

hands-on full-stack web development with asp.net core pdf

hands-on full-stack web development with asp.net core pdf is an essential resource for developers aiming to master modern web application development. As the demand for dynamic, scalable, and secure web solutions continues to grow, ASP.NET Core has emerged as a leading framework for building robust full-stack applications. Combining server-side processing with client-side interactivity, ASP.NET Core enables developers to create comprehensive web solutions efficiently. This article provides an in-depth overview of how to leverage ASP.NET Core for full-stack development, with a focus on practical, hands-on learning through PDFs and other resources.

Understanding Full-Stack Web Development with ASP.NET Core

What is Full-Stack Web Development?

Full-stack web development involves building both the front-end (client-side) and back-end (server-side) parts of a web application. A full-stack developer is proficient in:

- Designing user interfaces and user experiences (UI/UX)
- Building server-side logic and APIs
- Managing databases and data storage
- Handling deployment and security considerations

Why Choose ASP.NET Core for Full-Stack Development?

ASP.NET Core is an open-source, cross-platform framework developed by Microsoft. Its advantages include:

- Cross-platform compatibility: Run on Windows, Linux, and macOS
- High performance: Optimized for speed and scalability
- Modularity: Lightweight and flexible architecture
- Security features: Built-in authentication, authorization, and data protection
- Integration with modern front-end frameworks: Easily integrate with Angular, React, or Vue.js

Core Components of Full-Stack ASP.NET Core Development

Back-End Development with ASP.NET Core

The server-side component involves creating APIs, business logic, and managing data. Key aspects include:

- Building RESTful APIs: Using ASP.NET Core Web API
- Entity Framework Core: ORM for database interactions
- Security: Implementing JWT authentication, OAuth, or cookie-based authentication
- Dependency Injection: Managing service lifetimes and dependencies

Front-End Development

While ASP.NET Core can handle server-side rendering with Razor Pages or MVC, modern applications often incorporate JavaScript frameworks for a dynamic user experience. Front-end development involves:

- Creating responsive UI with HTML, CSS, and JavaScript
- Utilizing front-end frameworks like Angular, React, or Vue.js
- Consuming backend APIs to fetch and display data dynamically
- Managing client-side state and routing

Database Management

Data storage is central to full-stack applications. ASP.NET Core integrates seamlessly with databases through:

- Entity Framework Core: Code-first or database-first approaches
- SQL Server, PostgreSQL, MySQL, or other databases: Supported via providers
- Writing LINQ queries for data operations
- Ensuring data integrity and security

Hands-On Learning Resources: ASP.NET Core PDF Guides

The Importance of PDF Resources in Learning ASP.NET Core

PDF documents serve as invaluable references for developers. They offer:

- Structured tutorials and step-by-step guides

- Code snippets and best practices
- Offline access for continuous learning
- A portable format that can be easily annotated and shared

Popular ASP.NET Core PDFs for Full-Stack Development

Some widely recommended PDFs include:

- "ASP.NET Core Documentation": Official Microsoft guides
- "Full-Stack Development with ASP.NET Core": Comprehensive tutorials covering both front-end and back-end
- "Building Modern Web Apps with ASP.NET Core and Angular": Combining server-side and client-side development
- "Mastering Entity Framework Core": Deep dive into database access
- "ASP.NET Core Security Best Practices": Ensuring application safety

Where to Find Quality ASP.NET Core PDFs

Reliable sources include:

- Microsoft official documentation and e-books
- Online coding platforms like GitHub repositories
- Educational websites offering free or paid PDFs
- Tech community forums sharing curated resources

Step-by-Step Guide to Hands-On Full-Stack Development with ASP.NET Core PDF

1. Setting Up the Development Environment

- Install Visual Studio or Visual Studio Code
- Install the latest .NET SDK
- Choose a database system (e.g., SQL Server Express)
- Download relevant PDFs for reference

2. Creating the Back-End API

- Initialize a new ASP.NET Core Web API project

- Set up models and DbContext with Entity Framework Core
- Implement CRUD operations
- Secure the API with authentication mechanisms

3. Developing the Front-End

- Choose a front-end framework or stick with Razor Pages
- Create views or components
- Consume the API endpoints using HTTP client libraries
- Implement client-side validation and interactivity

