

You are in charge of developing the REST API of a simplified online medical appointment booking application. After careful analysis, you conclude that you will have to implement the following features:

- A patient can search for the different providers of the clinic
- A patient can look for the availabilities of a specific provider within a defined time interval (for instance, the availabilities of Dr. A between May 8th, 2019 and May 12th, 2019)
- A patient can book an appointment with a provider by selecting one of their availabilities

Implement a simplified REST API that will support the aforementioned features.

Please note:

- Clinic
 - Only one clinic is to be supported
 - A clinic has only one attribute, its name, which also acts as its unique identifier (ID)
- Patient
 - A clinic can have one or several patients
 - A patient has the following attributes:
 - First name
 - Last name
 - The combination of the first and last names acts as an ID
- Provider
 - A clinic can have one or several providers
 - A provider has the following attributes:
 - First name
 - Last name
 - The combination of the first and last names acts as an ID
- Availability
 - An availability is a time-slot during which a provider is able to treat a patient, if the latter has booked an appointment
 - Each provider has one or several availabilities everyday
 - An availability has the following attributes:
 - Start date and time (timestamp)
 - End date and time (timestamp)
 - Availabilities are 15-minutes time-slots (8:00, 8:15, 8:30, etc.)
- Appointment
 - An availability that's been chosen by a patient is converted into an appointment upon booking (one availability = one appointment)
 - An appointment has the following attributes:
 - An appointed patient
 - An appointed provider
 - Start date and time (timestamp)
 - End date and time (timestamp)
 - As appointments are booked on availabilities, they are also 15-minutes time-slots