



Game Production  
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**Assignment 1**  
Game Design Document

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# Preface

The Game Design Document was done as a collaborative effort between Ang Yong Xiang Adwin and Ibrahim Alrasyid Waterkamp. Each and every section in this document was done together during their many brainstorming sessions.

The authors would like to thank Dr Oon Wee Chong for guiding us and giving us feedback to work on.

The authors would like to thank the amazing predecessors: Hollow Knight, Shovel Knight, and Castlevania Symphony of the Night, for giving us an inspiration to start working on The Uprising.

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# Game Concept

Name: The Uprising

## Introduction

The Uprising is a 2D Metroidvania game, where you survive and try to rebuild humanity's former glory. However, you have to travel through a monster-infested and war-torn world to gather forces and rise up against a cruel mastermind that has been manipulating countless innocent people for years.

### **Rationale of the introduction (Not Part of Introduction)**

Organic exploration in a world that is broken apart by war and monsters while surviving, interaction with people, a mastermind and having to deal with people you know that were manipulated against their will without them knowing.

## Background (optional)

Some historical landmarks from the real world will be displayed in an alternative condition, for example, the Statue of Liberty is half-destroyed or half-buried.

## Description

- You will be sent on missions to fight monsters that are trying to take over the world
- You then found out that the drug given makes you kill other innocent humans without the drug
- You will then be finding out about the truth of what is happening and put an end to the manipulation and focus more on the survival of humanity.

## Key features

- An immersive and compelling story with complex grim morals and motivations.
- Explore a vast interconnected world with the last remnants of human civilizations, overgrown wildlands and destroyed societies.
- Visit areas and recover the past relics of humanity that have been long abandoned, or so you thought.
- Experience the intuitively tuned controls of Alwin
- Encounter a variety of monsters with varying abilities and evolution.
- Experience thrilling boss fights that are unforgettable.
- Your morals are challenged while you attempt to rebuild society to regain humanities' former glory
- Choose how you want to fight your battles and overcome obstacles
- Explore the synergy of two weapons to fight and overcome obstacles.
- Beware of trickery where one does not expect
- Deal with the rising danger of ever-evolving monsters who seek to devour the last remains of humanity

## Genre

- Metroidvania
- Adventure
- Action
- Platformer

**Rated R for gore and violence**

## Platform(s)

Personal Computers (PC)

Windows, Linux and Macintosh

## Market Analysis

- Action-Adventure games are popular amongst male and female on the PC platform, being top 3 amongst male and top 1 for female (Brown, 2020).
- There are successful games which achieved great reviews and sales, that follow the 2D action-adventure game format.
- For example, Hollow Knight which has sold over 2.8 million copies, showing the popularity of such genre while in a 2D format (Walker, 2019).
- 2D games are still very popular in the market, below are some of the popular 2d games
  - Terraria - 30 Million (Handrahan, 2020)
  - Brawlhalla - 20 Million (Jr, 2019)
  - The Binding of Isaac - 7.1 Million (Orland, 2018)
  - Castle Crashers - 5.5 Million (Orland, 2018)
  - Stardew Valley - 10 Million (Strickland, 2020)
  - Cuphead - 5 million (Strickland, 2020)
- According to Quantic Foundry, Completion is always one of the top 3 motivations for every gender and age group (Yee, 2016).
- The mental barrier for 'cheap \$10 small experience' has been passed through. 2D indie games that are over \$30 doesn't even bother players these days. This means that the level of acceptance the audience has for 2D games makes 2D game makers create newer and bigger things. On top of that, higher prices for a lot of these experiences show just how much audiences treat them like any other game on the market (Kay, 2018)

# Functional Specification

## Story

### Setting

#### **World**

Earth has been devastated by a war between the US alliance and China alliance through the use of chemicals and radioactive weapons. Most if not all countries have fallen apart and countless societies were destroyed in the middle of the war. As a last-ditch desperate effort between both sides, mutual destruction was enacted which effectively eliminated both alliances.