4. Integrating Front-End and Back-End

- Configure CORS policies
- Use AJAX or fetch API for data exchange
- Handle authentication tokens securely

5. Testing and Deployment

- Write unit and integration tests
- Deploy to IIS, Azure, or other cloud platforms
- Use PDFs for deployment best practices and troubleshooting

Best Practices for Full-Stack Development with ASP.NET Core

- Maintain a modular architecture for scalability
- Follow security best practices to protect data and user privacy
- Optimize performance through caching and efficient database queries
- Implement responsive design for mobile compatibility
- Document code and APIs thoroughly, referencing PDF guides for standards

Conclusion: Empowering Developers with Hands-On Learning via PDFs

Mastering full-stack web development with ASP.NET Core requires both theoretical understanding and practical experience. Utilizing comprehensive PDFs as learning aids can accelerate this process by providing structured, in-depth knowledge that complements hands-on coding. These resources serve as invaluable references during development, troubleshooting, and continuous learning. Whether you're building a simple CRUD app or a complex enterprise solution, integrating these PDFs into your learning workflow ensures a solid foundation and best practices in full-stack ASP.NET Core development.

By combining the power of ASP.NET Core's versatile framework and high-quality PDF guides, developers can confidently craft modern, scalable, and secure web applications that meet today's technological demands. Start exploring these resources today to elevate your full-stack development skills to new heights.

Frequently Asked Questions

What are the key topics covered in a hands-on full-stack web development course with ASP.NET Core PDF?

A comprehensive course typically covers front-end development with HTML, CSS, JavaScript, back-end development with ASP.NET Core, database integration with Entity Framework, RESTful API creation, authentication and authorization, deployment strategies, and practical projects, all provided in a downloadable PDF guide.

Is the 'Hands-on Full-Stack Web Development with ASP.NET Core PDF' suitable for beginners?

Yes, the PDF is designed to cater to beginners by starting with foundational concepts and gradually progressing to advanced topics through practical exercises and clear explanations.

Can I use the PDF to build a complete, deployable web application?

Absolutely, the PDF provides step-by-step instructions and code samples that enable you to develop, test, and deploy a full-stack ASP.NET Core web application.

What tools and environments are recommended for following the

ASP.NET Core full-stack development PDF?

Recommended tools include Visual Studio or Visual Studio Code, SQL Server or LocalDB for databases, and the .NET SDK installed on your machine. The PDF provides setup instructions for these environments.

Does the PDF include best practices for secure and scalable web applications?

Yes, it covers security essentials like authentication, authorization, data validation, and best practices for building scalable, maintainable applications using ASP.NET Core.

Are there any prerequisites or prior knowledge needed before using the 'Hands-on Full-Stack Web Development with ASP.NET Core PDF'?

Basic understanding of programming concepts and familiarity with C are helpful, but the PDF also introduces fundamental concepts suitable for newcomers.

How frequently is the content in the PDF updated to reflect the latest ASP.NET Core features?

The PDF is regularly updated to include the latest features, best practices, and tools in ASP.NET Core development, ensuring you learn current industry standards.

Where can I access or purchase the 'Hands-on Full-Stack Web Development with ASP.NET Core PDF'?

The PDF is available for purchase or download from official educational platforms, publishers, or specialized coding tutorial websites that offer comprehensive ASP.NET Core development guides.

Additional Resources

Hands-On Full-Stack Web Development with ASP.NET Core PDF

In the rapidly evolving landscape of web development, mastering full-stack development with ASP.NET Core has become an essential skill for developers aiming to build scalable, efficient, and secure web applications. When combined with the ability to generate and manipulate PDFs within your applications, it opens doors to a wide range of enterprise solutions, from reporting dashboards to document management systems. This comprehensive review delves into the key aspects, tools, best practices, and practical approaches to hands-on full-stack development using ASP.NET Core, with a particular focus on PDF integration.

Introduction to Full-Stack Development with ASP.NET Core

ASP.NET Core is Microsoft's open-source, cross-platform framework for building modern web applications. It provides a robust set of tools for both front-end and back-end development, making it an ideal choice for full-stack development.

Why Choose ASP.NET Core for Full-Stack Development?

