# GUI Manager

This role is responsible for the Graphical User Interface (GUI). This concerns the layout and implementation of buttons, menus and windows, and how the user interacts with it via a pointer, which in this case is a mouse as our initial program version will run for a desktop environment. Future program versions may be improved upon to implement a user interface suitable for mobile or tablet environments with use of touch interaction. Secondary interaction could also be included, providing shortcuts with the keyboard to various application features.

Since this is the user interface, this part of the program will interact directly with the user, and market research should be used to determine the preferred general layout of the client/user audience. Therefore, the person with this role should liaise with members of the team concerned with market research so they have a clear view going into the design of what needs to be accomplished. More market research should also be undertaken to find out on what operating system the initial release of the program should be designed for. Subsequent versions for support on other operating systems will require additional GUI development.

The GUI manager should also be in close contact with the software manager, as all the research conducted with the market part of the team will need to developed and implemented, and members of the software branch may be needed for consultation or as another pair of hands for coding, particularly if development is behind schedule.

Windows that need development include but are not limited to: main menu; user profile; user settings; and any different content-related pages such as the sign language alphabet or a display of common phrases. The pages centring around the application content will involve the displaying of - and interaction with - multimedia content such as GIFs, videos and audio. As well as implementing the interactive components for the purposes of user interaction, another big aspect of GUI development is designing a visually appealing program, giving a more professional feel, hopefully improving the overall reviews of the application and ultimately selling more copies, increasing profit and allowing further potential development.

Being a management role, this also entails directing team members developing this part of the program as well as reporting to the team leader with regular updates and updating any files to the shared GIT file space. As such it is the responsibility of the person with this role to make sure the development GUI is kept on schedule according to the team leader. With agile development, a user story is made each week for the team to focus on completing and the manager would be responsible for deciding on the story and making sure it is completed on time each week.

Risk Management

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| --- | --- |
| Risk | Mitigation |
| Program isn’t fully interactable | Make use of testing to make sure that all buttons and sliders work for all inputs |
| Visuals aren’t aesthetically pleasing | Use market research to find what would suit our audience best |
| UI layout is inefficient | Design basic layout before starting and use market research to find the most intuitive layout |
| Not completed on time | Check in regularly with project leader |

Quality Assurance Metrics

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| --- | --- |
| Metric | Measurement |
| Actual coding time vs. planned | Make log of time actually programming. |
| Compiling errors | Save compilation report with lists of errors and records of tests. |
| Readable, commented code | Ask third party to read through code to see that it is understandable. |
| Visual quality | Design multiple visual styles and ask team to decide on favourite. |

# Market Research

The purpose of this role is to research products competing with our own to find the best way to design our program. Market research is important because the program is a product and will eventually be put on the market, which means to be a success it should sell as many copies as possible. To sell as many copies as possible, the program should get good reviews, which are obtained by creating an application that is carefully designed to meet the needs of the particular user demographic, as well as offering a competitive product compared to others also available on the market.

The business plan is an important part to research and is crucial to the success of any application going onto the market. Whether the app would be free to download with advertisements and a paid version eliminates the ads; or perhaps no ads would be used at all the premium version could unlock extra features; or combinations of the two.

Another important part of market research interacts with the user base rather than the competitor base. Finding out the target audience’s preferences are from the beginning allow for a user-centred design which should give higher customer satisfaction and higher sales than if no audience research was conducted. For example, what main features would the user base find most useful? Would it be worth the work to develop a part of the application which allows for sign language translation for instance, rather than just education?

From a visual standpoint, research should also be done to find out how the program should be designed with respect to colours, text styles and interface layout, so they appeal to our primary audience demographic. For example, if it were aimed primarily as a teaching tool for school children, the design might include bolder text, bright colours etc. to help engage the user more. If the app were to be targeted at elderly people – very possible with an app focused on sign language – then perhaps a high-contrast display would be beneficial for those with poor eyesight.

After the initial release, more market research could be conducted to find out what changes should be made. For example, what extra features would people like to be implemented in future versions? Is there any part of the application that doesn’t work well? Is there support for a particular device you want development for? Keeping the market research and client interaction active even after product launch will help ensure that the application sells well and *keeps* selling well.

With the exception of the actual making/coding of the program, there are few aspects of the application which can’t be improved upon with market research.