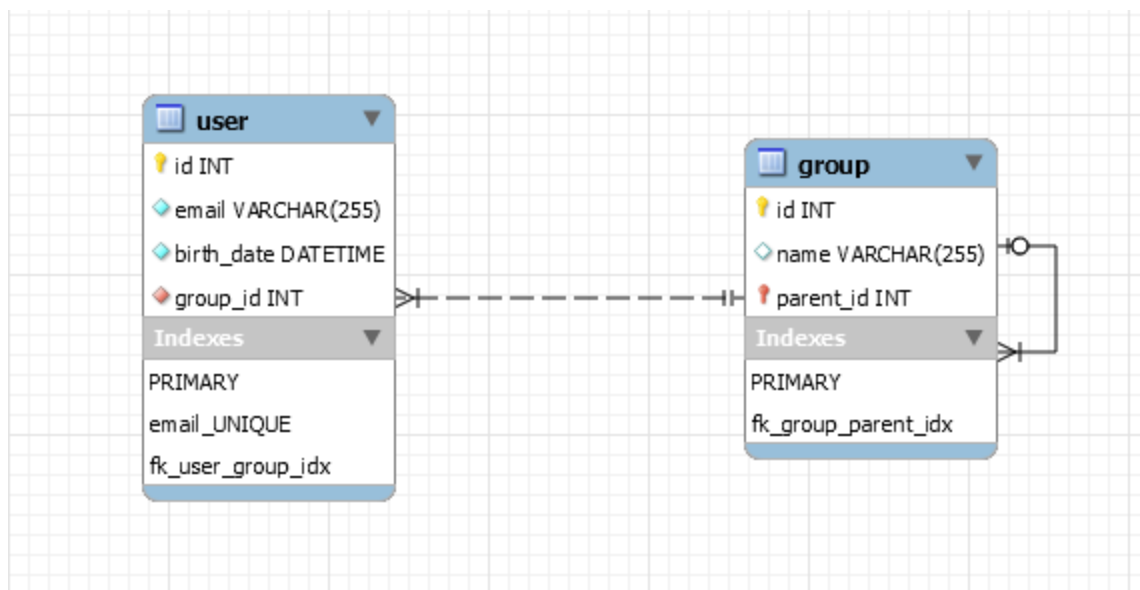# Angular Developer Job Application Pre-Test

Case:

We would like to develop a Single Page Application (SPA) to show the youngest, oldest and average age of employees per department, to achieve this we need a small Angular application.

The departments and employees are stored in a database according to the EER diagram below.

EER diagram

API

To assist in the development of the front-end application a mock api can be created with JSON Server. It is already set up and you can run it with: `npx json-server --watch data/db.json`

When the JSON Server is running you can access the groups and users endpoints, e.g.:
- http://localhost:3000/groups?parent_id=1
- http://localhost:3000/users?group_id=2

Wireframe and Description

The SPA should list the available groups in a list on the left side. When the user expands a group, the child groups should be loaded. When the users selects a group the users in that group should be loaded and their email and age shown in a list on the right side. Below the user list the youngest and oldest user and the average age should be shown.

Application constraints:

- The application should be written in Angular >= 12
- In the future the number of groups and users could grow very large.
  - Make sure that the function that retrieves and shows the groups can go to an 'unlimited' 'depth'.
  - Do not load all groups at once but only load the children for the requested group (in order to optimize the user experience 1 level deeper could be pre-loaded).
  - Only load users for the selected group.
- Choice of design/styling can be filled in freely

Bonus points:

- Use Docker and Docker compose to run the JSON Server.
- Add support to create, update and delete users.

The rest of the code can be completed freely.

In case you have any questions in regards to the assessment, you're always free to ask (preferably via email to r.hertogh@mycademy.com).