The advantages of ASP.NET Core versus legacy ASP.NET

As ASP.NET Core is the newer and more improved version of the .NET framework, there are several advantages that come with it. Some of the key advantages of using ASP.NET Core versus legacy ASP.NET are that the former is open-source as well as cross-platform, broadening the spectrum of what the framework can be used for. One other advantage lies in the fact that Core has robust Cloud support, and supports modular architecture better than the legacy ASP.NET. One reason for teams to use ASP.NET instead of Core could be that a given project might have been in development before its introduction, consequently allowing teams the choice of not using Core as it would take time to learn and deadlines might have to be met soon. On the other hand, ASP.NET Core might be used instead for the fact that the interface looks better, as well as an unconscious need to follow the market updates, which means using a newer platform. Technologically, .NET Core has more advantages, such as: more precise dependency control, faster performance, and a better interface. Ultimately, ASP.NET Core is “better” because it is more recent, therefore it will receive more updates and feel more up-to-date.

Razor Pages versus MVC

MVC is action and entity-focused while Razor Pages are page-focused. This interesting fact makes for a specific crutch of using MVC, as entities in MVC applications mostly start with simple CRUD operations, making it typically short-lived and easy to have controllers become too full, as more actions are needed. Razor Pages on the other hand allows for each page to focus on one activity each, giving them space by making them smaller. Another significant advantage of Razor Pages over MVC is that they are simple, due to its architecture being condensed, page-focused, and intuitive. While there are certainly parallels to draw between the two, Razor Pages maintains a strict separation between the markup and page model. This lack of separation in Web Forms made unit testing difficult and, in many ways, violated the separation of concerns principle.

The strengths and weaknesses of the EntityFramework and Scaffolding

EntityFramework is a tool that enables developers to work with data using objects of domain specific classes without focusing on the underlying database tables and columns where this data is stored. Some advantages of using it include: auto generation of code, reduction of development time and cost, allows multiple conceptual models to be mapped to a single storage schema, and it provides unique syntax for all object queries whether it is database or not. Some disadvantages of using EntityFramework are: lazy loading (loading items only when the user can see them), complicated syntax, It does not work if there is a need to change any schema of the database. An update would be needed to the schema on the solution, and that Its logical schema is not able to understand business entities and relation among each other. As for Scaffolding, its main advantage is that it saves time building applications, as it generates code that can be built on.

LINQ Queries

Language-Integrated Query (LINQ) is the name for a set of technologies based on the integration of query capabilities directly into the C# language. It is used to retrieve data from different sources and formats. It is used in a similar way to SQL, although it is built into C# and VB.NET instead. LINQ queries return results as objects, and it allows the user to use and object-oriented approach and to not worry about turning different formats of results into objects. LINQ queries have many advantages, such as: offering a common syntax for querying any type of sources of data, closing the gap between relational and object-oriented approaches. Some disadvantages of LINQ include, but are not limited to: it is not complex enough to write complex queries like SQL, its performance is degraded if the LINQ query is not written correctly, and the fact that LINQ does not take full advantage of all SQL features, such as cached execution plan for stored procedures.

Other technologies such as Blazor or PHP

Blazor is an amalgamation of the words Browser and Razor (mentioned earlier), and it is a SPA, or a Single Page Application development framework. It works by substituting the need to have to execute Razor views on the server in order to present HTML to the browser, but instead it executes these views on the client. Since Blazor offers access to different renderers, developers have an easier time developing UI not only for web applications but also for native mobile apps, for example. Its use also brings many benefits, among them are: Blazor runs in a memory-safe, sandboxed environment and is fast when it comes to execution, and Blazor-made applications can be deployed and executed like static files, where the machines don’t have .NET. When it comes to Microsoft Blazor, the development is conducted using C# which makes it an easier transition for the .NET developer.

Any technical difficulties with Visual Studio and ASP.NET

An issue the team had with Visual Studio was when the team made some changes to the work and push the work to commit the changes, regularly the changes would not fully push they would always be on hold, this caused issues when one of the team members wanted to continue the work but could not as nothing was pushed as it was on hold, this meant that the team member who pushed had to go onto GitHub and manually push all the changes there.