

# Climedo Health - Backend

v.2.0 2021

## Introduction

Dear software engineer, with this test we want to assess the level of your skills. **Please make sure to read the full document before you start implementing.**

## Requirements

For the completion of this task please use the following frameworks:

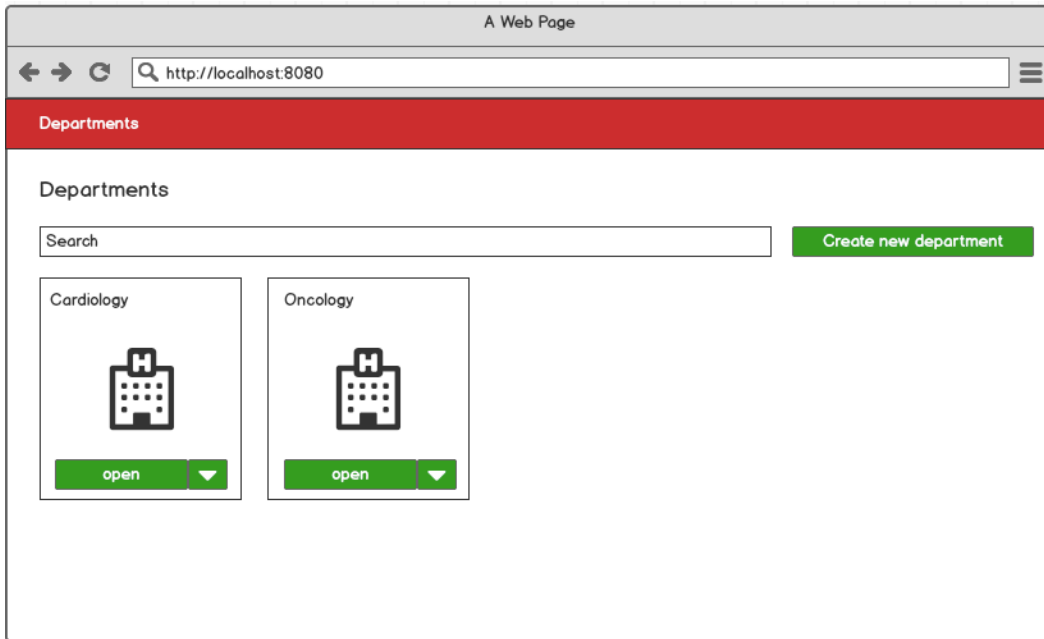
- **Backend:** (ExpressJS, NodeJS, MongoDB) (latest stable versions)
- **Other:** Feel free to use any existing open source libraries e.g. npm packages ... Whatever you need to complete the task.

## Task Description

In this test you need to implement the **backend** part of a web application for a hospital department management. The **RESTful API** routes that you will implement should enable the frontend engineers to create the following functionality:

- preview all departments
- preview a single department
- create a new department
- update a department
- delete a department
- search through the departments

The API responses as well as the data sent to the API should be in **JSON** format. Below you can find a few mockups for the required web app:



