**Chapter 3**

**Technology Adapted**

**3.1 introduction**

When choosing the technology suitable for the software, we considered the compatibility, portability, speed of the system after using the particular technology. Compatibility means able to work together with two more computers. Because we are in different places in this situation. Portability means able to move with anyone easily. So, we use angular for the frontend, MSSQL for the database, express.js for the backend, and react native for the mobile application.

**3.2 Why we use it?**

There are many front-end developments in the world. As an example, React and Angular. Both React and Angular are best for front-end developments.But there are big differences. React.js uses virtual DOM. While Angular uses real DOM.

Considering data binding, Angular uses both **one- and two-way data**[binding](https://angular.io/guide/binding-syntax)**,** but react use one-way data binding. So, we think angular is adopted for our project. Also, our mentor is mentioned that Angular is a trend in the Sri Lankan software industry more than react. Also, we had not enough knowledge about any frontend before this project start. So, we need to study it. There are many tutorials in angular more than react. Also, More YouTube videos in angular more than react. Moreover, there are many Sinhala tutorials in angular. So, we choose Angular for the frontend.

Express.js is a small Node.js framework of the web application. Also, Express.js is a flexible Node.js web application framework that provides a robust set of features for web and mobile applications. We did not have good knowledge of any backend languages. So, we study tutorials of many backends. After that, we understood express.js is the most suitable for our project as same as ourselves. Our mentor also preferred the selection of express.js for the backend.

We use MSSQL for our database.MSSQL offers high-performance speed. Our complaint management system project is not a big project when compared with other worldwide projects. But we can implement this project as a big project in the future. So, we must choose the database as a match between now and the future. MSSQL suitable for small and large projects and can support millions of transactions every day. Also, MSSQL doesn’t block the database while backing up data. Also, we study MSSQL at university. This is the main reason for our selection. When comparing MSSQL with MongoDB, MongoDB is not a relational database. We did not know anything about the non-relational database. So, we are difficult to deal with MongoDB. That’s why we choose MSSQL for our database.

We use IntelliJ IDEA as our development platform which is an integrated development environment written in Java for developing computer software. It is developed by JetBrains. It is the most trending development platform in the Sri Lankan IT industry. Jetbrains offers a free license for university students to use IntelliJ. Also, it is a compatible, portable, and high-performance speed development platform. So, we use IntelliJ as our development platform. Also, we use Git as our version controlling tool. There are many version controls tools as Git, CVS, SVN. But Git is a Sri Lankan trending version control tool. Also, it is a free source. So, we use Git as our version control tool. We use GitHub as a version controlling service provider. When we compare GitHub with other service providers like GitLab, GitHub is a world trending version controlling platform. Also, it is compatible, portable, and high speed more than GitLab. So, we use GitHub.

**3.3 Summary**

We mainly focus on the technique’s compatibility, portability, and speed for us and its popularity level. Also, we focus on whether technology can learn easily. After that, we choose the above-mentioned techniques for our group project.

Reference:

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