Audibene Solution

# Overview

This document describes the problem and it provides solution. It does not discuss any alternative solutions.

Notice that the solution provide more than required please read in details the nonfunctional requirements and use cases sections.

# Nonfunctional requirements

* The data should (Nice to Have) be persisted and survive a server restart. The solution uses H2 memory relational database. Even though data do not persist after server restart, but it can be replace with any other relation database, which persists after a server restart.
* Logging: this is not required. The solution uses Spring AOP to solve this.
* The API must use JSON, HTTP and be written in Java. Use any framework if you wish. The solution uses Spring Boot framework to satisfy this requirement.
* Authentication / Authorization is NOT required
* User Interface is NOT required

# Use cases

## List audiologists

The system need to list available audiologists. The solution provides three audiologists by default.

### Status

Implemented as extra.

## Create customers

As an audiologist I want to create my customers. The customer cannot be created without having a first name and last name data.

### Alternatives

For the following cases the system will return an error and the customer will not be created.

* Audiologist does not exist in system.
* Firs name is missing.
* Last name is missing.

### Status

Implemented.

## Create appointments

As an audiologist I want to create appointments with a customer. The appointment cannot be created without having a date. The appointment will have rating with value between zeros to five. The default rating value is zero. Every appointment must belong to valid audiologist and valid customer.

### Alternatives

For the following cases the system will return an error and the appointment will not be created.

* Audiologist does not exist in system.
* Customer does not exist in system.
* Customer does not belong to an Audiologist.
* No date is provided.
* Appointment with the same date, Audiologist and Customer exists in the system. Not implemented.

### Status

Implemented.

## List audiologist appointments

As an audiologist I want to see an overview of all appointments and their ratings. The system will show the date, rate, customer and audiologist of every appointment belonging to the requested audiologist.

### Alternatives

For the following cases the system will return an empty report reported.

* Audiologist does not exist in system.
* Audiologist has no appointments.

### Status

Implemented.

## List audiologist next week appointments

As an audiologist I want to see an overview of the next week’s appointments. The starting date of the next week varies from country to country. In Germany it is Sunday. Same roles apply as list audiologist appointments.

### Status

Implemented.

## Customer next appointment

As a customer I want to see my next appointment. This will return the customer first appointment based on the requested time.

### Status

Implemented.

## Rate customer last appointment

As a customer I want to rate my last appointment. Rating has value starting from zero to five. The last appointment is the first appointment before the current date.

Appointment should have a status of visited otherwise the customer cannot rate it, this feature is not implements.

### Status

Implemented.

## Note

The following use cases had been implemented even they are not required:

1. List audiologists
2. List specific audiologist.
3. List customers
4. List specific customer.