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*. |
| In the game I will be designing, the player will collect blue spheres and avoid red spheres. It will include a main menu which will let you start the game, quit, and access a settings menu that will let you reposition stats displayed during gameplay. |

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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. |
| Some good practices to keep in mind include keeping UI simple enough so that it doesn’t interfere with gameplay, but also ensuring it catches the eye of players. Responsiveness is a key feature of UI, such as having buttons become highlighted or make a sound when hovered over with the mouse. |

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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). |
| The button labelled “Play” will close the UI screen and launch the game screen.  The button labelled “Options” will close the UI screen and launch a different UI screen, the options menu.  The button labelled “Quit” will close the program.  A screenshot of a computer screen  Description automatically generated  The slider labelled “Volume” will adjust an integer that will affect the sound volume of the game.  The drop-down menu labelled “Resolution” will have different resolutions that can be selected, which will change the screen resolution to the relevant size.  The button labelled “Edit” will open the Stat Position menu, allowing the player to move around the positions of stats.  The two stats shown in the edit menu can be dragged to different spots on the screen.  “Editing Stat Positions…” will be shown in the bottom right corner while editing so that the player knows they aren’t in the game. |

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| What prototyping tools are available to you? Which one(s) will you use? |
| Some tools available to me include Photoshop, MS Paint, Draw.io, and physical notebooks. I will be making use of draw.io. |

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| What resources are required for the development of the user interface?  Include both software, and assets. |
| Development of the UI will require use of Unreal Engine. Most of the assets I use will be one’s built in to Unreal, including the font, buttons, player model, and level assets. The exclusion is the spheres, which I will make myself using Unreal Engine. |

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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? |
| A design document should contain information that explains how the UI should work thoroughly enough that other people working on the project understand how to work on it. Mock-ups of the UI are also important inclusions. Diagrams would be included for HUD elements, and a flowchart would be included for the menu system. Each individual menu will also have its own diagram. |