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| Learning Contract | | | | |
| Aim 2: Technical Process – Implement the core mechanics and features required for my game to be playable | | | | |
| Objectives | Tasks | Resources needed | How is the success fulfilment of the task measured | Date Due |
| 1. Enemy wave system | 1. Create basic enemy  2. Create wave manager  3. Implement enemy ai  4. Create enemy types | 1. UE5  2. UE5  3. UE5  4. UE5, UE5 Marketplace | 1. An enemy actor that has stats  2. Wave manager can spawn a set number of enemies every wave  3. Enemies can travel to the defence point  4. Different enemy types with different models and stats | 1. 01/12/2022  2. 02/12/2022  3. 09/12/2022  4. 20/02/2023 |
| 1. Towers | 1. Create grid-based tower placement system  2. Create basic tower  3. Create tower effects  4. Create tower types | 1. UE5  2. UE5  3. UE5, UE5 Marketplace  4. UE5, UE5 Marketplace | 1. The player can place towers on the map in a grid like fashion  2. A tower that can aim and shoot at nearby enemies  3. The tower has sound and visual effects when shooting  4. Different tower types with different models and stats | 1. 04/12/2022  2. 04/12/2022  3. 24/02/2023  4. 26/02/2023 |
| 1. Weapons | 1. Create basic weapon  2. Create weapon effects  3. Create Weapon types | 1. UE5  2. UE5, UE5 Marketplace  3. UE5, UE5 Marketplace | 1. The player can shoot enemies with a gun  2. The weapon has sound effects and visually effects when shot/ reloaded  3. Different gun types with different models and stats | 1. 07/02/2022  2. 13/02/2023  3. 14/02/2023 |
| 1. Levels | 1. Blockout the levels  2. Implement buildable areas/ enemy spawns/ defence point  3. Add meshes  4. Set up lighting | 1. UE5  2. UE5  3. UE5, UE5 Marketplace  4. UE5, maybe UE5 Marketplace | 1. A preview of a level  2. A playable level  3. The level has an interesting and immersive environment that matches the theme of the game.  4. The level has unique lighting (not UE5 template lighting) | 1. 13/02/2023  2. 16/02/2023  3. 01/03/2023  4. 05/03/2023 |
| 1. UI | 1. Create player HUD  2. Create Main Menu  3. Create in-game menus  4. Stats Menu | 1. UE5  2. UE5  3. UE5  4. UE5 | 1. A HUD displaying player stats and wave information  2. A menu system that allows the player to change settings, select a level/ difficulty, view controls  3. A pause menu  4. A menu displaying the player’s statistics (Kills, Wins, Points Accumulated ect.) | 1. 22/02/2023  2. 23/02/2023  3. 23/02/2023  4. 28/03/2023 |

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| Learning Contract | | | | |
| Aim 3: Testing & Polishing – Find and fix any bugs with the game & make sure that the game runs smoothly | | | | |
| Objectives | Tasks | Resources needed | How is the success fulfilment of the task measured | Date Due |
| 1. Testing | 1. Create a questionnaire  2. Have users play through the game  3. Have users fill out the questionnaire | 1. Microsoft Word  2. UE5, Questionnaire Sheets  3. Microsoft Forms | 1. A prepared questionnaire  2. Record of playtest sessions  3. The questionnaire is fully filled out and may contain additional feedback notes | 1. 14/09/2022  2. 20/03/2023  3. 20/03/2023 |
| 1. Questionnaire Feedback | 1.Analyse Feedback  2.Present Data  3. Make a ToDo list based on feedback | 1. Microsoft Word  2. Microsoft Word  3. Microsoft Word | 1. A Table showing all of the responses to each question.  2. Graphs displaying user feedback and average feedback ratings.  3. A ToDo list with all tasks in order of what will be completed first. | 1. 24/03/2023  2. 26/03/2023  3. 29/03/2023 |
| 1. Iterative Design | 1. Fix any bugs that were mentioned in the questionnaire form  2.Make changes to the game based on user feedback | 1.UE5, Microsoft Word  2.UE5, Microsoft Word | 1.All bugs that were mentioned are fixed, with the changes being documented.  2.All relevant feedback is acted upon, all changes are documented. | 1. 10/04/2023  2. 15/04/2023 |
| 1. Game Polishing | 1. Balance gameplay  2. Make sure player movement/ interaction is smooth  3. Make sure the UI is clear | 1. UE5  2. UE5  3. UE5 | 1. All towers and weapons feel powerful in their own way, and enemies feel challenging but not unfair to fight.  2. The player can move around smoothly and effortlessly. The player can smoothly place towers and shoot enemies.  3. The HUD shows all necessary information to the player clearly. The menu UI is easy to navigate. | 1. 17/04/2023  2. 24/04/2023  3. 27/04/2023 |

I, the Supervisor, agree to the scope of the project including aims, objectives and successful fulfilment of tasks assigned to objectives

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| Signature of Supervisor: | L.Haslett | Date: | 07/12/2022 |