

DEPARTMENT OF COMPUTER SCIENCE

THE UNIVERSITY OF YORK

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SEPR - Assessment 3

# GUI Report

Evil Geese

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# Initial GUI Design

## GUI Design Process

Our GUI design should aid the player not hinder them, improving both usability and playability. We have recognised that our GUI must be designed to satisfy our initial requirements agreed with the stakeholder, put an emphasis on the player's experience, all whilst avoiding the pitfall of "Big Design Up Front" (BDF) [1]. Our GUI design has and will continue to change throughout development which suggest that large up-front planning (BDF) [1] is unwise and unhelpful.

The iterative nature of our Agile development methodology has aided us by allowing us to apply short iteration cycles to GUI design. Initial brainstorming on whiteboards allowed for our group to quickly ascertain the design principles which formed the foundation of our consequent design decisions. Paper prototypes have allowed us to quickly express ideas between our group and with our stakeholders. Collaborative User Centred Design sessions have facilitated an inclusive, stakeholder-focused decision-making process [2]. Continuous Integration has been employed to allow for our design to evolve, refactoring our design to enhance the player experience [1]. We believe these processes have allowed us to maximise the usability and playability of our software.

## Usability

Red/green colour-blindness is the most prevalent form of colour-blindness [3]. Our requirement, UH2, states that the "Game is accessible for those with impaired vision." To this end, we have ensured that we never use colour as the primary cue for information [4]. Our world map fulfills both requirements UH2 and requirement F7, "A player's' progress can be viewed from a top-down world map. This is accomplished by having white text on a black background showing which locations are available to be travelled to, allowing progress to be viewed by all: [https://evilgeese.weebly.com/uploads/1/1/4/1/114148871/gui\\_world\\_map.png](https://evilgeese.weebly.com/uploads/1/1/4/1/114148871/gui_world_map.png)

## Playability

The focus of our GUI design is not limited to usability. Player Experience can be seen as an extension of the traditional notions of User Experience. We will focus on the former as our game must be enjoyable, not merely functional. Playability, a contributing factor to game enjoyment, is considered and improved through our use of a "Player-Centred Video Game Design" approach [5]. This approach recognises that playability is maximised by in turn maximising effectiveness and efficiency of gameplay elements [5]. The GUI is an example of such a gameplay element.

From our initial requirements, requirement F8 states that "Enemies can be battled in combat mode." Combat mode requires more buttons to allow for the additional functionality expressed in combat mode to be accessed. Hence, whilst more complex, the GUI for combat mode has still been designed to be consistent with our design methodology. To increase efficiency, a minimalist design is employed. Buttons are grouped together in the lower left hand corner, being clearly labelled with their respective functions:

[https://evilgeese.weebly.com/uploads/1/1/4/1/114148871/gui\\_combat\\_mode.png](https://evilgeese.weebly.com/uploads/1/1/4/1/114148871/gui_combat_mode.png)

Requirement F1 states that the "Game must incorporate at least 6 complementary playable characters." To facilitate this feature we have implemented a character selection screen where players can choose three out of the six available characters to battle with: [https://evilgeese.weebly.com/uploads/1/1/4/1/114148871/gui\\_roster.png](https://evilgeese.weebly.com/uploads/1/1/4/1/114148871/gui_roster.png). Selection is made using the on-screen buttons with the selected character appearing on screen.

# References

- [1] J. Ferreira, J. Noble, and R. Biddle, "Agile development iterations and ui design," in Agile Conference (AGILE), 2007, pp. 50–58, IEEE, 2007.
- [2] J. Patton, "Hitting the target: adding interaction design to agile software development," in OOP- SLA 2002 Practitioners Reports, pp. 1–ff.
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- [4] C. Rigden, "'The Eye of the Beholder'-Designing for Colour-Blind Users," British Telecommunications Engineering, vol. 17, pp. 291–295, 1999.
- [5] J. L. G. Sánchez, N. P. Zea, and F. L. Gutiérrez, "From usability to playability: Introduction to player-centred video game development process," in International Conference on Human Centered Design, pp. 65–74, Springer, 2009.