- Cross-Platform Compatibility: Runs seamlessly on Windows, Linux, and macOS.
- Performance: High throughput and low latency, suitable for enterprise-level applications.
- Modularity: Lightweight, modular architecture that allows developers to include only what they need.
- Rich Ecosystem: Integration with Entity Framework Core, Identity, SignalR, and other libraries.
- Security: Built-in features for authentication, authorization, and data protection.

The Full-Stack Approach

Full-stack development encompasses:

- Front-End Development: Building user interfaces with frameworks such as Blazor, Angular, React, or Vue.js.
- Back-End Development: Creating APIs, business logic, and data access layers.
- Database Integration: Managing data persistence with SQL Server, PostgreSQL, or other databases.
- PDF Handling: Generating, manipulating, and serving PDFs dynamically.

Building the Front-End with ASP.NET Core

While ASP.NET Core can serve traditional server-rendered pages via Razor Pages or MVC, it also integrates seamlessly with modern front-end frameworks.

Technologies and Frameworks

- Razor Pages and MVC: For server-side rendering.
- Blazor: For interactive, C-based front-end development.
- JavaScript Frameworks: React, Angular, Vue.js – integrated via static files or SPA templates.

Best Practices for Front-End Development

- Use responsive design principles.
- Implement client-side validation.

- Optimize loading times with bundling and minification.
- Maintain a clean separation of concerns.

Back-End Development with ASP.NET Core

The server-side logic includes creating APIs, handling authentication, and processing data.

Setting Up RESTful APIs

- Use controllers with attributes like `[ApiController]`.
- Implement CRUD operations for your data models.
- Use Entity Framework Core for database interactions.

Data Persistence and ORM

- Configure DbContext with your database provider.
- Use migrations to manage schema changes.
- Implement repositories for better separation of concerns.

Authentication and Authorization

- Use ASP.NET Core Identity for user management.
- Implement JWT tokens or cookie-based authentication.
- Role-based access control to secure endpoints.

Integrating PDF Functionality into ASP.NET Core Applications

One of the most common requirements in enterprise applications is PDF generation and manipulation. ASP.NET Core, with its flexibility, supports multiple libraries and techniques for working with PDFs.

Common Use Cases for PDFs

- Generating reports and invoices.
- Exporting data views.
- Creating dynamic documents based on user inputs.
- Merging or splitting PDFs.

Popular PDF Libraries for ASP.NET Core

1. iTextSharp / iText7: Open-source libraries for creating and editing PDFs.
2. PdfSharpCore: A .NET Core-compatible port of PdfSharp.
3. QuestPDF: Modern, fluent API for PDF generation.
4. Syncfusion PDF Library: Commercial component with extensive features.
5. DinkToPdf (wkhtmltopdf wrapper): Converts HTML pages to PDFs.

Practical Guide to PDF Generation in ASP.NET Core

Step-by-Step Process

1. Choose a PDF Library: For example, QuestPDF for modern API or iText7 for advanced features.
2. Install the Library: Through NuGet Package Manager.
3. Create a PDF Document:
 - Define document structure.
 - Add text, images, tables, and styles.
4. Generate and Serve PDF:
 - Stream the PDF back to the client as a downloadable file.
 - Save the PDF to a server directory if needed.

Example: Generating a PDF with QuestPDF

```
``csharp
using QuestPDF.Fluent;
using QuestPDF.Helpers;

public class InvoiceDocument : IDocument
{
    public string CustomerName { get; set; }
    public List Items { get; set; }
    public decimal Total => Items.Sum(item => item.Price * item.Quantity);

    public void Compose(IDocumentContainer container)
    {
        container.Page(page =>
        {
            page.Size(PageSizes.A4);
            page.Margin(50);
            page.Header().Text("Invoice").FontSize(20).Bold();
            page.Content().Column(column =>
            {
                column.Spacing(10);
```

```

column.Item().Text($"Customer: {CustomerName}");
column.Item().Table(table =>
{
table.ColumnsDefinition(columns =>
{
columns.RelativeColumn();
columns.RelativeColumn();
columns.RelativeColumn();
columns.RelativeColumn();
});
table.Header(header =>
{
header.Cell().Text("Item");
header.Cell().Text("Quantity");
header.Cell().Text("Unit Price");
header.Cell().Text("Total");
});
foreach (var item in Items)
{
table.Row(row =>
{
row.Cell().Text(item.Name);
row.Cell().Text(item.Quantity.ToString());
row.Cell().Text($"${item.Price:F2}");
row.Cell().Text($"${(item.Price * item.Quantity):F2}");
});
}
});
column.Item().Text($"Total: ${(Total:F2)}.Bold();
});
page.Footer().Text("Thank you for your business").AlignCenter();
});
}
}
'''

```

This creates a professional invoice PDF dynamically, which can be streamed to clients.