The use of radioactive weapons has resulted in mass mutations and caused many survivors to lose their sanity and morph into horrific monsters

## Monsters and Humans

### Monsters - Evolution

Monsters can evolve from consuming other living organisms, but consuming humans gives the most nutrition for growth. Monsters have intuitions that allow them to identify which living organism provides the most nutrition, which causes them to be easily attracted to humans.

Monsters have 7 tiers of evolution that affect how they behave and their capabilities. Each tier will contain the capabilities of the previous tier.

#### Tier 1

Monsters who would only react with their instincts and chase humans on-sight. Can only do basic melee attacks.

#### Tier 2

Monsters who are more powerful but still rely on instinct.

#### Tier 3

Monsters are able to perform higher damages. Some are able to perform ranged attacks.

#### Tier 4

Monsters are able to block attacks. Some have invulnerable defences except one a weak spot.

#### Tier 5

Monsters are able to evade attacks through manoeuvres. Some are able to fly/glide.  
Monsters are able to mimic human behaviours.

#### Tier 6

Able to perform charged instant kill attacks. Have average human intelligence and can speak the human language.

#### Tier 7

Unique monsters that have special powers that vary from monsters. Monsters have higher intelligence than average humans. Most powerful but power can differentiate depending on their main strengths.



## Human - INOX Academy & Liberty Force

In a war-torn world, monsters run rampant in the world. These monsters are once human, however, they are mutated and lose the sense of any intelligence. The humans made a fort with a very strong defence to train one another and fight back against these beings.

Therefore, INOX Academy was built to provide a safe haven for humans.



Figure 1. INOX & Liberty Force Hierarchy System

INOX academy has a military hierarchical school system, Liberty Force follows the system as many of the members were originally from INOX academy, following a familiar system would ensure that there will be less confusion.

### Cadet

The cadets are the students of the academy where they would be trained and eventually graduate to be a Private.

### Corporal

Corporals are the building blocks of INOX as they handle many types of work. They can be teachers, guards, front-line forces, researchers, administrative workers and more.

### Sergeant

Sergeants are one rank higher than corporals where they can be vices to the Lieutenants.

### Lieutenant

Lieutenants are the team leaders, project managers and subject head.

### Colonel

Colonels would be the vice-director in a school or of a department such as the department of finance or logistics.

### Lieutenant

Lieutenant Generals would be the equivalent to the director of a school or department.

### General

Generals would be the equivalent of the acting commander of the army, the vice-principal of a school.

### Command-In-Chief

The founder, Luthor is the Commander-In-Chief.

The Commander-In-Chief for the Liberty Force is Kevin, Abella's father.

## Main Storyline

A boy named Alwin was born in a village outside of INOX academy. However, one day the village ran out of cure and many of the villagers turned into monsters before INOX could reach the village with the cure. INOX had to raid the village and defeat all the people who turned. Alwin's parents don't have much cure left and gave all of it to Adwin, they eventually turned and got killed by the soldiers from INOX. Alwin was then taken to the academy for the sake of getting a new shelter and learning how to fight back against monsters. This is where he met lieutenant Chase, the soldier who saved Alwin. Lieutenant Chase has been the father equivalent of Alwin ever since he joined INOX. He has a wife, Jane Smith who is also a mother figure for Alwin.

The cure is, however, a hallucinogenic drug designed to view all people who do not have the hallucinogenic drug injected to be hostile enemies. This drug was given to Alwin before he was dispatched on a 10-day mission to eradicate a monster's nest. However, towards the end of the mission, Alwin got trapped by the building remnants that fell on him due to a huge explosion. He was assumed dead by his comrades resulting in him to be left behind.

After waking up from his passed out state, he fought his way through the heavy block on top of him and managed to break free. Tired, confused and injured, he tried to find his way back to INOX academy. He met Abella in the middle of his journey, who turns out to be a doctor and brought Alwin to her house where he was treated for his severe injuries. Alwin was told that INOX academy kills innocent humans outside of INOX to harvest them for health. Despite these warnings, Alwin still insists on finding his way back to INOX.

