User Interface Programming – Project Research Workbook

This workbook will help you focus your research for your project.  
Once you have answered these questions, use this information in your GUI Design Document.

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| Briefly describe the application or game you will design and create the user interface for.  The graphical user interface you design may be just a piece or sub-section of a larger application.  This is your initial idea to focus your research. The application described in your design document, or your final build, may end up being different from this description.  Keep in mind that you may want the project you develop in this subject to integrate with the project you create for the subject *Cross-Platform Development*. |
| The application will be a sort of music creation app, where the player can spawn in different objects that all have separate musical functions. The main focus is that they would all be operating on a loop at the same rate so they can all play in time with each other. Some objects could play a drum noise, some could play a keyboard noise, etc… There could also be some blocks that apply an effect on top of the playing audio.  We would allow the player to “go into” these various objects opening up their UI to let the player interact with them. |

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| Identify any industry best practices, standards, codes of practice, or similar requirements or frameworks that may be applicable to the graphical user interface you are designing.  You may want to consider developer guidelines for app or game stores, video game rating regulations, and industry best practice reflected in online blogs, guides, or conference recordings. |
| One important practice I will need to implicate is for the options sliders. (Eg. Master volume level, FX level, etc…) Since these will be interacting with audio they will need to be converted to output logarithmically instead of linearly, otherwise they will not work properly.  The UI should also be very pleasant to work with in terms of user feedback. So having the buttons highlight themselves and provide some sort of audio feedback when pressed to satisfy the user is important. This would also make interacting with the various audio objects a lot more enjoyable and intuitive. (Knobs + Switches having click sounding feedback) |

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| Describe the functionality of your GUI.  Use diagrams or mock-ups to detail the front-end interface (what the user sees).  Describe the events or processing that occurs in response to actions the user performs using the interface (i.e., the back-end processing). |
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| What prototyping tools are available to you? Which one(s) will you use? |
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| What resources are required for the development of the user interface?  Include both software, and assets. |
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| List and describe the information that is contained within a design document used to describe the design of a graphical user interface.  In how much detail is each piece of information typically described?  What diagrams may be included? |
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