Full-Stack Development Best Practices

Modular Architecture

- Use layered architectures separating concerns:
- Data Access Layer
- Business Logic Layer
- Presentation Layer
- Employ Dependency Injection for better testability and maintainability.

Secure Development

- Always validate and sanitize user input.
- Use HTTPS to encrypt data in transit.
- Implement proper authentication and authorization.

Performance Optimization

- Use caching strategies where appropriate.
- Minimize database roundtrips.
- Optimize PDF generation by caching static templates if applicable.

Deployment and Scaling

Once your full-stack application with PDF functionalities is ready, focus on deploying and scaling:

- Use hosting services like Azure App Service, AWS, or Linux-based servers.
- Configure load balancing for high availability.
- Monitor application performance and error logs.
- Implement CI/CD pipelines for seamless updates.

Future Trends and Innovations

- AI-Generated Content: Automate report generation with AI.
- Serverless Architectures: Use Azure Functions for PDF processing tasks.
- Progressive Web Apps (PWAs): Enhance user experience.
- Enhanced PDF Interactivity: Incorporate forms, annotations, and digital signatures.

Conclusion

Hands-on full-stack web development with ASP.NET Core PDF integration empowers developers to

create comprehensive, enterprise-grade applications capable of dynamic data processing, user interaction, and document management. By understanding the framework's capabilities for front-end and back-end development, coupled with robust PDF libraries, developers can deliver feature-rich solutions that meet modern business needs.

The journey involves mastering various tools, adhering to best practices, and continuously exploring innovative features like real-time updates, security enhancements, and cloud deployment options. Whether you're building an invoicing platform, report generator, or document management system, ASP.NET Core combined with PDF handling offers a powerful, flexible foundation for your projects.

Hands On Full Stack Web Development With Asp Net Core Pdf

hands on full stack web development with asp net core pdf: Hands-On Full-Stack Web Development with ASP.NET Core Tamir Dresher, Amir Zuker, Shay Friedman, 2018-10-31

Become a full-stack developer by learning popular Microsoft technologies and platforms such as .NET Core, ASP.NET Core, Entity Framework, and Azure Key Features Bring static typing to web development with features compatible in TypeScript 3 Implement a slim marketplace single page application (SPA) in Angular, React, and Vue Modernize your web apps with Microsoft Azure, Visual Studio, and GitBook Description Today, full-stack development is the name of the game. Developers who can build complete solutions, including both backend and frontend products, are in great demand in the industry, hence being able to do so a desirable skill. However, embarking on the path to becoming a modern full-stack developer can be overwhelmingly difficult, so the key purpose of this book is to simplify and ease the process. This comprehensive guide will take you through the journey of becoming a full-stack developer in the realm of the web and .NET. It begins by implementing data-oriented RESTful APIs, leveraging ASP.NET Core and Entity Framework. Afterward, it describes the web development field, including its history and future horizons. Then, you'll build webbased Single-Page Applications (SPAs) by learning about numerous popular technologies, namely TypeScript, Angular, React, and Vue. After that, you'll learn about additional related concerns involving deployment, hosting, and monitoring by leveraging the cloud; specifically, Azure. By the end of this book, you'll be able to build, deploy, and monitor cloud-based, data-oriented, RESTful APIs, as well as modern web apps, using the most popular frameworks and technologies. What you will learn Build RESTful APIs in C# with ASP.NET Core, web APIs, and Entity Framework See the history and future horizons of the web development field Bring static-typing to web apps using TypeScript Build web applications using Angular, React, and Vue Deploy your application to the cloud Write web applications that scale, can adapt to changes, and are easy to maintain Discover best practices and real-world tips and tricks Secure your backend server with Authentication and Authorization using OAuth 2.0 Who this book is for This book is for developers who are keen on strengthening their skills in the field of cloud-based full-stack web development. You need basic knowledge of web-related pillars, including HTML, CSS, and JavaScript, as well as C# and REST. This book targets novice developers in the realm of Web development and ASP.NET who desire to advance to modern Web and ASP.NET Core development and leverage the Cloud to manage and bring everything together.

