**Software Implementation and Testing Document**

**For**

**Group AssignmentBuddy**

Version 1.0

**Authors**:

Ashley Ellis

Jeffrey Knappman

Analise Saunders

Virginia Sicuriello

**Note:for the first increment, only sections 1 and 2 of the document are required.**

**1.** **Programming Languages (5 points)**

*List the programming languages used in your project, where you use them (what components of your project) and your reason for choosing them (whatever that may be).*

The programming languages used throughout the project are **Java**, **XML,** and **SQL**.

In our project, **Java** will be used to invoke activities within our Android application. An activity provides the window in which our app will draw its UI; one activity implements one screen in an app. Developing a .java file is necessary for developing activities within our application. Our group chose to use Java because it is the language primarily used in Android development and it is supported by Android Studio (IDE where we are building our app on). Java utilizes object-oriented design, which all members of our group are familiar with; and it contains many frameworks and class features that are beneficial in the development of our project.

**XML** will be used in conjunction with java to implement activities within our app. Currently, XML is being used to store data about our activity - such as activity size, layout, etc. Since XML makes data storage easier, we may use it to store necessary user information. We chose XML because it is a necessary aspect in developing the UI for our app, and it contains several predefined widgets in android that would aid in our project’s development.

**SQL** will be used as a means to manage data that we would want to store in our application. SQL would primarily be used in overseeing data management of user login information and other necessary user data that relate to the user’s personal data, such as, university courses that would be stored within the app. We chose SQL because it's great for querying data - which is important. After all, our app is going to rely on quite a bit of data storage. It can also be used in conjunction with XML.

# **2.** **Platforms, APIs, Databases, and other technologies used (5 points)**

*List all the platforms, APIs, Databases, and any other technologies you use in your project and where you use them (in what components of your project).*

*The platform for the project is* ***Android Studio****, it is the IDE where our app is being developed on. The emulator that our application is running on is* ***Pixel 3 API 15****. We will use this emulator due to this preloaded hardware profile - this relates primarily to the applications UI. The API of the emulator that is being used to run our application affects how our XML files will be developed. Android Studio provides a template-based setting which makes it easier to visualize how the interface will look like. Further into development, our group plans on using* ***SQLite API*** *in Java in order to create and maintain database tables within our application. SQLite would primarily be used in relation to user login information, including data concerning registered courses and assignments. It will also be used to help store the classes pertaining to each user, and the grades within each class and assignment.*