**Requirement:**

Design a scheduling application where a patient schedules an appointment with a doctor.

A patient can,

* Searches for a doctor
* Checks for the doctor available schedule
* Book an appointment
* Create a new patient if the patient is not already available

The above operations are exposed as a RESTful web api and the api accepts and respond as JSON objects. The following apis need to be designed for the above-mentioned operations,

1. Doctor – searches a doctor by passing various search parameters like, name, specialty, qualification etc.
2. Appointment – returns the pre-defined appointments by doctor and patients can book an appointment in available slot
3. Patient – Create a new patient or get existing patient information

All the information should be persisted in a database repository. The basic model to be created is Doctor, Appointment and Patient. You can include other tables as you think it is necessary.

Write a unit test case to test the above described api.

**Design considerations:**

1. Use .Net core(recommended) as base technology to develop web api, EF core to design database model and localdb to store the data
2. Follow SOLID design pattern and all your services are interface segregated and follow the coding standards.
3. Use the DI container and inject the services into the controller.
4. Use mock service (assume you do not have access to sql server database) while you write the unit test cases

**Repository:**

Create a github account and upload all your source code and share the link.