**PROJECT POSTMORTEM SUBMISSION FRIDAY 4TH MAY 2018**

Once you have made your final presentation WE NEED YOU TO SUBMIT THE FOLLOWING COMPONENTS UPLOADED TO A SEPERATELY LABELLED GITHUB FOLDER

1. A SINGLE PAGE OF A4 (MAXIMUM) WHICH LISTS THE OVERVIEW OF THE ASSETS YOU HAVE PRODUCED FOR THE PROJECT, WHETHER THEY HAVE MADE IT INTO THE FINAL GAME OR NOT.
2. A COMPLETED REVIEW OF THE PROJECT **USING THE TEMPLATE PROVIDED BELOW**. PLEASE REMEMBER THAT THE MORE DETAIL YOU ADD TO THIS COMPONENT THE EASIER IT IS FOR US TO JUDGE YOUR WORK. SO AVOID SINGLE LINES OF TEXT. **EXPLAIN WHAT YOU MEAN**.

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| **STUDENT NAME** | Oliver Chamberlain |
| **PROJECT NAME** | Monster Miner – L6 Group 4 |
| What do you think went well on the project? | The project was brought to fruition quite quickly, and the iteration of assets was quite fast which allowed for various mechanics and art styles to be trialed. For the most part, the management (almost entirely by Daniel and myself) has been adequate however there have been periods where the ball has been dropped and week’s sprints have been missed. Overall I feel that the amount of programming assets that were produced managed to get the game completed to such a level that game balancing could be started at an early enough time in the project. In this vein, I believe that the amount of balancing on the project has been rather adequate even if some areas of the game could use some more attention.  I feel like my implementation of a behaviour tree for the colonists was well implemented and worked well for what the game needed. However it does feel slightly incomplete as there were some behaviours that I would have liked to include but we decided not to due to the point at which the project was at when it would have been feasible to implement them.  I am also pleased with the functionality of the UI for the game and feel that my collaboration with Ross between the design and implementation of the UI went relatively smoothly. |
| What do you think needed improvement on the project? | I feel like the creation of assets could have been better. On almost every occasion that an asset was submitted, it was not in a usable state to be put into the game which resulted in me having to use many development hours to fix these assets resulting in at least 15 hours split across the project in fixing scaling and pivot point issues on 3d models or resolving flipped faces on 3d models or important changes were made within the 3d models (using a regular mesh renderer instead of a skinned mesh renderer) once caused an entire core system to be rewritten because it would be quicker than to re-make the assets in such a way that using a skinned mesh renderer made sense. Alongside this on many occasions assets were not created on time and it took multiple weeks for assets to be produced which slowed production somewhat.  On the programming side, the code architecture was not well planned, this was partially a result of poor planning of the main mechanics of the game and very little design input being put into the game leading to the implementing programmer to implement the feature as he saw fit. Often the extent of design discussions resulted in “allow players to hunt monsters” rather than a discussion of how the actual mechanic was supposed to work within the game which then led to confusion between members of the group as to how mechanics functionally worked within the game. This was also partially due to the fact that neither design student had opened the Unity project until the final two months of the project (when Douglas begun his playtesting) and to my knowledge, Ross still has yet to open the project without myself or Daniel opening it during meetings in order to demonstrate something.  A lack of foresight by the programming team was also to blame for the poor code architecture and as the programmer responsible for many of these systems I feel that the primary blame for the lack of foresight falls on me. On many occasions poor code flow led to me using a bit of a “hacky” workaround to elicit the desired result and as such meant that changing one of the game’s core systems required changing many other systems because many systems that I created were interdependent on one another.  Also I feel that the team’s communication throughout the project was somewhat lacking, however a reasonable amount of communication did occur away from official channels. Much of the communication was focused on chasing up missing work rather than discussing gameplay changes etc.  Many times, primarily in the first semester of the project and early second semester, the designers on the project would leave meetings very early, leaving myself and Daniel to handle the majority of the administration of the project such as deciding which tasks would be done in the week and writing meeting minutes. |
| What do you think of your own contribution to the project? | I believe that my contribution to the project was significant. As one of the two programmers on the project, I was responsible for programming the colonist AI, any of the building functionality and the UI that came along with them. Alongside this, due to the group beginning the project during the summer, I worked on two prototypes and developed one prototype (a 2d version of the same game concept that we continued with) to quite a high level of completion, having around 1/3 of the features that are in the game at the end of the project. And due to my interest in the game’s genre I found a lot of enjoyment in developing the project and as such did some work on the project in my spare time and logged hours for that.  I also feel that the majority of the management fell to myself (and Daniel) as the two designers on the project did not feel comfortable with taking part in the project management and I feel that the project was mostly on track throughout the year. |
| **OVERVIEW** |  |
| **Thinking about the project you have worked on this year, what are the important lessons that you will take away from the experience for your next group project?** | The biggest lesson that I have taken from this project is that a good design document would have been invaluable. All members of the team (as with any team) had slightly different ideas of how the game should be/was implemented and having a central document to refer to with this would have been useful in clearing this up. Alongside this, better planning of the code structure would have been very nice to have had. As previously mentioned, the code did end up being quite convoluted and messy and some more prior thought to how the game’s systems should interact could have mitigated or avoided this altogether. |

Asset list:-

* Equipment
* BehaviourBase
* BehaviourTreeManager
* Composite
* Decorator
* RepeatDecorator
* Selector
* Sequence
* ConstructBuilding
* GatherObject
* HarvestObject
* ColonistWander
* ConsumeFood
* DepositInStockpile
* FindJob
* FindStockpile
* GetResourcesForJob
* IsJobTypeDecorator
* MoveToJob
* WorkOnJob
* AttackMonster
* FindTarget
* MoveToTarget
* ColonistController
* BuildingManager
* ArmouryFunction
* BarracksFunction
* BlacksmithFunction
* BuildingFunction
* GranaryFunction
* HouseFunction
* StockpileFunction
* Craftable
* Armour
* Weapon
* Wearable
* Item
* ItemInfo
* Resource
* Job
* JobManager
* DropTable
* HuntingIconRotate
* CameraController
* ItemDatabase
* Keybinds
* Stockpile
* TimeManager
* UnitSelection
* ArmouryJobPanel
* BarracksJobPanel
* BarracksPanelUI
* BlacksmithPanelUI
* HouseUI
* ArmourTooltip
* BuildingTooltip
* ItemTooltip
* WeaponTooltip
* HUDMainBar
* UIController
* UIPanels
* UIWorldSpaceCanvasBillboardEffect
* In game implementation of UI based on Ross’ designs.