

Assignment

You're part of a team that has the responsibility to develop an API for online hotel bookings. The API is implemented in a service layer that communicates with a central booking system.

The implementation details of how to communicate with the central booking system is not known to you, all you have is an interface.

The API should be exposed as a HTTP/JSON interface, but that is not yet implemented and is not part of this exercise. You will have to define the interface that will be used by the HTTP/JSON communication module.

The problem

You will implement the business logic for a new feature: to add another guest to an existing booking. The required input is:

- Booking Id
- First name
- Last name

If the booking is in a German hotel, the guest's title (Herr/Frau/Dr) is also a required input field.

It is also important that there are beds for all guests. The number of beds differ depending on the room type. The room type is identified by a room type code (a string). The following room type codes are currently in use:

SINGLE	1 bed
DOUBLE	2 beds
TWIN	2 beds
TRIPLE	3 beds

The interface to the central booking system is defined as follows:

```
using System;
using System.Collections.Generic;

namespace BookingService
{
    public enum Country
    {
        SE,
        DK,
        DE
    }
}
```

```

public class Hotel
{
    public string Name { get; set; }
    public Country CountryCode { get; set; }
}

public class Booking
{
    public IEnumerable<Guest> Guests { get; set; }
    public string RoomType { get; set; }
    public Hotel Hotel { get; set; }
}

public class Guest
{
    public string FirstName { get; set; }
    public string LastName { get; set; }
    public string Title { get; set; }
}

public interface IBookingSystem
{
    Booking FetchBooking(Guid bookingId);
    void AddGuestToBooking(Guid bookingId, Guest guest);
}
}

```

You can copy the code above and paste it into your solution.

Your task is to:

- Define the interface towards the communication module
- Implement the business logic as described above
- Verify that the implementation works as described above
- Describe any additional assumptions you have made about the problem

Your solution should be written in C#.