He then found out that it has been more than 2 weeks since he used the drug. He was puzzled since Alwin was told that he will turn if the drug is not taken after 2 weeks. At the front gates of INOX, Alwin tried to convince the guards that he is safe, but then he was shot at, resulting in Alwin to run for his life.

Alwin returned to the place where he met Abella and told her about everything that happened. Abella then revealed that her father used to be the leader of the Liberty Force that tried to fight INOX 5 years back. This puzzles Alwin more because when this event occurred, Alwin was a cadet back then where he was evacuated to his room and was told that a huge fleet of monsters had grouped up against INOX academy. Abella insists that it was actually a group of humans and they both started to raise suspicion about the drug.

One day Alwin heard about news stating that a nearby village was being raided by INOX, he dashed quickly to the event. He was confused because he saw his friend killing other innocent humans. Alwin shouted to his friend, to tell the news that he is not dead. However, his friend looked at him as if they have never been friends and started to shoot towards Alwin. Alwin managed to defeat him, took the drug and fled back to Abella's house.

Abella then convinced Alwin to be tied up and consume a small dose of the drug. It turns out, after 30 minutes of consuming the small dose. Alwin became aggressive and was struggling to get out. Abella then knocked Alwin out and then waited. After one day, Alwin woke up and told Abella that she turned into a monster and had a sudden urge to kill it. This is when they both found out that the drug is leading to chaos between humans.

Abella then tells Alwin of a member of the rebel group who is a chemist genius, named Franklin Benjo. Franklin managed to survive as he did not take part in the clash between the Liberty Force and INOX academy. Franklin may have a clue to eliminate the effects of the drug.

Alwin then finds Franklin in danger of being attacked by INOX and has to deal with the onslaught of INOX forces. After overcoming the dangers, Alwin worked with Franklin to come up with the antidote to the drug. The antidote, however, has to be breathed in to be effective, INOX forces always wear a gas mask while on missions to eliminate the toxic fumes emitted by monsters. Franklin joined Alwin in his endeavour to overthrow Luthor from his position and free INOX.

Alwin then starts to gather all members of the Liberty Force to help attack INOX outposts and free the imprisoned members of the Liberty Forces to create a huge army that will overthrow Luthor.

Upon gathering sufficient members, Liberty Force enacted a plan to defeat Luthor once and for all. Alwin has been selected to infiltrate INOX academy and block off the armoury to disarm the INOX soldiers. However, in order to stay undercover, Alwin has to take the drug to disguise himself and control his urges to attack the Liberty Forces.

After the destruction of the armoury's entrance, the alarm in the INOX headquarters signals the start of the invasion. The members of the Liberty Force will gas all members of INOX to lift the drug off them. At this moment, Alwin will have to navigate to the King's Peak to defeat Luthor. However, getting to Luthor will be a challenge since the guards that are guarding Luthor are actually Tier 6 monsters under mind-control.

Luthor was then found and he was actually a Tier 7 monster with hypnotism power and telekinesis power. Luthor's hypnotism power can only be spread through contact with Luthor's bodily fluids. Luthor will control soldiers who are wearing gas masks and attack Alwin. In order to save the soldiers' lives while still undergoing attacks from Luthor, Alwin has to incapacitate the soldiers.

Finally, Alwin confronted and fought Luthor. Throughout the fight, Luthor repeatedly mentions that killing him is pointless as Luthor attempts to kill Alwin. Alwin successfully defeats Luthor, but moments later, sounds of monster roars could be heard echoing throughout INOX academy.

