**Combat Design Doc**

**NOTE: All numbers written in red should be exposed for tweaking at the testing phase**

# Generation

**In Husk combat encounters will be randomly generated according to specified parameters such as intended difficulty and available enemies for the area**

* Every combat encounter in the game should have an integer value exposed for tweaking called the Difficulty Scale that ranges between **1-3**
* When combat start the player should appear on the left-hand side of the screen for every encounter
* Between **1-3** enemy positions should be generated upon the start of the encounter based on its Difficulty Scale (DS**1** = **1** position, DS**2** = **2** positions etc.)
  + These positions should be in a line to the right of the player character with position 1 being at the front closest to the player.
* These enemy positions will then be randomly populated from the available enemies (this is determined in each enemy types description)
* The player will draw **5** cards to the bottom of the screen fanned out, this is the players hand

## Difficulty Scale 1

* At this level the following enemy types may spawn:
  + Basic

## Difficulty Scale 2

* At this level the following enemy types may spawn:
  + Basic
  + Bomber
  + Shield
* Additional conditions present at this level are:
  + Only 1 shield enemy may be generated
  + Only 1 bomber enemy should be generated
    - If a bomber is generated it must be placed in position 2

## Difficulty Scale 3

* At this level the following enemy types may spawn:
  + Basic
  + Bomber
  + Shield
  + Brute
* Additional conditions present at this level are:
  + Only 1 Brute may be generated
  + Up to 2 bombers may be generated
    - If a bomber is generated it must be placed in either position 2 or 3
  + Up to 2 shield enemies may be generated

# Turn Structure

**Combat will follow a turn-based structure where the player acts first followed up by the enemies back and forth until the encounter is cleared or the player dies**

## Player Turn

**The player engages in combat by playing cards from their hand that are randomly selected from their deck**

* When the players turn starts if they do not have the maximum number of cards they should draw cards till they reach it

### Mana

**Mana is spent by the player on their turn to play cards from their hand**

* Mana should be displayed on the HUD in the top left hand side of the screen as the amount written over a mana symbol
* Every turn the player should gain mana at the start of their turn
  + At turn 1 they should have **1** mana
  + Turn 2 – **2** mana
  + Turn 3 – **3** mana
  + Subsequent turns mana should not increase beyond **3**

### Playing A Card

* When the players mouse hovers over a card with their mouse it should
  + Be drawn on top of the stack.
  + Be pushed up slightly so that its description is visible.
* The player may then play that card by pressing LMB provided they have enough mana:
  + The card should then move up to the centre of the screen
  + The card should then become larger quickly and fade till it disappears
    - The card is now removed from the players hand
  + The relevant animations should be played on the player character and the enemies, as well as appropriate VFX/SFX
* The effect of the card should then be applied.
* If the player doesn’t not have enough mana a message should be briefly displayed by the mana counter that reads “Not Enough Mana” in red.
  + The mana counter itself should also flash red.

## Enemy Turn

**Enemies fall into various types that allow them to take different actions on their turn to oppose the player in different ways allowing for strategy on the players part**

* Enemy turn order is determined at the beginning of the turn, they go from left to right
* For example if the creature in position 1 uses the move action to swap with the enemy in position 2, the creature that was in position 2 but is now in position 1 takes its turn before finally the creature in position 3 goes

### Basic Enemy

**These will be some of the earliest enemies the player encounter and therefore the easiest to defeat.**

* Basic enemies will be capable of taking the following actions on their turn:
  + Attack – this will cause the player to lose **x** health.
  + Dodge – this will cause the players next **2** attacks to only hit **x**% of the time.
    - This move should have a cooldown of **2** turns
  + Move – this will cause the enemy to swap positions with another creature next to it or move to an empty space next to it
* Basic enemies will only have **10** health, so they are easy to kill
* The Basic enemy will prioritise using its dodge if it is available otherwise it should Attack

### Brute Enemy

**These enemies resemble the basic enemies but are larger in size and able to use a wider range of abilities in combat.**

* Brute Enemies will be capable of taking the following actions on their turn
  + Attack – this will cause the player to lose **x** health
  + Slam – this will cause the player to lose **x** health as well as lose a random card from their hand. This ability should then go on cooldown after being used for 1 turn.
  + Move – this will cause the enemy to swap positions with another creature next to it or move to an empty space next to it
* Brute Enemies will have **x** health.
* The Brute will prioritise using its Slam attack if it is available otherwise it should Attack

### Shield Enemy

**These enemies resemble the basic enemy but equipped with a shield and are capable of blocking damage from the player with the use of its active ability to force the player to utilise strategy to win**

* Shield enemies will be capable of taking the following actions on their turn
  + Attack – this will cause the player to lose **x** health
  + Defend – this will cause the shield enemy to block card effects and damage to the creature to its right and take **x**% less damage against itself
    - When this player attacks a defended enemy the word “Defended” should briefly appear below the creature, an animation should play of the Shield enemy stepping in front of the defended creature
    - The damage the defended creature would take should be applied to the defending shield enemy
  + Move – this will cause the enemy to swap positions with another creature next to it or move to an empty space next to it
* Shield enemies will have **x** health
* The shield enemy should prioritize moving in front of other creatures in combat to use the Defend action on subsequent turns. The enemies it prioritizes defending and their order are as follows:
  + Basic
  + Brute
  + Shield
  + The shield enemy should never try to move in front of a bomber enemy

### Bomber Enemy

**These enemies will resemble the basic enemy but with clear to see explosives strapped to them allowing them to deal large area of effect damage**

* Bomber enemies will be capable of the following actions on their turn:
  + Attack – this will cause the player to lose **x** health
  + Move – this will cause the enemy to swap positions with another creature next to it or move to an empty space next to it
* When the bomber enemy dies it will explode dealing **15** damage to creatures in adjacent spaces, if the bomber was at the front of the line of enemies it will deal this damage to the player as well
* The first time a bomber is encountered by the player a warning should pop up should appear to inform them of this.
* The bomber should prioritise taking its turn moving to the left to the front of line before attacking the player

### Enemy UI Elements

* Enemies should have health bars above their heads
* These should appear as progress bars without specific numbers on them that represents the percentage of their total health
* Written over the bar should be the name of the enemy (i.e. bomber, shield, brute, basic)