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| Week Starting: | 28/10/2019 TO 1/11/2019 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| This week was spent deciding on a topic for the research for my project which was a Unity Physics Engine. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Complete research on Newton’s Laws of motion and how they are affected by external forces | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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|  | **Student** |
| **Signature** | **Dylan Curran** |
| **Date** | **1/11/2019** |

**Additional notes:**

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| Week Starting: | 4/11/2019 TO 8/11/2019 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| For this week I had to come up with a different topic for my research project as my initial project idea was declined. After some contemplating with Lei Shi I decided to choose AI Learning as a new path for my project as there were too many Physics libraries for unity anyways |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Come up with a new research project idea. | | **2** | Think of a specific way it could be applied to a project to make it researchable. | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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|  | **Student** |
| **Signature** | **Dylan Curran** |
| **Date** | **8/11/2019** |

**Additional notes:**

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| Week Starting: | 11/11/2019 TO 15/11/2019 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| I decided to make an AI Learning game based on searching for a player in a house. I felt this would be an interesting way to see if I can make the AI adapt and make decisions based upon learning. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Do some research into AI Learning to get an insight into what is needed for the project. | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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|  | **Student** |
| **Signature** | **Dylan Curran** |
| **Date** | **15/11/2019** |

**Additional notes:**

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| Week Starting: | 18/11/2019 TO 22/11/2019 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| I did some research into DeepMind, a Google company that specialises in AI Learning. They made a bot that thought itself how to walk. I found out that AI works based off of simple objectives. I should aim to do similar for mine. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Find another area of AI to research to see if I can extract any information from other resources. | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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|  | **Student** |
| **Signature** | **Dylan Curran** |
| **Date** | **22/11/2019** |

**Additional notes:**

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| Week Starting: | 25/11/2019 TO 29/11/2019 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| This week I did some research into AlphaGo which is a bot that learned to play the match 5 game “Go” and bet the all time Go champion showing that the AI can pick up on complex strategies that players will not realise in their lifetime |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Do some more research to further build up the resources to tackle the project | | **2** | Begin the coding for the project to show some progress also. | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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|  | **Student** |
| **Signature** | **Dylan Curran** |
| **Date** | **29/11/2019** |

**Additional notes:**

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| Week Starting: | 2/12/2019 TO 6/12/2019 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| Did some more research into AlphaGo playing Chess against Stockfish which is another bot that was thought to play chess, during this time I found out that AlphaGo checked less squares per move than stockfish and yet AlphaGo was more efficient and won 10 out of 100 games whilst drawing 89 and losing 1.  I also made a base layout for a house in Unity, its a two storey building with room for the player and the AI to roam about |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Do 1 more field of research to ensure I can get all of the information that I need for the project.  Create a basic AI for now that can chase the player and detect obstacle collision. | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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|  | **Student** |
| **Signature** | **Dylan Curran** |
| **Date** | **6/12/2019** |

**Additional notes:**

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| Week Starting: | 9/12/2019 TO 13/12/2019 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| Since last week a basic AI was made for the game that chases the player.  Apart from this I did some research on a DOTA 2 bot that beat a professional DOTA gamer after playing against itself for 3000 years in our time which was only a couple of hours for the AI. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | During this week so far I made an AI that chases a player object no matter where the player goes, the AI also collides with obstacles. | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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|  | **Student** |
| **Signature** | **Dylan Curran** |
| **Date** |  |

**Additional notes:**

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| Weeks From: | 9/12/2019 TO 27/3/2020 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| No work was done during all of these weeks |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Restart working on the main project again to have some more work done. | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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| Week Starting: | 30/04/2020 TO 03/04/2020 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| Nothing was during the previous weeks.. |

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| **Tasks to be completed this week**  During this time Worked on creating a better player movement because the older player movement left a lot to be desired which involved fixing the movement with rotations and having the camera following the player successfully. |
| |  |  | | --- | --- | | **1** | Create variables to allow for ration and create a formula to allow the movement. | | **2** | Attach the camera to the player and have the camera rotate around the player | | **3** | Move the camera with the player to keep a relative distance between the player and the camera. | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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| Week Starting: | 6/4/2020 TO 10/4/2020 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| Last week I implemented the movement for the Player so that the player can move with the camera. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | Create a tutorial Level so the player can learn the basics of the game | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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| Week Starting: | 13/4/2020 TO 17/4/2020 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| Last week I made a tutorial level which allowed the player to understand the player’s basic movements and how to get collectibles. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | This week I am going to implement the Navmesh and take into account the obstacles and agents for this game. | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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| Week Starting: | 20/4/2020 TO 24/4/2020 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| Last week I made sure the NavMesh fit each level and took into account all of the obstacles and agents needed to make the NavMesh what I needed it to be. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | For this week I need to ensure that future levels can be easily made by prefabbing out the assets needed for future level design. | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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| --- | --- |
| Week Starting: | 27/4/2020 TO 29/4/2020 |
| Student Name: | Dylan Curran |

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| **Description of work completed since previous meeting** |
| Last week I prefabbed out everything to do with a level, player, Ai, collectibles etc. and ensured that they would work for future levels. |

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| **Tasks to be completed this week** |
| |  |  | | --- | --- | | **1** | This week I will update the Ai so it now patrols the level unless it finds the player, if it doesn’t it will keep searching until it finds the player. ( incomplete due to error encountered at last minute). | | **2** |  | | **3** |  | | **4** |  | | **5** |  | | **6** |  | |

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| **Supervisor Comments** |
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