**Name of Person Submitting Report:** *Aaron Metallion 100518326*

**Studio:** *Pixel Brothers Studio*

**Studio Members:**

Lead Programmer: *Aaron Metallion 100466698*

Lead 2D Artist: *Eric Chan 100518326*

Writer: *Rehan Rameez 100489357*

Producer: *Thomas Whiting 100517132*

Level Designer: *Usman Variava 100522053*

**Workshop:**  *1395*

**Game Name:** Once upon a time at: Misthaven.

**Feature Completion Report:**

**Required Feature** **Report** Section

*INFR 1100U, Introduction to Programming, Miguel Martin*

*BUSI 1700U, Intro. To Entrepreneur, Michael Konopaski*

*INFR 1395U, Game Development Workshop 1, Kenneth Finney*

*INFR 1020U, Essential Math for Game 1, Andrey Zarin*

*INFR 1310U, Graphic Design 1, Mike Hansen*

*INFR 1330U, Basic Intro. to Game Design, Lennart Nacke*

***Course Feature****:*

***Graphic Design:*** *During the Graphic design, landscape had the biggest connection on the GDW game project out of all the graphic design lessons. The game’s art was born out of the inspirations of the artwork that the studio had come up with. The general idea on “Once upon a time at: Misthaven” was that the game is set on a world where the planet’s gravity was corrupted to the point of the landmass breaking up, creating a world of floating islands. In landscape, we were able to learn the idea of creating a world based on Surreal, Sci-Fi and fantasy that would allow us to create Misthaven. We also used the landscape to design the environments in our games, from the peaceful village where the players begin the game to the mysterious atmosphere of the dungeons where the players would travel to. Graphic Design also allowed taught us the use of coloring that allows the design of the game to appear unique and seem like an alien world when compare to the real world. Another feature from the Graphic Design course is the character designs. The character designs allowed us to create our own perspective of what the inhabitance of Misthaven would look like. However, because the game is more of a text based game, it limits how we represent the characters in the game.*

***Programming:*** *‘Once upon a time at: Misthaven’ was a game created to primarily understand how a top view adventure game would be prototyped, implemented and fleshed out. The project was ideal for a Game Development student to learn to think like a game programmer and understand the logic behind programming a game. The Programming Course perhaps had the most critical impact to fleshing out the game and making it a reality. The course just taught us the basics of C++ programming such as nested for loops, matrices, file I/O, switch statements, etc. What we did with those basic concepts and how we implemented it was left to the programmer. So the game started out as a simple X moving on a matrix of asterisk characters, and as time went by, files were converted into colorful maps – appearing to look like 2d graphics even though completely ASCII based, the gameplay started to take its shape and the game became what it is. During the 100+ hour development period of the game, learning to think like a game programmer and most importantly creating a gameplay experience for the player using just a fully text based medium (no graphics) in C++ was learned.*

***Game Design:*** *“Once upon a time at: Misthaven”, our GDW game featured many things that we learned from our game design course this semester. Misthaven is an RPG game which is based in a medieval fantasy world. Its name comes from the town in our game which is also called Misthaven. The gameplay is based on our game story. In Misthaven, the whole landmass is cursed causing all the people to lose their memories. The people built a portal to free the evil spirits. The game is about the protagonist who has to hunt and a girl that ran away from the town into a dangerous forest. The girl is pure at heart and sacrificing her would complete the summoning. Misthaven is a single player game in which you must go through mazes by avoiding the shadow that is chasing you and also traps that are in your way to get to the end of the maze. If the shadow touches you, you will die and respawn outside of the maze. The objective is to reach the girl and complete the summoning. The resources in Misthaven are the crystals you are able to collect while in the mazes. The crystals act as a form of currency. As you die in the mazes, you will lose lives. Once you lose all 6 of your lives you will lose the game. When you reach the end, you will find an artifact from the girl and it will summon you back to the village. Our game design course taught us all of the formal elements we used in our game to make our game more appealing to the players. Our storyline will also create emotional tension as the player is the evil villain in the game instead of the hero. The game will also create gameplay tension as our use of specific gameplay mechanics such as players trying to avoid the shadow and the traps to get to the end. Our game design course taught us to create interesting mechanics along with many formal elements of game design that influence the game positively.*

***Math:*** *When the GDW was working on “Once upon the time at: Misthaven” a text based adventure game, the math plays an important role in the development of the game, primarily on the programming aspect of the game. One of the key important of math in the game’s development is on the basic mechanic of the game. During the development of the game, it was required for the players to move the game on a preset grid. The grid would show a small segment of the map and will only move to the direction of where the players move. When the player move left, the screen moves left. The math allows us to replicate the size of the game screen and give coordinates for the commands, in which the program codes would use the given numbers and commands to replicate a feedback from the player. Another aspect that the math plays a role in the game is in calculating key game mechanics. Specifically, the math also allows the game to determine the overall amount of collected plasma, or currency, that the player collected, and also calculates the total amount of hit points that the player has before dying. Math has also helped to determine the size of the game’s display. In the game, the character’s portrait is created using the mathematical calculations for the dimension of the portrait’s length and width. The dimensions of the portraits allow the safety of ensuring that the images do not look unusual or deformed from what was expected for players to see. This can also be said about the size of the game’s display on screen as well.*

**Teamwork Wisdom:**

1. The importance of team work and contribution in the making of a game. In order to create our game, we all had to work together as a team. If one person were to do all of the work, it would be much too stressful on them. We learned from our experience that we need to work together to make something great.

2. Our collaboration of ideas improved the overall game making experience. While working on the game, we all had very different opinions and ideas about how to make the game a fun experience. Having all of these different opinions really helped our group make decisions since we could all critique the ideas and choose the best ones.

**Production Wisdom:**

The lead programmer is king. A hard working programmer will need to be treated leniantly and a treated-leniant programmer will need to be hard working. Programmers lead the path to profit and victory. The programmer is the biggest part in production’s success. Treating them rightly helps secure a good production