

# Gravity Duck Level Design Manual

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## Level File Format Specification

### Basic Rules

- One game object per line
- Coordinates as `x y` or `x1 y1 x2 y2`
- Sections marked with single letters (case-sensitive)
- Origin (0,0) at top-left corner
- Add as many levels as you want but add the paths of them in the Constants.h file too and update the total number of levels variable

### Object Reference

Section	Format
Walls	<code>x1 y1 x2 y2</code> (line segments)
<code>s</code>	<code>x y</code> (duck spawn)
<code>e</code>	<code>[g l r c] x y</code> (egg with orientation)
<code>n</code>	<code>[g l r c] x1 y1 x2 y2</code> (nails with orientation)
<code>r</code>	<code>x y</code> (righter position)
<code>f</code>	<code>[l r] x y</code> (shooter with direction)
<code>B</code>	<code>[v h] start end x y</code> (brick path)
<code>G</code>	<code>[v h] start end x y</code> (ghost path)
<code>I</code>	<code>[v h] start end x y</code> (insect path)

### Orientation Keys

Key	Meaning
<code>g</code>	Ground (default)
<code>l</code>	Left wall
<code>r</code>	Right wall
<code>c</code>	Ceiling
<code>v</code>	Vertical movement
<code>h</code>	Horizontal movement

## Best Practices

- Always order coordinates from low to high (e.g., 0 0 0 1080)
- Maintain 2-3 empty lines between sections
- Group similar objects together
- Ensure walls form closed areas
- Test moving objects don't clip through walls
- Place eggs on valid surfaces matching their orientation