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Test assignment for Junior Backend Developer position

In this test assignment your call is to develop a web-based Employee Directory for a big company with over 50,000 employees.

General information

1. Test assignment is split into two parts. Part 1 is required and you must complete it fully to be considered. Part 2 consists of optional tasks that you can complete to show your experience in web development field.
2. If you have experience with Laravel / Symfony frameworks try to implement as many tasks from Part 2 as possible to prove your overall proficiency and skills.
3. You should send your solution to our email address info@abz.agency as a link to github/bitbucket repository. If you submit your solution in any other form (as a link to zip archive, attached zip file, etc.) – your application won't be considered!

Technical requirements

- Laravel 5.4 / Symfony 2.8 LTS / Symfony 3.x
- MySQL 5.6+
- PHP 5.6 / 7.x

You can use any PHP and Javascript/CSS 3rd party libraries without any restriction. If 3rd party PHP libraries are added to the project via composer you will get bonus points. If 3rd party javascript/css libraries are added to the project via bower/npm/yarn you will get bonus points.

Part 1 (required)

Create a web page that displays employee hierarchy in a tree form.

- Employee data should be stored in a database, following information about each employee is required:
  - Full name;
  - Position;

  - Employment start date;
  - Salary;
- Every employee has exactly 1 boss;
- Database should be filled in with data of at least 50,000 employees and there should be at least 5 levels of hierarchy;
- Don’t forget to display employee position.

Part 2 (optional)

1. Create database using Laravel / Symfony migrations.
2. Use Laravel / Symfony seeder to fill database with data.
3. Use Twitter Bootstrap to apply basic styles to your page.
4. Create another web page with a list of all employees with all employee record fields from the database and implement possibility to order by any field.
5. Add possibility to search by any field to the page you created in task 4.
6. Add possibility to order (and search if task 5 is implemented) by any field without reloading the whole page (i.e. using ajax).
7. Using standard Laravel / Symfony functionality implement login/password restricted area of the website.
8. Move functionality implemented in tasks 4, 5 and 6 (including ajax endpoints) to login/password restricted area.
9. In the login/password restricted area implement the rest of CRUD functionality for employee record. Please note that all employee fields should be editable including possibility to change employee’s boss.
10. Implement possibility to upload employee photo and display it on the employee edit page and add additional column with small resized employee photo to the employee list page.
11. Implement logic to re-assign employee’s subordinates to employee’s boss in case if employee is being deleted (additional bonus points if you implement it using Laravel / Symfony ORM features).

12. Implement lazy loading for employee tree, i.e. by default show first 2 levels of hierarchy and load tree branch (full or 2 more levels of hierarchy) by clicking on the employee from the 2nd level.
13. Implement possibility to change employee’s boss using drag-n-drop directly in the employee tree.
14. Create database structure first using MySQL Workbench (do not forget to commit MySQL Workbench project file to git) and generate migration files for Laravel / Symfony from existing MySQL database or directly from MySQL Workbench project file.

We kindly remind you that your test assignment should be submitted as a link to github/bitbucket repository. Please be patient, we consider and respond to every application that meets minimum requirements. We look forward to your submission. Good luck!