“Hanbaobao” To-Do List

**Design**

Design More Enemies

* Only 7 Flying Enemies and 5 Grounded Enemies have been developed so far.
* Concepts for more Enemies of both types (at least 30, in total) need to be created.

Design 2+ More Mini-Bosses

Design 2+ More Player Weapons

* Currently, only 4 Player Weapons have been either designed or developed.
* The Player should have at least 6 Weapons to choose from, that they can switch between (or avoid) over the course of the game.
* Each of the Weapons should fulfill some different niche or firing pattern that the Player might need (power vs. range, wide shot vs. direct aim, speed vs. damage, etc.)

Design the Enemy Progression for Each of the 10 Sub-Stages

Design More Enemy Projectiles

Create Concepts for Background Elements

**Programming**

* ~~Implement the Fold Wall’s AI and Rotation Behavior~~
* ~~Program Invincibility Frames for the Enemies When they Take Damage~~
* ~~Currently, Enemies take damage every frame when colliding with Bullets that don’t despawn on contact (currently Boomerangs and Pierce Lasers).~~
* ~~This leads to Enemies dying very quickly, and will likely cause problems with the damage Animations.~~
* ~~Instead, Enemies should be invincible while their Sprites/Animations are solid white, to space out the damage that they receive.~~
* ~~Implement the Player’s Sprite Changing When the Up/Down Keys are Held~~
* ~~As the Player’s Ship moves up, its Sprite should change to the first frame of the upward barrel roll Animation, to serve as a visual indicator.~~
* ~~The same should occur for the Player moving down, but with the first frame of the downward barrel roll instead.~~
* ~~When the Up or Down key is held for more than .5 seconds (the time it takes for the game to register a key being held), the Sprite could change to the second frame of the respective barrel roll animation, to indicate the “tap time” for a key press has passed.~~
* ~~Program the Player’s Barrel Roll Function~~
* ~~When the Player double-taps the Up or Down key, they should barrel roll in that direction.~~
* ~~Develop the Pause Button Function~~
* ~~Implement the Transition between Stages~~
* ~~Develop the “Game Over” Function~~
* ~~Develop the High Score Entry Screen~~
* ~~Develop the Continue Screen~~

Write the script for the Door that opens to the B-side of each Stage.

* Write a special script for the Broken Door in Stage 3.

Write the sequence of events that will occur when transitioning into a Boss Fight

Fix the Snake’s Movement Code

Improve the Player’s Lightning Weapon Targeting System

Implement the Rest of the Items

* A separate script needs to be written for the Mystery Box Item.
  + ~~This script should have an array of GameObjects for every other Item in the Game.~~
  + ~~The Item that spawns when the Box is destroyed should be determined randomly.~~

Alter the Accuracy Calculation for the Player’s Boomerang Weapon

* Currently, the Player’s Boomerang Weapon unbalances the Accuracy Bonus system, because each time the Boomerang projectile hits an enemy (which can occur every frame, for now), it counts toward the “enemiesHit” variable, while the “shotsFired” variable is only incremented once per Boomerang fired.
* Instead, the “enemiesHit” variable should only increment the **first** time a Boomerang hits an Enemy, with the Accuracy Ratio only greatly increasing if the Player hits multiple Enemies with a single Boomerang, rather than hitting a single Enemy multiple times.

Implement the Rest of the Player Weapon Power Levels

* Each of the Player’s (likely 6) Weapons will have 4 Power Levels.
* These Levels should improve each Weapon in some way, either by increasing damage, increasing range, adding more projectiles, or in some other fashion.

Write the AI Routines for All of the Bosses and Mini-Bosses

Implement the Changing Animations for the Player’s Jet Flames

Implement the Ship’s Ability to Leave the Screen during Scene Transitions and Boss Intros

Write the Methods for Playing the BGM and Sound FX from the Options Screen

Program the “End of Stage” Screen

Implement the Credits

**Art**

~~Create White Silhouettes for Each of the Enemies to Use as Damage Indicators~~

* ~~When an Enemy takes damage, they should appear as a solid white silhouette of themselves for 1-2 frames.~~
* ~~These silhouettes have to not only match the Enemies’ basic Sprites, but also their Animations, meaning each Animation will need a solid white variation for the Controller to transition to.~~

Create the Background for the Intro Cutscene and Title Screen

Create 5 Basic Exterior Backgrounds for the “A”-Stages

Create Transparencies to Fill Out the Space Backgrounds

Create 5 Basic Interior Backgrounds for the “B”-Stages

Create Transparencies to Fill Out the Interior Backgrounds

Design the Wall Objects that Border the “B”-Stages

Design and Animate the Door that Leads to the “B”-Stages

Create the remaining 8 Keyframes for the Player’s “Barrel Roll” Animation

* Create the Sprites for the Player’s Jet Flames

Create the Animation Spritesheet for the Player’s Explosion

Improve the Art on the 4 Fold Wall Segments

Design and Animate the Bullet Impact Sparks

Create the Animation Spritesheets for the Enemy Explosions

* Create the Animation for the Player’s Wave Bomb Effect
* Create the icon for the Wave Bomb for the Game’s HUD

Create the remaining art for the Hydra Miniboss

* Create a large gray teardrop-shaped asteroid to serve as the Hydra’s body.
* Create a Spritesheet for the Hydra’s death explosion.
* Create Spritesheets for smaller preliminary explosions.

Create the remaining art for the Mirror Miniboss

* Flip the Spritesheet for the Player ship and give it a darker color palette.
* Darken the Player’s hitbox Sprites to use for the Mirror.
* Alter the Player’s “jet flames” Spritesheet to give it a harsher color (possibly red).

Design and Animate the English and Japanese Title Screen Logos

Design and Animate the “Stage [number]” Graphic

Design and Animate the “Warning” Graphic that precedes Boss Fights

Design and Animate the “Stage Clear” Graphic

* Create the Player Shield Sprite and Animations

**Sound FX / Music**

Compose the Music for the Intro Cutscene

Compose the Music for the Title Screen

Compose Basic BGM tracks for the 5 “A”-Stages.

Alter the “A”-Stage BGM tracks for the 5 “B”-Stages.

Compose the Music for the Game Over Screen

Compose the Music for the High Score Entry Screen

Compose the Music for the Continue Timer

Create Sound Effects for the Player’s Weapons Firing

Create a Sound Effect for the Lightning Wall’s Primary Fire

Create Sound Effects for the Enemies Exploding

Create a Sound Effect for Getting a 1-Up

Create a Sound Effect for Changing and Upgrading Weapons

Create a Sound Effect for Selecting a Letter in the High Score Entry Screen

Create a Sound Effect for Confirming a Letter in the High Score Entry Screen