The programming language that will be used is Python, a general-purpose programming language. The majority of members within our group have experience with the language, and feel that the simplicity and flexible of the language would be easy to teach to the remaining people. Additionally, because it’s one of the more popular languages, there would be a ton of information and support out there to help in the creation of the application. There was some discussion about other programming language to use for development. Java was an option, and although there was praise for its adoption in many things, the problem was that nobody really liked working with the language. Other languages were brought up as well, but were almost instantly ignored because nobody knew how to work in it or it was simply disliked by everyone.

Since Python is a language that can be run on many different platforms, including Windows, Mac and Linux, everyone in the group can use any sort of PC to develop the application. In addition to that, Python has the capabilities to be run on a hosting server, which means that it could be accessed through any devices that have web capabilities. The IDE that each of us will be using for writing the Python code is PyCharm, by the developer JetBrains. This is because all of us have used JetBrain products and have found them to be useful tools in developing.

In terms of GUI, a proper decision about what to use hasn’t been decided yet. There has been a few different options presented, and each have their positives and negatives. One of them is TkInter, the default GUI package that has been built into Python. Another is a cross-platform framework named Kivy, which can be used for mobile applications and have multi-touch technologies. Finally, the other option is called PyGUI, which was a project designed to run a smooth, lightweight GUI implementation for Python.

There also needs to be an implementation of a database into the application. Therefore, the Python DB-API will be used, which has support for a whole range of different databases. The type of database that will be a relational database, which will be used to store all the values that the application will read in regards to blood level, etc. The chosen database to use will be SQLite, which is an open-source database which is embedded into the end-system, rather than being client-side. This means not having to worry online connections to a database, since it’s built into the application.

For collaboration purposes, the group chatting service Slack will be used, allowing for the creation of specific-purpose channels and integration of many different useful services. Additionally, the project management application Trello will be used during development, where roles and tasks can be assigned to different people. For configuration management, the version control command line Git will be used, due to its universal usage in terms of version control, and because of its integration within PyCharm. GitHub is going to be the hosting service for these git commits.

References

<https://sqlite.org>

<https://kivy.org/#home>

### <http://www.cosc.canterbury.ac.nz/greg.ewing/python_gui/>