**Akvelon Full stack application Task**

**2017**

## Change History

| Issue Date: | 6 June 2017 |
| --- | --- |
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| Revision | Change Description | Affected Documents | Valid Date |
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| 0.0.1 | Create draft | | 06/06/2017 |

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## Task Requirements

Notes for task:

1) Looking for object oriented design, break down by components, abstraction, etc.
2) Design approach for production code.
3) Unit-tests are necessary.
4) The assignment time is from 8 to 16 hours.

## Task Functionality

User management application should perform the following functions:

1)  User roles: administrator (master access), user (limited access)
2)  Functions:
    * Create account
    * Update account
    * Upload account (photo, information)
    * Delete account
    * Getting a list of users
3)  Creating a middleware for authentication using JWT
4)  Writing test cases (functional and usability)

## Back-end Task Definition

Create an application for user management (back-end side)

Using technologies and frameworks:

1)  Node.js
2)  TypeScript
3)  KoaJS 2 -  as basic framework for the development
4)  Mongo DB – noSQL document-oriented DB
5)  Mongoose - wrapper for functional document schemes
6)  JWT  - for user authentication (jwt.io)
7)  Mocha and chai – testing framework

## Front-end Task Definition

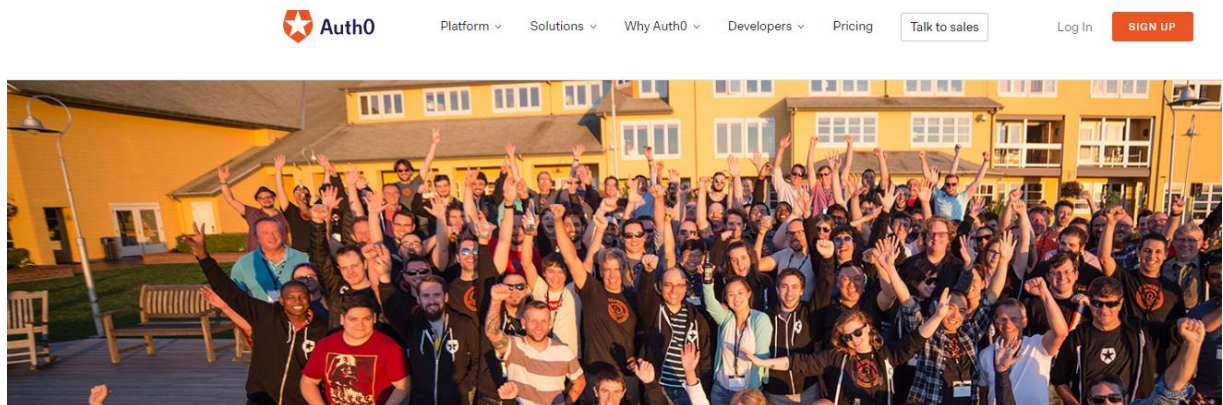Create a single-page application for user management (front-end side)

Using technologies and frameworks:

1)  React JS - as basic framework for the development
2)  Redux - state container for JavaScript applications

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3) Saga – as middleware and business logic
4) Jest - testing framework
5) TypeScript


Single-page application should consist of:

1) Welcome page (navigation bar and Sing on user)



2) Modal window (login and password)

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3)  Home page (photo, user, position) - grid

| | | | |
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| Alexander Basha | Alexander Golub | Alexander Petrash | Alexander Pochanin |
| Senior .NET Developer | Software Development Engineer in Test | Lead Software Test Engineer | Senior C++ Developer |
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