

# Development Environment

We have used Visual Studio 2019 to develop our web application. **Microsoft Visual Studio** is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps. Also, the ASP .NET MVC framework provides the 'Model, View, Controller' pattern using which we achieved the separation of concerns – and I realized this is really helpful – having different files for different purposes. Using this, if there are any bugs, we are successfully able to debug the bug in a very short span of time.

There are many reasons because of which we used Visual Studio to develop our web application. The various main features which we used are:

1. **Smarter IntelliCode:** Visual Studio includes a code editor supporting IntelliSense which is a code completion component. This is a life savior for us! It gives us suggestions about the code to be written. For instance, if I am writing a LINQ query, then I will know what kind of lambda expression is to be written using this intellisense. It also provides code refactoring.
2. **Debugger:** Debugger is one of the tools I used the most in our iteration! There were many times when the details from the database were not being retrieved correctly and for that I had to use the debugger to debug each step by putting breakpoints.
3. **Code Cleanup:** Visual Studio also provides the code cleanup feature. We can use clean solution to cleanup any chances (if there any).
4. **Improved Search**

Also, we developed the application using the C# language which is quite similar to JAVA, so developing the backend was not that difficult. Furthermore, we can easily integrate javascript in the front-end code which helped us achieve dynamicity in the application. Moreover, visual studio supports front-end development in bootstrap – which has quite a lot of plugins available to achieve fancy css transition effects in the web application.

Also, since Azure is from Microsoft as well, deployment of our web application was not very complicated for us because even Visual Studio is from Microsoft. Hence Visual Studio has an integrated functionality of publishing the web application. Further deployment details are provided in a separate 'Deployment' document.

