1. Number of files needed in order to set up same functionality (alongside no of lines in code and languages it used)

In this case, I had noticed that the no of files required to set up the website in JavaEE had been **8** more than that required by .NET. Furthermore, it also JavaEE **1211** extra lines of codes to implement the feature when compared with .NET. Last but not the least, JavaEE needed the developer to be have knowledge regarding **Java, Xhtml, Sql** and **Xml languages** in order to use the framework to develop the website whilst .Net only needed **C#, Html** and **Sql** **languages** knowledge.

Thus, in this case, .Net is better than JavaEE in terms of effort required for development as it required less number of files to be edited, required less number of lines of codes to be written, and required proficiency in less languages for the developer to create the functionality.

1. Time taken to develop both features from back to front

In this case, JavaEE had taken 50.87% more time in setup when compared with .NET.

Since, I had taken the readings on the stopwatch on my android phone, the average human reactions time of **273 ms** could have come into effect in the readings. But I hadn’t reduced that time from the readings taken as: it affected both readings equally, and was insignificant compared to the difference of **28.2708 mins** between the readings (*where 1 min = 60,000 ms*)

(reference <https://humanbenchmark.com/tests/reactiontime> )

Furthermore, it should also be noted that these times had been achieved as I had been using JavaEE for the last 3 months and had a clear idea about the pattern to follow (and files to create) while I hadn’t used .NET before to develop web application or database and thus had to research online to troubleshoot issues whilst coding. So, if I had the same proficiency in .NET as I have had for JavaEE, it would have been possible to further reduce the time taken for .NET and hence further increase the time difference between them.

Thus, in this case, .Net is better than JavaEE in terms of effort required for development as it required less time to develop the same functionality there when compared to that in JavaEE.

1. Performance of the two websites

Here, we can see that for all cases, .Net took significantly more time than JavaEE in performing the Post/Create operation from website UI to the database for hot bootup, cold bootup and even in consecutive inputs. This showed that .NET was performing slower than JavaEE for the functionality chosen. Furthermore, it showed that other factors (like other softwares running in background and using memory and cache) did not affect it as the similar difference was also present during hot and cold bootup where only those softwares were running (in order to maintain proper test condition).

This had been quite surprizing to me, as when I looked up information online, each and every websites had claimed that .Net in fact had better performance than JavaEE, which was exactly opposite of what I had detected in my data!

So, I decided to read those articles in details and find out what criteria they had used to measure the performance. There I noticed that most websites says that both have similar performance (ref1) while websites that claim that .Net have better performance are ones which also include compiling and deploying time (reference2,3), alongside the fact that code is further optimized and consumes less memory. So, although it can be noticed that NetBeans (JavaEE) usually takes more time in deploying and loading up webpage when compared with time taken by .NET (proving the claim made by the websites), this time difference has not been recorded during the investigation of performance and thus cannot be confirmed. Thus it would be better to repeat this investigation, noting down those values as well for better performance comparison

Moreover, they also note the fact that .NET has more upgrades and enhancements (reference3) which give it a further edge over JavaEE. But here in the setup, I had used the simpliest .NET setup to implement the functionality on the webpage, without using any of the enhancements (like ones present Razor, MVC, etc) which may have further reduced the time it took to send the data from web ui to the database.

(reference1: <https://www.quora.com/How-is-net-better-than-Java> )

(reference2: <https://codersera.com/blog/reasons-why-dot-net-is-better-than-java/>)

(reference3: <https://www.ideamotive.co/blog/dotnet-vs-java-which-technology-is-better-for-software-development> )