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Introduction

.NET Core has given .NET developers a lot to think about. Some developers have embraced the technology, while others have taken a wait-and-see approach. Whatever approach you are taking, .NET Core is without a doubt here to stay.

Developing web applications is also not one of the easiest things to do. I've always wanted to write a book on developing web applications, but to do it in a way that is very structured and takes the reader on a journey of discovery.

Creating ASP.NET Core Web Applications is my attempt at that book. I always try to take the point of view that the book I'm writing is a reference book for my bookshelf. With this in mind, I, therefore, tried to cover a wide set of topics.

As with all projects, Chapter 1 starts with creating your project and using the .NET CLI. We have a look at adding Razor pages and also how to configure the application using the appsettings.json file. I then create a dummy data service, which is used to get the application up and running with test data. This test data is designed in such a way that it can easily be swapped out at a later stage (and I show you how to do this).

Chapter 2 takes a look at the process of creating models, model binding, tag helpers, working with a query string, and page routes. To illustrate these concepts, Chapter 2 shows you how to implement a search form. This allows us to search for data, view the details, and add in logic to handle bad requests.

Chapter 3 illustrates the concepts of editing the data, displaying validation errors, and modifying the data access service to suit our needs. I also discuss the differences between singleton, scoped, and transient lifetime registration for services.

EF Core and SQL Server become the focus in the next chapter. Chapter 4 shows you how to install Entity Framework Core, define your connection strings, what database migrations are, and how to use them. We will also be implementing a new data access service and changing the data access service registration from the test data to the SQL data.

Moving to the front end next, we have a look at working with Razor pages in Chapter 5. Here, we will look at what sections are and how they benefit you as a developer. We take a closer look at _ViewImports and _ViewStart files. I also show you how to create your own tag helper, how to work with partial views, and, finally, how to work with ViewComponents.

Staying front end, we have a look at adding client-side logic in Chapter 6. I show you how to separate production scripts from development scripts, use SCSS to generate CSS, how SCSS works, and the different features you can use to create CSS with SCSS, as well as work with Chrome Developer Tools. This is, in my opinion, crucial for any web developer to know.

With Chapter 7, we will take a look at what middleware is. This is a very important chapter and one that will require some explaining. We have a look at some of the built-in middleware components, but also how to create a custom middleware component if the built-in middleware components don't suit your needs. After creating a custom middleware component, we will have a look at logging in ASP.NET Core. Logging is a big subject, but this book tries to cover the basics.

Finally, Chapter 8 will take you through getting your web application ready for deployment and finally publishing your web application and hooking it up to a SQL Server database. I hope that you will enjoy this book as much as I enjoyed writing it.