**Intention:**

The intention of this project was to create a turn-based combat prototype for a game which encapsulates the excitement of chance-based mechanics as found in role playing games and their digital counterparts. More specifically, a focus was placed on the roll-to-hit mechanic commonly found in role playing games such as *Pathfinder* (Bulmahn, 2009). Not only does this mechanic add emotional tension to the player’s interaction with the game as they do not know if their attacks will succeed or not, but it also makes sure that there is a variance in the potential outcome of a game, no matter how perfectly or badly the player plays.

**Process:**

This turn-based combat prototype is based on the roll-to-hit mechanic. The player and enemy are each given 10 health, and their basic attacks do 2 damage each. The player and the enemy are each given a turn where they must utilise the roll-to-hit mechanic to do damage. This decision was made to add the excitement of unpredictability to the combat as described in the intention. Without this, the turn-based system would be predictable and therefore boring as the player would defeat the enemy every game, as it is the player’s turn first and the player has access to a higher damage ability. Before the start of each turn a number is rolled out of 6 which is then compared to the enemy or player’s defence number, which is 2 in both cases. If a 2 or lower is rolled, the enemy or player will miss, and the turn will pass to the opposing entity. These health, defence and attack statistics were kept the same for the enemy and player so that the effects of the roll-to-hit mechanic and the chance-based fireball spell (which will be analysed shortly) could be clearly understood while still providing an engaging experience to the player. If the number rolled by the enemy’s AI is higher than the player’s defence number, 2 damage is delt to the player. If the player rolls higher than the enemy’s defence number, the player is given the opportunity to choose between two attacks: a melee attack or a fireball spell. Two types of attacks were added to give the player more options, therefore increasing player agency. The melee attack will do 2 damage. The fireball spell will do 4 damage to the enemy, but there is a roll out of six with a 3/6 chance that the player will receive 2 damage. The 50% chance that the fireball spell would damage the player was added after it was realised that if there was no disadvantage to choosing it, the player would consistently select the more powerful ability. In this way an element of strategy is added which the player can engage in. This also corrected the issue of the player feeling like they could win too easily. Furthermore, if the player has been unlucky and missed too many rolls, this can act as a “comeback” mechanic which would enable the player to win. Considering that the enemy and player both have the same defence, attack and health values, this mechanic is the only one which gives the player a clear advantage over the enemy. However, to make use of this advantage effectively this spell must be played at the right time, which is determined by the roll-to-hit mechanic’s effect upon the player’s health. The player is guaranteed to do double the damage they can do with a melee attack in one turn, with a 50% chance that they might give themselves the damage equivalent of one of the enemy’s hits. Furthermore, this ability is thematically appropriate since fire has the connotation of being dangerous. Originally the enemy defence was set to 1 instead of 2, and after some playtesting it was decided that this 1/6 chance did not occur often enough and therefore made it too easy for the player to win.

**Reflection:**

Overall, the enemy and player in prototype in its current form are balanced, as they both have the same statistics such as their health, defence and basic attacks. In the future it would be valuable to further explore how these values could be changed. This would require more engagement from the player to understand how the interactions work and would thus complicate the strategy of the game. This would be supported by a console showing numerical values. Furthermore, this would make each entity in the game feel different, whereas the fact that one is supposed to represent a frost giant while the other the player is currently not mechanically represented, and therefore the player would not know this if the labels had not been placed there. To give a specific example, one could consider making the defence of the enemy higher at 3 instead of 2. This would make sense thematically as one might expect a giant to be more resistant to human attacks. To balance this, as this would make it harder for the player to hit the enemy, the player’s attack value could be increased from 2 to 3. It could also be considered that the 3/6 defence value, which is a 50% hit chance, is low, and may cause player frustration. To correct this the D6 roll would be changed to a D10 roll. This would give the option to make the hit rate 4/10, or 40%, which would be larger than the current 33.33% hit rate, but lower than 50%. A differing defence value in response to different player attacks could also be explored, such as a higher defence for melee attacks, whereas the defence for ranged attacks could remain at 2. Overall, the intention has been met as the roll-to-hit mechanic has been explored and highlighted in this prototype. Furthermore, the fireball chance mechanic works with the roll-to-hit mechanic to rectify the frustration a player would feel if they kept missing. However, as discussed above, there are areas which this prototype could be improved and these concepts further explored in the future.

REFERENCES:

Bulmahn, J. (2009) *Pathfinder*. [Tabletop game]. Washington, USA: Paizo Publishing