

- 1) The strengths to the GUI is the readability and understanding of the overall program, as well as being able to easily change parameters for the program without having prior software knowledge. Simplicity is another key strength of this program and communication between the program and the end-user is efficient and concise, as the program displays as little and simple information as possible while still conveying the knowledge and understanding needed for the user. Some things that can be improved are social and ethical issues such as accounting for disabilities as well as inconsistency in certain design factors (such as letter positions around the circle which is difficult to fix due to canvas' design and structure), as well as average GUI visual design and very dull colours, images, buttons and text, creating a less interactive experience when used for a long period of time.
- 2) There are many advantages and disadvantages to graphical user interfaces when using a computer. Advantages to GUI's is the usual ease of access and use to a wide variety of end-users, as well as easy navigation between elements and finding your way around the system. Through GUI's the user does not have to have prior complicated software knowledge or difficult commands to interact with and operate the program and can provide necessary help if needed to complete the task/s. They can also let you exchange data between different software applications.

There are however also drawbacks to GUI's. Some include that GUI's take up a much larger amount of hard disk space than other interfaces, as well as the fact that they need significantly more memory (RAM) to run as well. They use more processing power than other types of interfaces and can be slow for experienced programmers to use (for example, these people often find CLI interfaces much faster to use). Overall GUI's take up a lot more hardware power and are overall more intensive.

- 3) Processing logic development is vastly different to user interface design. Processing logic requires more mathematical, structured and algorithmic skills, to solve complex solutions and algorithms that mostly require mathematical functions, whereas user interface design requires more artistic and social skills, to communicate with the user through the GUI in the most effective and efficient way possible.
- 4) I did not use any specialised software, but if I were to use special software to facilitate the development of the GUI I would use "Altia Design", which would assist in creating a consistent GUI that included animation, stimulus and behaviours without the use of programming, while making the design process much easier.