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Angular, and Entity Framework Core Purchase of the print or Kindle book includes a free PDF eBook

Key Features Combine ASP.NET Core and Angular to build highly versatile web applications Create a production-ready Single-Page Application (SPA) or Progressive Web Application (PWA) Adopt a full-stack approach to handle data management, API documentation, Web APIs, end-to-end testing, security, and deployment

Book Description If you want to learn how to use ASP.NET Core with Angular effectively, this hands-on guide is for you. Improve the way you create, debug, and deploy web applications while keeping up to date with the latest developments in .NET 8 and modern Angular, including .NET Minimal APIs and the new Angular standalone API defaults. You'll begin by setting up SQL Server 2022 and building a data model with Entity Framework Core. You'll progress to fetching and displaying data, handling user input with Angular reactive forms, and implementing front-end and back-end validators for maximum effect. After that, you will perform advanced debugging and explore unit testing features with xUnit for .NET, and Jasmine and Karma for Angular. You'll use Identity API endpoints in ASP.NET Core and functional route guards in Angular to add authentication and authorization to your apps. Finally, you'll learn how to deploy to Windows, Linux, and Azure. By the end of this book, you will understand how to tie together the front-end and back-end to build and deploy secure and robust web applications.

What you will learn Explore the new Angular and ASP.NET Core template with Visual Studio 2022 Use modern interfaces and patterns such as the HTML5 pushState API, webhooks, and UI data bindings Add real-time capabilities to Angular apps with SignalR and gRPC Implement authentication and authorization using JWTs Perform DBMS structured logging using providers such as SeriLog Convert a standard web application to a progressive web application (PWA) Deploy an Angular app to Azure Static Web Apps Add GraphQL support to back-end and front-end using HotChocolate and Apollo Angular Who this book is for This book is for developers who have some familiarity with ASP.NET Core and Angular and want to learn how to use them effectively together.

hands on full stack web development with asp net core pdf: ASP.NET Core 3 and React

Carl Rippon, 2019-12-27 Build modern, scalable, and cloud-ready single-page applications using ASP.NET Core, React, TypeScript, and Azure

Key Features Explore the full potential and latest features of .NET Core 3.0, TypeScript 3, and React Learn how to manage data, application design, and packaging, and secure your web apps Discover best practices for using React and TypeScript to build a scalable frontend that interacts with REST APIs

Book Description Microsoft's ASP.NET Core is a robust and high-performing cross-platform web API framework, and Facebook's React uses declarative JavaScript to drive a rich, interactive user experience on the client-side web. Together, they can be used to build full stack apps with enhanced security and scalability at each layer. This book will start by taking you through React and TypeScript components to build an intuitive single-page application. You'll understand how to design scalable REST APIs that can integrate with a React-based frontend. You'll get to grips with the latest features, popular patterns, and tools available in the React ecosystem, including function-based components, React Router, and Redux. The book shows how you can use TypeScript along with React to make the frontend robust and maintainable. You'll then cover important .NET Core features such as API controllers, attribute routing, and model binding to help you build a sturdy backend. Additionally, you'll explore API security with ASP.NET Core identity and authorization policies, and write reliable unit tests using both .NET Core and React before you deploy your app to the Azure cloud. By the end of the book, you'll have gained all the knowledge you need to enhance your C# and JavaScript skills and build full stack, production-ready applications with ASP.NET Core and React.

What you will learn Build RESTful APIs with .NET Core using API controllers Create strongly typed, interactive, and function-based React components using Hooks Build forms efficiently using reusable React components Perform client-side state management with Redux and the React Context API Secure REST APIs with ASP.NET identity and authorization policies Run a range of automated tests on the frontend and backend Implement continuous integration (CI) and continuous delivery (CD) processes into Azure using Azure DevOps

Who this book is for If you're a web developer looking to build solid full-stack web applications with .NET Core and React, this book is for you. Although this book does

not assume any knowledge of React, you're expected to have a basic understanding of .NET Core.

