



HYPER-CASUAL PUZZLE · UNITY 6 · PORTRAIT MOBILE AND WEB

Shelf Life

Sort the shelves. Mind the tall volumes.



Tall volumes need tall shelves



The returns cart only gives



A locked case, and its key



Level 40: all three at once



40 levels, 4 chapters

The pitch

A book sort puzzle in the style of the market's sort games (Book Sort Master, Colorwood Sort), with one twist: **height**. Some volumes are tall and only a few shelves have room for them, so a set with an atlas in it has to finish on one of the tall shelves. Later chapters add a **returns cart** you can only take from and **locked cases** that open when a colour is finished.

Design pillars

- **Readable at a glance:** tall books look tall.
- **One new idea per chapter**, on an easy level.
- **No fail:** a dead end is named, and restart is free.
- **No decoration:** every mechanic must change the best line.

Systems

- 40 levels in 4 chapters; up to 7 shelves, 5 colours.
- Tall volumes, a returns cart, locked cases.
- Stars by par, a hint from the solver, free restart.
- A level map with chapters; a dead-end prompt.

40

levels in 4 chapters

3-12

moves on the best line

3

mechanics, each tested by the solver

30/30

levels where the newest mechanic changes the best line

75-98%

of a careless bot's games dead-end on 9 of 11 height levels

My role

Concept, rules, the three mechanics, level design and difficulty curve, UX and art direction on a professional free UI kit. Built in Unity (C#) with an AI coding assistant (Claude): I set the rules, the chapter plan and the tuning, reviewed every build and decided each change.

The solver drove it

Two first ideas did nothing: heights per colour, and an empty reserved shelf. The solver showed neither changed a best line, so both were redesigned. **Bots found the height rule's real job:** careless play dead-ends, so the game now names a dead end and points at restart.

In this portfolio

- Game Design Document
- System flowcharts
- Level design workbook, from the solver and bots
- Ad storyboard, CPI test and KPI plan
- Playable web build and Android APK