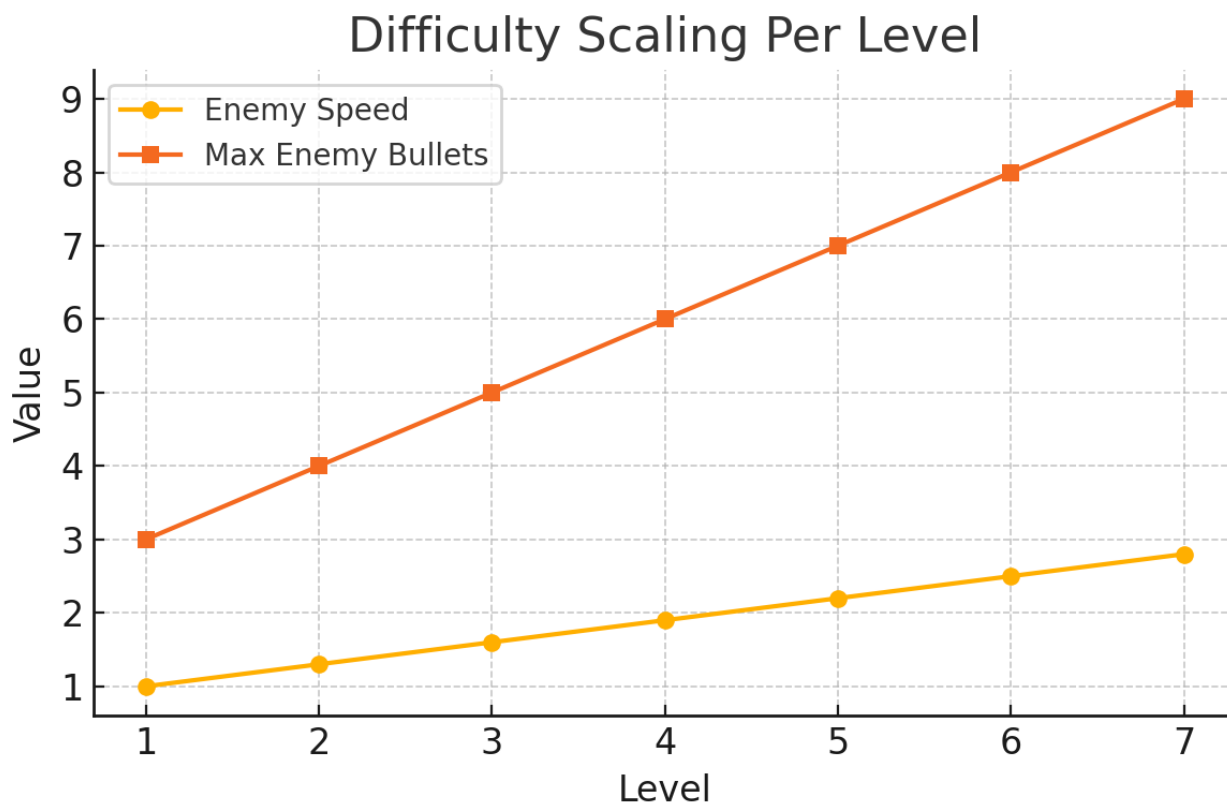


Level Progression Design: Stat Changes & Enemy Movement

Overview

This design document explains how the game's difficulty increases with each level, using both numerical stat scaling and more dynamic enemy behaviors such as swooping or diving attacks.

Difficulty Scaling Chart



The graph above shows how both enemy speed and maximum bullets increase with level progression, making the game more challenging over time.

Enemy Movement Enhancements

- Block Movement: Enemies move in formation, reversing direction at screen edges.
- Diving Movement (like Galaga):
 - Starts randomly, ~1% chance per frame.
 - Enemies move down in a sine-wave pattern.
 - No more than 2 can dive at once.
 - Diving enemies are removed if off-screen.

Update Logic Placement

The diving logic functions are placed after the wave check in the game loop to ensure that they

target enemies from the newly created wave. This avoids bugs or outdated references.