A Web Page

http://localhost:8080

Departments

Departments

Search

Create new department

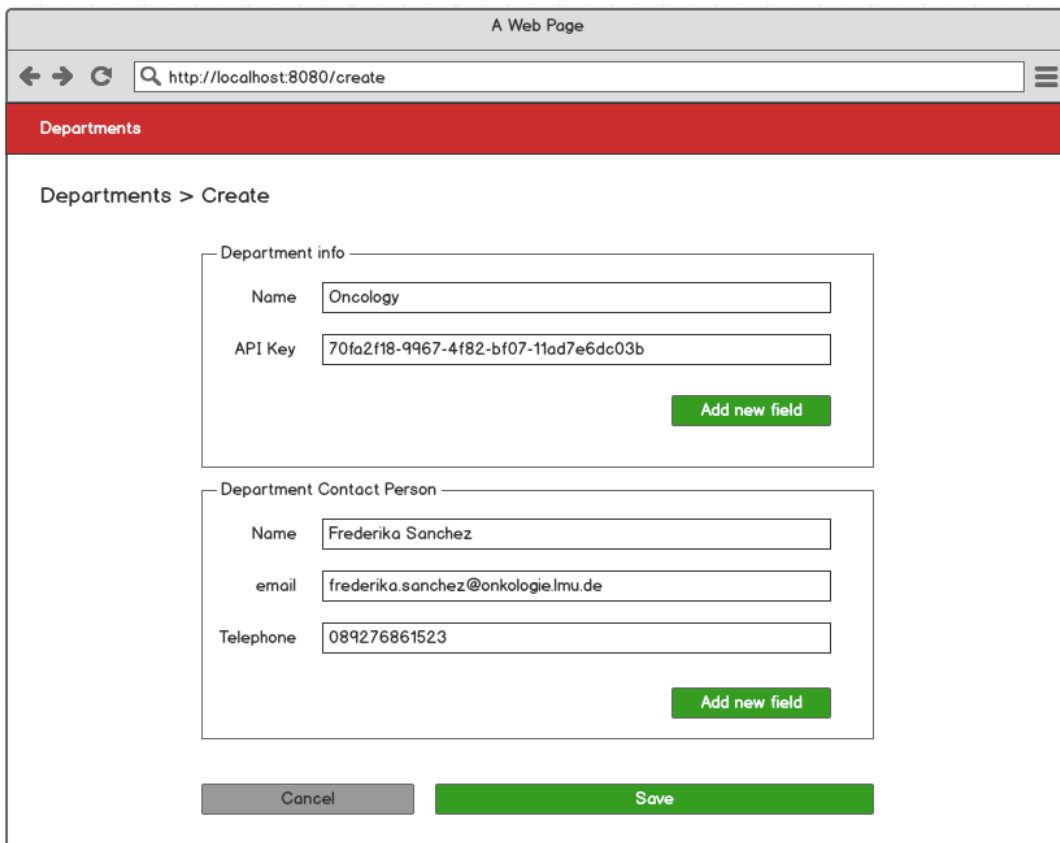
Cardiology

Oncology

open

open

Figure 1. Department listing



A Web Page

http://localhost:8080/create

Departments

Departments > Create

Department info

Name Oncology

API Key 70fa2f18-9967-4f82-bf07-11ad7e6dc03b

Add new field

Department Contact Person

Name Frederika Sanchez

email frederika.sanchez@onkologie.lmu.de

Telephone 089276861523

Add new field

Cancel Save

Figure 2. Create new department

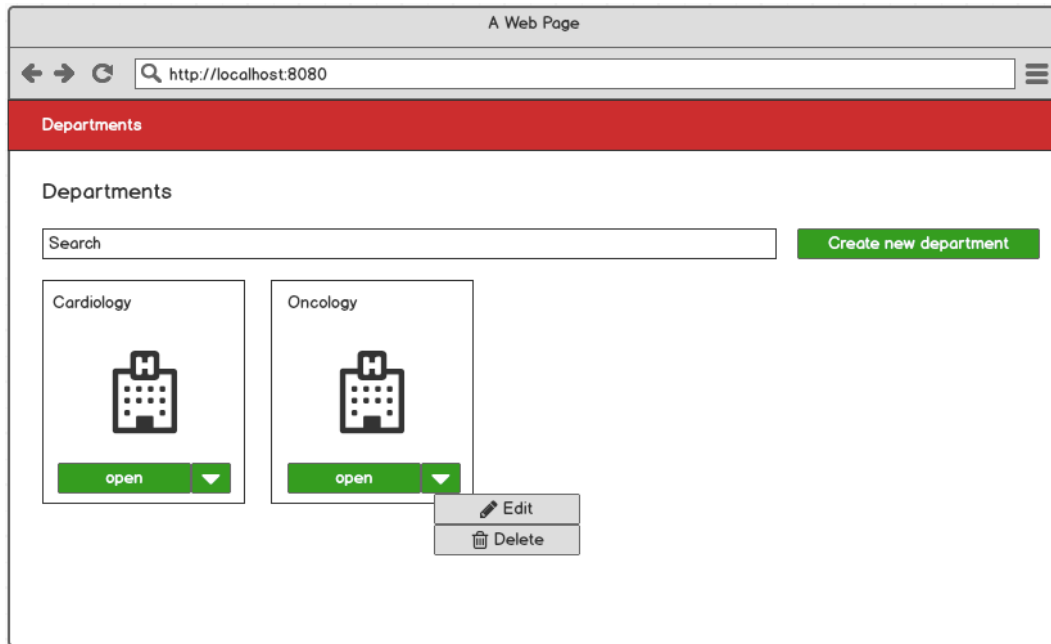
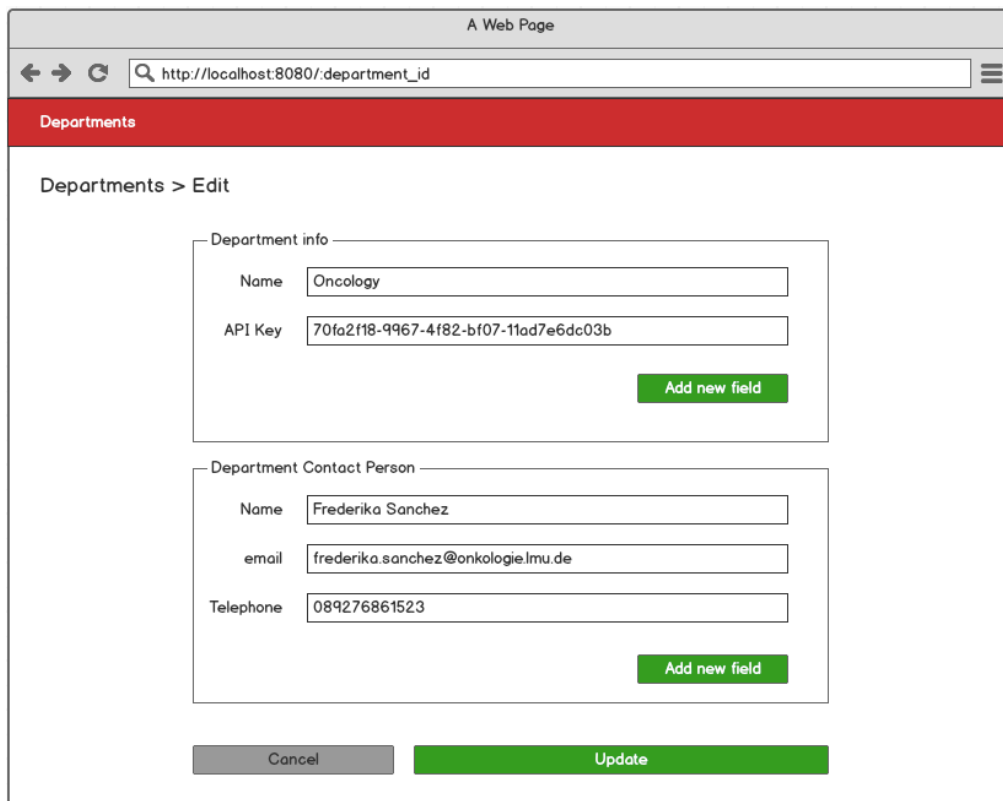