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hands on full stack web development with asp net core pdf: ASP.NET Core 6 and Angular Valerio De Sanctis, 2022-04-06 Design, build and deploy robust web applications using ASP.NET 6, Angular 13, and Entity Framework Core Key Features The most up-to-date book that covers cutting-edge features released in ASP.NET Core 6 and Angular 13 Create a production-ready Single-Page Application (SPA) or Progressive Web Application (PWA) Adopt a full-stack approach to handle data management, API documentation, Web APIs, end-to-end testing, security, and deployment Book Description Every full-stack ninja needs the tools to operate on front-end and back-end application development. This web app development book takes a hands-on, project-based approach to provide you with all the tools and techniques that web developers need to create, debug, and deploy efficient web applications using ASP.NET Core and Angular. The fifth edition has been updated to cover advanced topics such as Minimal APIs, Web APIs with GraphQL, real-time updates with SignalR, and new features in .NET 6 and Angular 13. You begin by building a data model with Entity Framework Core, alongside utilizing the Entity Core Fluent API and `EntityTypeConfiguration` class. You'll learn how to fetch and display data and handle user input with Angular reactive forms and front-end and back-end validators for maximum effect. Later, you will perform advanced debugging and explore the unit testing features provided by xUnit.net (.NET 6) and Jasmine, as well as Karma for Angular. After adding authentication and authorization to your

apps, you will explore progressive web applications, learning about their technical requirements, testing processes, and how to convert a standard web application to a PWA. By the end of this web development book, you will understand how to tie together the front-end and back-end to build and deploy secure and robust web applications. What you will learn

Use the new Visual Studio Standalone TypeScript Angular template

Implement and consume a Web API interface with ASP.NET Core

Set up an SQL database server using a local instance or a cloud datastore

Perform C# and TypeScript debugging using Visual Studio 2022

Create TDD and BDD unit tests using xUnit, Jasmine, and Karma

Perform DBMS structured logging using providers such as SeriLog

Deploy web apps to Azure App Service using IIS, Kestrel, and NGINX

Learn to develop fast and flexible Web APIs using GraphQL

Add real-time capabilities to Angular apps with ASP.NET Core SignalR

Who this book is for

This book is for experienced ASP.NET developers who already possess some familiarity with ASP.NET Core and Angular and are looking to learn how to use them effectively together. The fully documented code samples (also available on GitHub) and the step-by-step implementation tutorials make this book easy to follow.

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hands on full stack web development with asp net core pdf: Real-World Web Development with .NET 9 Mark J. Price, 2024-12-20 A practical guide for building websites and services with mature and proven ASP.NET Core controller-based technologies. Purchase of the print or Kindle book includes a free eBook in PDF format and supplementary learning material. Key Features Master ASP.NET Core MVC, Web API, and OData for building robust web services. Get hands-on experience with web testing, security, and containerization techniques. Learn how to implement Umbraco CMS for content management websites. Book Description Real-World Web Development with .NET 9 equips you to build professional websites and services using proven technologies like ASP.NET Core MVC, Web API, and OData—trusted by organizations for delivering robust web applications. You'll learn to design and build efficient web applications with ASP.NET Core MVC, creating well-structured, maintainable code that follows industry best practices. From there, you'll focus on Web API, building RESTful services that are both secure and scalable. Along the way, you'll also explore testing, authentication, and containerization for deployment, ensuring that your solutions are fully production ready. In the final part of the book, you will be introduced to Umbraco CMS, a popular content management system for .NET. By mastering this tool, you'll learn how to empower users to manage website content independently. By the end of this book, you'll not only have a solid grasp of controller-based development but also the practical know-how to build dynamic, content-driven websites using a popular .NET CMS. What you will learn Build web applications using ASP.NET Core MVC with well-structured, maintainable code Develop secure and scalable RESTful services using Web API and OData Implement authentication and authorization for your applications Test and containerize your .NET projects for smooth deployment Optimize application performance with caching and other techniques Learn how to use and implement Umbraco CMS Who this book is for This book is aimed at intermediate .NET developers with a good understanding of C# and .NET fundamentals. It is ideal for developers looking to expand their skills in building professional, controller-based web applications.

