**FYP Environment Rationale**

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| Software | Use | Rationale |
| *Netbeans IDE* | Software Development Platform | Netbeans is a software development platform we originally started using in 2nd year for Java. For my FYP I will be using Netbeans to develop through HTML. HTML is easy to use and understand. Also all browsers currently support it, making it easy to optimise my web app for the most used browsers. I have decided to also implement the Bootstrap Framework when creating the frontend for the web app. Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects. Bootstrap is extremely easy to use and to understand. It is also very adaptable. Bootstrap makes the web app responsive, meaning, regardless of what device the website is displayed on, it will appear correctly. It is also easy to create all the webpages and manage your DB tables from within it. |
| *MySQL* | Database | MySQL is an open source relational database management system. I chose a MySQL Database because it is free, straightforward to use, and easy to configure. It is one of the most common stacks for web development and it is also easy to implement next to HTML, Javascript and CSS. |
| *Javascript* | User Experience | I have also decided to use JavaScript in my project. The use of JavaScript extends the functionality of the webpages in ways that allow for a greater user experience. Even with all the added functionality I can place into my project using JavaScript,  it will not delay the amount of time it takes to render a web page. |
| *PHP* | Database connections | I have chosen PHP which is a widely-used, open source scripting language and is also one of the primary components of Xampp. This will go hand in hand with MySQL, which is one of the most common stacks for web development and it is also easy to implement next to HTML, Javascript and CSS. PHP will be extremely useful for generating any dynamic page content and collecting form data. If I need to access other web based tools like Fusion charts, which I plan to use, and if I am stuck for time, PHP makes it easy to access. There is also a lot of support one can find online through, youtube tutorials and websites such as **Stack overflow** & **The New Boston**, to help if I run into any challenges. |
| Microsoft Azure | Server application |  |
| Xampp | Web server solution | Xampp is a free and open source web server solution stack package. Xampp will provide the project with everything I need to set up a web server - server application (Apache), database (MySQL) and scripting language (PHP). It is also cross-platform which is very beneficial as it works equally well on MAC & Windows. |