Figure 3. Edit/Delete via button dropdown



The screenshot shows the 'Departments > Edit' form in the web application. The browser address bar displays 'http://localhost:8080/department\_id'. The form is divided into two main sections: 'Department info' and 'Department Contact Person'. The 'Department info' section contains fields for 'Name' (Oncology) and 'API Key' (70fa2f18-9967-4f82-bf07-11ad7e6dc03b), with an 'Add new field' button. The 'Department Contact Person' section contains fields for 'Name' (Frederika Sanchez), 'email' (frederika.sanchez@onkologie.lmu.de), and 'Telephone' (089276861523), also with an 'Add new field' button. At the bottom of the form are 'Cancel' and 'Update' buttons.

Figure 4. Update a department

Please extract the properties for the database objects from Figure 4.

## Bonus tasks

1. The first bonus task will be to write a few unit tests for the RESTful API routes.
2. The second bonus task will be to enable users to add a few more custom fields to every department. On Figure 4, you can see the **Add new field** button which, if clicked, will open a modal asking to specify a **unique key** for a custom text input field. Once it is added and saved the user will be able to use it to add some extra data for the department e.g. Address of the contact person ... Please keep in mind that those custom input fields can vary for each department.

## Evaluation criteria

- Javascript best practices
- Show us your work through your commit history
- We're looking for you to produce working code, with enough room to demonstrate how to structure things in a small program
- Completeness: did you complete the features?
- Correctness: does the functionality act in sensible, thought-out ways?
- Maintainability: is it written in a clean, maintainable way?
- Testing: is the system adequately tested?
- Timing: please spend around 3-4 hours on this task but It is also fine if you want/need to spend more time on it. We will consider the quality/quantity/time ratio.

## Deliverables

Please create a **PRIVATE** [github](#) repository and work there. When you are finished please invite [ClimedoHealthCodingTests](#) to the repository. We will download your solution from there, review it internally and come back to you with next steps. **Please add this PDF to the root of the repository as well.**

**Please do not use a PUBLIC repository as a way to deliver the result and do not expose this test to anyone apart from yourself.**

Please organize, design, test, and document your code as if it were going into production and add a Readme where you will explain how to start/test the app. Additionally at the bottom of the Readme please add **application details section** containing:

- **Name:** Your full name
- **Email:** The email that you used to apply for the job at climedo
- **Position:** The position you are applying for

Because those things might not be 100% clear from your github user details.

**Good luck and have fun!**