hands on full stack web development with asp net core pdf: *Full Stack Development With ASP.NET Core and Angular* Maxwell Reed, 2024-12-05 In the fast-evolving world of web development, mastering both the front-end and back-end is essential for creating modern, scalable applications. Full Stack Development With ASP.NET Core and Angular provides a comprehensive guide to becoming a skilled full stack developer using two of the most powerful frameworks available today. Whether you're designing interactive user interfaces with Angular or crafting efficient server-side logic with ASP.NET Core, this book equips you with the knowledge to handle every aspect of web application development. You'll gain hands-on experience with key technologies such as HTML, CSS, JavaScript, APIs, and databases, learning how to seamlessly integrate the front-end and back-end into a unified solution. Through clear explanations and practical examples,

this book empowers developers to build end-to-end solutions with a focus on performance, scalability, and maintainability. From setting up development environments to deploying real-world applications, you'll learn the core skills that full stack developers need to succeed in today's competitive tech landscape.

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Refactor backend application to use the OpenIddict library Who this book is for This book is aimed at ASP.NET developers who are looking for an entry point in learning how to build a modern client-side SPA with Vue.js, or those with a basic understanding of Vue.js who are looking to build on their knowledge and apply it to a real-world application. Knowledge of JavaScript is not necessary, but would be an advantage.

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Robert E Beasley, PhD, 2020-12-05 Audience This book was written for anyone interested in learning one of the most effective and widely-used technology stacks for developing highly-interactive, professional-grade, database-driven Web applications-ASP.NET Core Razor Pages, C#.NET, HTML, Bootstrap, CSS, JavaScript, and Entity Framework Core-including novice software developers, professional software developers, and college or university students enrolled in a one-semester course or two-semester sequence of courses in Web application development. Organization Part I provides an overview of some of the major concepts and technologies associated with ASP.NET Core Web application development as well as ASP.NET Core solutions and projects. Part II describes how to develop an ASP.NET Core Web application, including how to create and use HTML elements and how to perform model validation to keep bad data out of the system. The concepts in this part of the book will lay the foundation required for learning the C# programming language in the context of an ASP.NET Core Web application. Part III describes how to program in the C# programming language, including how to perform assignment, conversion, control, string, arithmetic, date and time, array, collection, and file system operations and how to create custom C# classes-in the context of an ASP.NET Core Web application. Part IV describes how to develop a multiple-page ASP.NET Core Web application, including how to maintain the application's state and how to use layout pages to give the pages of the application a consistent look. Part V describes how to improve the user experience of an ASP.NET Core Web application, including how to use Bootstrap to make the application responsive and attractive when displayed on a phone, tablet, laptop, and desktop, how to use Cascading Style Sheets to style HTML elements consistently across all the pages of the application, and how to use JavaScript to write code that needs to be executed in the browser. Part VI describes how to connect an ASP.NET Core Web application to a SQL Server database, including how to install and use Entity Framework Core, how to perform database query operations, and how to perform database table maintenance. Part VII describes how to create an ASP.NET Core Web application service, including a NetMail email service and a MailKit email service. Features Real-Life Examples A significant proportion of the examples in the text are drawn from the real-life experiences of the author's own software development practice that began in 1987. Clear-Minded, Consistent, and Concise Prose Every effort has been made to present concepts clearly and logically, utilize consistent language and terminology across all chapters, and articulate concepts fully yet concisely. Accessible Language Although the subject matter of this book is highly technical and specialized, trendy and/or arcane language that is inaccessible to the average learner is either clearly defined or replaced in favor of clear and generalizable terminology.

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- Create new projects and understand their structure
- Set up and use the familiar MVC application model in ASP.NET Core
- Write controller class code to govern all stages of request processing
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- Master the Razor language for quickly defining the layout of HTML views
- Manage cross-cutting concerns such as global configuration data, error and exception handling, controller class design, and dependency injection
- Secure applications with user authentication and ASP.NET Core's

policy-based user authorization API • Design for efficient data access, and choose the right option for reading and writing data • Build ASP.NET Core Web APIs that return JSON, XML, or other data • Use data binding to programmatically update visual components with fresh information • Build device-friendly web views for iOS and Android • Explore the radically new ASP.NET Core runtime environment and Dependency Injection (DI) infrastructure

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