**CHAPTER 3**

**SYSTEM REQUIREMENTS SPECIFICATION**

**3.1 Hardware Requirements**

1. **Computer**: Any modern computer capable of running development tools should suffice. This can range from laptops to desktops.
2. **Memory (RAM)**: At least 4GB of RAM, though 8GB or more is recommended for smoother performance.
3. **Storage**: Enough storage space for development tools, libraries, and project files. SSDs are preferred for faster read/write speeds.
4. **Processor**: A multi-core processor (i5 or higher for Intel, Ryzen 5 or higher for AMD) for faster compilation and execution.

**3.2 Software Requirements**

**1. Operating System**: Windows, macOS, or Linux. ASP.NET Core is cross-platform, so you can develop on any of these.

**2.Text Editor or IDE**: You can choose between lightweight text editors like Visual Studio Code or fully-featured IDEs like Visual Studio.

* 1. **Visual Studio**: Offers a comprehensive development environment with tools tailored for .NET development.
  2. **Visual Studio Code**: A lightweight, cross-platform editor with extensive extensions for ASP.NET Core development.

1. **.NET Core SDK**: Download and install the .NET Core SDK, which includes everything you need to build and run .NET Core applications.
2. **ASP.NET Core Runtime**: If you're deploying your application to a server, you'll need the ASP.NET Core runtime installed on the server.
3. **Database Management System**: Depending on your application's requirements, you may need a database management system like SQL Server, MySQL, PostgreSQL, etc.

### 3.3 Optional Tools:

### ****Source Control****: Version control systems like Git are highly recommended for managing code changes.

1. **Containerization Tools**: Docker for containerizing your application.
2. **Testing Frameworks**: NUnit, xUnit, or MSTest for unit and integration testing.
3. **Continuous Integration/Continuous Deployment (CI/CD)**: Azure DevOps, Jenkins, or GitHub Actions for automating builds and deployments.
4. **Frontend Frameworks**: Libraries or frameworks like React, Angular, or Vue.js if you're building single-page applications alongside ASP.NET Core MVC.