**Project Description**

The group project is to develop a “Smart Mailbox” that aims to track and secure incoming mail and packages. The project involves developing an app installed smartphone to receive notifications and monitor the status of their mailbox. The top current information technology trends include mobile apps, automation, artificial intelligence, and smart technology – all of which are part of developing the Smart Mailbox project (Linchpin, 2021). Specifically for the Smart Mailbox project, the app will need to monitor light, motion, sound, temperature, number of parcels, and basic requests such as accepting or rejecting an incoming parcel. Developing an app requires knowledge of common modern coding languages such as HTML5, Java, C++, Objective-C, Swift or C# (Portal, 2017) or web development skills in React, or Redux. It also requires proficiency in Microsoft .Net Framework, MVC, SQL server and other software such as Node.js or Tomcat. To create an adaptable app with the many operating systems, such as Android, Windows, or iOS, it will also require the application of a “cross-platform tool” (Portal, 2017). Moreover, the app will need to capture information and store this information within the app which requires knowledge of server developments.

A consistent passion throughout the group is all things technology but becoming software engineers was particularly common and ranks #11 in IT occupations according to Burning Glass Technologies. In the software engineer roles, the main tasks involved are designing, developing, testing, and delivering software solutions that is also necessary to deploy this project. In software engineering, experience with Java, SQL, HTML5 are most popular, with knowledge of SQL ranking the #1 most sought-after skill from employers. For group members that are interested in software and production engineering, the skills and experience with programming languages, frameworks and tools developed from this project will contribute to their ideal job. This project also requires the ability to work collaboratively and effective communication (ranked #1 in demand from employers) to plan and execute a project within a timeframe – building experience that can be applied to any career, whether it is in IT or another field.

In addition to the software, a hardware component is also needed to be sourced and put together for this project. Sourcing the best fit hardware will require researching skills and the ability to analyse pros, cons, and risks to give the team the best chance to develop a successful product. These researching and analytical skills are commonly found in all the ideal jobs of the team members including Business Analysts and Infrastructure Architects.

**Risks**

What risks can you identify for your project? The idea is to be as specific as you can to your project. For example, if your topic is to develop a game, there may be a risk that the software you choose to work with may be very difficult to learn, poorly documented, or not turn out to have the features that it claims it has. These properties are often only discovered once you have started working with the software, and so unless you have had lots of experience with the particular tool, there is always a risk that it may not work as well as you believe it should, no matter how much prior research you do. Similar comments apply to hardware.