**-DB Browser for SQLite**

DB Browser for SQLite is a visual open-source tool made for creating, designing, and editing database files that are compatible with SQLite. (*Edureka*, 23 Oct. 2019) DB Browser was used to manage and generate the data base in this solution. DB Browser for SQLite was chosen rather than other solutions due to it being the only Data Base Browser this efficient with SQLite compatibility.

**Tools and Languages:**

**-Freeplane**

Freeplane is a free and open-source software application that provides online tools for creating mind maps, concept mapping or information mapping. (Freeplane documentation, n.d.) Freeplane was chosen over other mind mapping tools such as Xmind, Mindmeister, or Diagrams.net due to the application being more optimized, more accessible, it runs on any operating system that includes Java, and Freeplane is much more efficient when using its mapping tools.

**-Python**

Python is an object-oriented, strongly typed coding language, with easy-to-use syntax, perfect for first time learners of code. (Python.org, unknown) This language was chosen to type the solution as it offered a time effective, and easy to code solution when developing the prototype. Python also allowed the user to have a simple way to debug the solution compared to other coding languages such as C++ or C#. Further allowing the prototype to be built more time effectively.

**-Adobe XD**

Adobe XD is an easy-to-use vector-based design platform that was built with performance at the top of mind. (What is Adobe used for, Oct 26, 2020) Adobe XD was used to generate the WireFrames for this solution and was chosen over many alternatives due to its accessibility, speed at which designs could be generated, its reliability, and the overall feel of the program didn’t feel clunky or bloated with unnecessary features.

**-Lucid Chart**

Lucid chart is an online tool that helps users sketch and develop flowchart diagrams, also providing designs to help creatives develop their ideas. (Lucid Chart, Unknown) Lucid Chart was used to generate the ERD for the solution. Lucid Chart was used for its simple, easy-to-use, and easy-to-navigate user interface. As well as this, Lucid Chart supplied the correct shapes needed to generate the ERD.

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**-SQLite**

SQLite is the most used database engine across all programming. SQLite is a Language Library that implements fast, very-reliable, self-contained, SQL database engine. It was chosen for this solution when compared to other SQL Database Engines, such as MYSQL, due to its simplicity, its file format being stable, the fact that SQLite is built into all mobile devices and most computers, meaning it is well received and well documented which proves useful when encountering any errors. The source code is in the public domain and the developers are completely transparent and dedicated to their work. (SQLite Home Page, n.d.)

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**-Microsoft Visual Studio Code**

Microsoft Visual Studio Code is a powerful developer tool, that combines the simplicity of a source code editor with useful and quality tools, such as IntelliSense code completion and debugging. The easy “edit-build-debug” cycle allows for less time managing you enviorment, and more time to produce code. (Microsoft, 3 Jan 2023) Vs Code was chosen to produce this solution for its easy-to-use debugging, allowing for a time efficient process to deploy the solution.

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**-QT Designer**

Qt Designer is a tool that allows easy creation of GUIs. (Graphical User Interface) Allowing users to drag and drop QWidget objects to build the GUI. (Leodanis Ramos, Unknown) This tool was selected over other GUI build tools due to its easy “plug and play” style used when developing the GUI. The tool is also heavily compatible with python allowing the rest of the solution easy to code as it aligned with the chosen coding language.

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