*The end of storyline.*

## Game Mechanics

- Realistic design to ensure elements for survivability
- Skill-based
- Comprehensive character movement and design
- Checkpoints which are safe zones
- Organic exploration while still maintaining level design
- Solving puzzles to get through levels

## Health

- Regenerates slowly when standing still
- Can be regenerated from health shots

## Monsters

- As long as you are in the line of sight of the monster, the monsters will attempt to path find its way to attack you or immediately shoot ranged attacks if possible.
- Able to perform blocking actions against melee weapons

## Movement/weapons/skills

- Able to Walk, Run, slide, jump and wall jump (Allow double jumps)
- Some actual physics will be implemented to the character's movement
  - E.g. Jumping after sliding will give longer horizontal momentum for further distance
- Combination of using 2 weapons
- Power attack requires a sequence where you crouch and release the crouch before Alwin stands straight and attacks for power attack.

## Items (Drops Only)

- Adrenaline shots (Dropped by Monsters)
- Health shots (Dropped by humans or semi-intelligent monsters)
- Ammo (Found in abandoned chests and dropped by humans)

## Tools and skills

- Access to a variety of tools, only able to equip two at the same time.
- There will be a gun, sword, whip and grappling hook.
- Can change weapons at any time, but Alwin has to take out his bag and take out the weapons which will inhibit Alwin from being able to respond to his surroundings at the same time.

## Gun

- Automatic, making it the skill ceiling higher as delicate controls are required to manage ammo without always constantly needing to scavenge for ammo.
- Limited ammo capacity due to limited inventory and ammo in each cartridge.
- Can go through monster's block with no damage reduction
- Able to pierce through holes in weakened/vulnerable walls
- Very Heavy Piercing damage

## Sword

- Slash and Stab. No limit to usage except for being confined to short distance attack.
- Has a durability lifespan
- Cut down trees with three slashes.
- Able to stab holes in weakened/vulnerable walls.
- Monster block minimises the damage
- Heavy Blunt and Piercing damage

## Whip

- Momentum Based
- Able to coil around any surfaces that can be coiled around and use as pivot points to swing.
- Hitting enemies with a whip will tumble them down and stun them any enemies in the range
- Has a maximum length
- Able to pull weakened monsters' head off from the body
- Unlimited usage
- Can be blocked by monsters if timed incorrectly
- Light Blunt Damage

## Grappling Hook

- Mechanical Based
- Has a maximum length
- Hook onto surfaces and pull Alwin to the surface.
- Pierce through multiple enemies, dealing damage and pull them towards Alwin.
- Pierce through weakened/vulnerable walls
- Cannot be blocked by monsters
- 3-second cooldown after use
- Medium Piercing Damage

## 6 possible combinations

Each combination will have a special combination move that grants an advantage depending on situations.

1. Gun and Sword

E.g. Able to stab an enemy and use one shot for an instant kill

*Scenarios*

When there is a monster that has below a specific health point (depending on the evolution tier), Alwin performs a power strike with the sword and shoots with the gun for an instant kill.

2. Whip and Gun

E.g. Stunning enemies and spraying them down

*Scenarios*

When there are multiple enemies that are difficult to fight, hitting them with a whip help stun them so that Alwin can proceed to kill them

3. Whip and Sword

E.g. Able to swing and stab multiple enemies

*Scenarios*

If there is a pole, Alwin can coil the whip to a pole and swing toward the monsters and decapitate or deal critical damage to all of them in Alwin's path.

4. Whip and Grappling Hook

E.g. Grappling Hook gives momentum to allow Alwin to turn around a pole as a pivot point which is coiled with the whip.

*Scenarios*

This is used for a puzzle-solving or escape activity

5. Grappling Hook and Sword

E.g. Piercing through enemies and pulling them towards you then stabbing them

*Scenarios*

When there is a group of enemies in one line, you can shoot the grappling hook towards them. The enemies that are hit with the grappling hook will then be pulled towards you, allowing you to perform an instant kill if you stab them while the enemies are moving towards your direction.

6. Grappling Hook and Gun

E.g. Able to spray down enemies while being pulled by the grappling hook

*Scenarios*

When there are a lot of enemies coming towards you, you can shoot the grappling hook to somewhere high then while grappling yourself to that spot, the monsters can be shot down.



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