



BookWise Solutions MVC Technical Test



Healthcare Scheduling Experts

Completing the test

Follow through the requirements document as you work, the requirements may evolve but we'd like to see how your solution evolves as well. As part of this we'd like to see you committing your changes to version control frequently – at least after implementing each requirement. Don't worry about pushing your commits for now. If you've not used git before visual studio provides really simple git integration.

You're free to use Google/MSDN/Stack Overflow for reference – this isn't a memory test!

You're free to add any additional libraries you may require to the project.

We're looking at how you implement the solution not just that it works in the end. We want to see clean, readable and maintainable code – any refactoring you feel will help is more than welcome.

Background

You're required to implement some functionality on a new room booking system. This system will allow users to book out rooms for meetings and appointments.

The system has various rooms setup which belong to a site – a site is just an organisational group for some rooms. It may represent a different area of a hospital, a different building on a hospital site or another hospital in the same trust.

The MVC solution you have been given includes a basic N-Tier project structure and utilises an ASP.Net MVC user interface, a 'business' class library for any core logic and a data project that uses Entity Framework 6 for allowing access to a SQL database.

The SQL database is prepopulated with some bookings, rooms and sites.

There is also a test user setup in the database with the following details:

Username: john.smith@bookwisesolutions.com

Password: test1234

Requirement 1

There is very little functionality in the system so far however we've decided the first core element we'd like to see is the ability for a user to find a room that's available for them to use based on search criteria.

The search criteria should be as follows:

1. The user can specify a site to limit the search results, they should also be able to leave this as 'All Sites'.
2. The user can specify a date and time for when they wish to use a room.
3. The user can specify a duration they require the room for.
4. The user can specify the number of attendees that will be using the room. (There's no point in showing rooms suitable for 4 people when they're organising a conference to 100!)

The follow considerations MUST be taken into account:

1. There are bookings in the database with a status of **CANCELLED**. These bookings should be ignored when considering whether or not a room is available for a given time period.

What you need to do

- The user should be able to access the new functionality from a 'Check Availability' link on the main menu.
- You're required to create a simple UI with a search form at the top of the page and present results in a table on the same page. This has been started for you but is not completed.
- The search criteria should remain in the form after the results have loaded so they can tweak the search criteria.
- The user MUST be logged in in order to check room availability.

Requirement 2

Another requirement has been raised by a user, sometimes they have a preferred room and just want to check if that one room is available for their selected criteria.

What you need to do

- Within the search area of Check Availability, add a drop down that lists the rooms for the site they have selected.
- This should show all rooms across sites when the 'Site' dropdown is set to 'All Sites', and only the rooms for the site that is selected if they specify one.
- The dropdown should have an 'All Rooms' option by default.

Requirement 3

A user has commented that some areas of the system seem to be running slowly. We'd like to log request times for areas of the system.

What you need to do

- Write an action filter that times the execution of actions within controllers.
 - It should also log any query string parameters that form part of the request.
- You log the data using 'NLog' which is already in the UI project. Within the class where you require logging just add the following:

```
private ILogger log = LogManager.GetCurrentClassLogger();  
log.Info("log message");
```

- This action filter should execute for all actions (and any future currently unwritten actions) within the CheckAvailabilityController that you've been working on.

Requirement 4

Some users have been reporting errors in various areas of the system however we don't have any logs.

What you need to do

- We'd like global exception handling adding to the MVC project so that any unhandled exceptions are logged using 'NLog'.