

Viral Impact Scaling System

Version: 1.0

1. Overview

This document explains the scaling system for enemies, bosses, and player progression across the 3-game worlds:

- World 1: Whatsapp
- World 2: Instagram
- World 3: Scam World

The goal of this system is to create a predictable and exciting difficulty progression while keeping gameplay fair.

2. Overview

System	Type of Scaling
Worlds	Stepwise scaling
Levels inside each world (Enemies)	Linear scaling
Miniboss	Multiplicative + mechanical
Boss	Multiplicative + mechanical
Player HP	Linear additive
Player Speed	Linear multiplicative
Player Damage	Linear additive,capped
Power-ups	Mixed (Linear + multiplicative + mechanical)

3. World Difficulty Scaling

Description

Every new world introduces a stepwise increase in enemy difficulty. Meaning its a huge jump from one world to the next one in difficulty.

World Multipliers

HARD MODE

World	HP Multiplier	Damage Multiplier
Whatsapp	x1.0	x1.0
Instagram	x1.5	x1.2
Scam World	x1.75	x1.4

NORMAL MODE

World	HP Multiplier	Damage Multiplier
Whatsapp	x0.7	x0.7
Instagram	x1.2	x0.9
Scam World	x1.4	x1.2

Explanation: This is the multiplier applied to enemies before level-based scaling.

4. Level Scaling (Inside each World)

Description

Enemy Stats grow smoothly between levels (1-6)

Formula

HARD MODE

$\text{enemyHP} = \text{baseHP} * (1 + \text{level} * 0.08)$

$\text{enemyDamage} = \text{baseDamage} * (1 + \text{level} * 0.05)$

- HP grows 8% per level
- Damage grows 5% per level

NORMAL MODE

$\text{enemyHP} = \text{baseHP} * (1 + \text{level} * 0.03)$

$\text{enemyDamage} = \text{baseDamage} * (1 + \text{level} * 0.02)$

- HP grows 3% per level
- Damage grows 2% per level

5. Mini-boss Scaling

Description

Mini-boss use multiplicative and mechanics scaling to feel significantly stronger

Formula

HARD MODE

$\text{minibossHP} = \text{baseHP} * \text{WorldMultiplier} * 2.0$

$\text{minibossDamage} = \text{baseDamage} * \text{WorldMultiplier} * 1.5$

- 2x HP of normal enemies
- 1.5x Damage of normal enemies
- Same attack speed
- More mechanics

NORMAL MODE

$\text{minibossHP} = \text{baseHP} * \text{WorldMultiplier} * 1.3$

$\text{minibossDamage} = \text{baseDamage} * \text{WorldMultiplier} * 1.2$

- 1.3x HP of normal enemies
- 1.2x Damage of normal enemies
- Same attack speed
- More mechanics

6. Boss Scaling

Description

Boss use multiplicative and mechanics scaling to feel significantly stronger

Formula

HARD MODE

$\text{minibossHP} = \text{baseHP} * \text{WorldMultiplier} * 3.5$

$\text{minibossDamage} = \text{baseDamage} * \text{WorldMultiplier} * 2.2$

- 3.5x HP of normal enemies
- 2.2x Damage of normal enemies
- Same attack speed
- More mechanics

NORMAL MODE

$\text{minibossHP} = \text{baseHP} * \text{WorldMultiplier} * 2.5$

$\text{minibossDamage} = \text{baseDamage} * \text{WorldMultiplier} * 1.5$

- 2.5x HP of normal enemies
- 1.5x Damage of normal enemies
- Same attack speed
- More mechanics

7. Player Scaling

Description

Player use power-up to feel stronger

HARD MODE

Max HP scaling

$\text{playerMaxHP} = 33.3\% \text{ chances every NPC encounter (+10 every encounter)}$

Player Damage scaling

$\text{playerDamage} = 33.3\% \text{ chances every NPC encounter (+ 3 every encounter)}$

Player Speed scaling

$\text{playerSpeed} = 33.3\% \text{ chances every NPC encounters (There is a capped)}$

NORMAL MODE

Max HP scaling

playerMaxHP = 30% chances every NPC encounter (+10 every encounter)

Player Damage scaling

playerDamage = 50% chances every NPC encounter (+ 3 every encounter)

Player Speed scaling

playerSpeed = 20% chances every NPC encounters (There is a capped)

- Everytime player talk to the NPC correctly they get a powerup

8. Upgrades Scaling

Description

Player can choose their upgrades in the hub after reaching the required Max HP increase:

Tier 1: +50 Heart to baseline HP

Tier 2: +75 Heart to baseline HP

Tier 3: +90 Heart to baseline HP

Speed Increase

Tier 1: x0.5 Speed

Tier 2: x1 Speed

Tier 3: x1.2 Speed

Damage Increase

Tier 1: +10 damage to baseline DMG

Tier 2: +20 damage to baseline DMG

Tier 3: +30 damage to baseline DMG

Range Attack

Tier 1: Slash a projectile

Tier 2: Projectile damage increase + 10

Tier 3: Projectile damage increase +10

Combo

Tier 1: Unlock combo

Health regen

Tier 1: Unlock health regen, heal 2 / 5 sec

Tier 2: Increase health regen 2 heart / 5 sec

Tier 3: Increase health regen 4 heart / 5 sec

Double dash

Tier 1: Unlock double dash

9. Scaling Graph

