## Goals for 0.1.0 (2016)

* User is able to play through the game (at least 1 stage)
* Character selection screen
* Local scoreboard
* Options menu
* Stage ending
* Mid-bosses
* Pause menu

## Goals for 0.2.0 (2022)

* Stage 2
* Score Bonuses on stage end
* Local scoreboard window
* Options menu

## Goals for 0.3 (2022)

* Tweaks for more dynamic gameplay
  + Revamped player shoot levels
  + Pickup zone
  + ~~Boss bonuses + loot after every phase~~
  + Names for all boss phases
* Stage 1 enemies concept art
* Stage 1 enemies static sprites (3 types of gandharvas)
* ~~Asura concept art~~
* ~~Asura static sprite~~
* Stage 1 gameplay redesign
* Stage 1 BGM mix
* ~~Boss 1 BGM mix~~
* Stage 1 new musical note bullets
* ~~Boss 1 art redesign~~
* Pooling system for bullets

## Goals for 0.4 (2022)

(how many days will it take)

* Asura concept art & sprite (2)
* Boss bonuses & loot after phase (1)
* Adjust lowest difficulty up (1)
* ~~Boss 3 fight (3+)~~
* ~~Predesign Bosses 5&6 (3+)~~
* Tutorial screen (1)
* Intro story (1)
* Windowed mode (1)

### 0.1.0

* Player movement inside the play area
* Player single projectile shooting
* Player special attack system (kills everything hostile on screen)
* Player hit detection, lives, life reduction
* Player invulnerability function and animating
* Gameover handler on player die
* Restart function on gameover
* Enemy spawner and wave timer handler
* Stage timer
* Enemy movement with patterns
* 2 Enemy bullet types (homing/nothoming)
* 2 Enemy bullet patterns (single, scaling circle pattern)
* Boss enemy derived from normal enemy
* 2 boss phases that change according to health
* Exp point objects created on enemy die
* Exp point hit detection on player
* Player exp gain function
* Parallax tile scroller
* Sprite placeholders for player,enemy,playerProjectile,enemyProjectile,expPoint
* MainMenu with title textholder and start button
* GameOver screen with overlaid images and button to restart
* Player lives text indicator
* Player exp/expCap text indicator
* Player special core image indicator
* Boss life slider indicator
* Stage timer text indicator
* Current stage text indicator on stage start
* Current wave text indicator
* Stage completed indicator on boss death
* Dialog UI
* Singleton gamecontroller
* Can switch between attack types
* Sound controller
* Stage initializes when navigating from main menu
* Xp accumulates stat points that can be spent on power, speed or life generation
* Wave class
* Bullet pattern class
* Made creating wave types and patterns more easy
* Redid dialog system
* New bullet pattern: spiderweb
* Bullet movement class
* New bullet pattern: giant web
* Visible player hitbox
* Add new projectile art
* Concept art of first boss
* Bullet animations (spiderweb)
* Singleton UICanvas
* Multiple boss healthbars
* Special Charge Slider
* Rescaled exp point collider for easier collection
* Core charge points
* Special attack triggers when core meter is full
* When all projectiles are destroyed they turn into core points
* Stop stage timer when enemy encountered
* Upgradable stats affect bullet behavior accordingly
* Player special attack draft
* Programmer art for boss X pos indicator
* Indication of boss healthbars
* Added boss name indicator
* Added boss X position indicator
* Boss pattern toast when “super phase”
* Special attack toast
* Fixed next wave spawn time not checked correctly
* Can programmatically switch stage
* Magnetic collection of points
* Reworked enemy spawning
* New bullet type: laser
* Simultaneously spawning enemies
* Waves now refer to an arraylist of spawnpositions
* Added new movementpattern to center enemy horizontally
* Waves can spawn almost simultaneously
* Boss specific patterns have identifier
* Fixed boss movementpattern and pattern referencing the same old one (create a new pattern from template if used more than once)
* When enemy dies all bullets shot by that enemy are destroyed
* Added focus mode -> hitbox becomes visible, player movement speed halves
* Can’t collect points while special attack is on
* Magnetic range activates now only in focus mode
* Fixed boss healthbar resetting when next healthbar
* Boss phases change top layer of background
* Toplayer alpha fading out/in
* Core charge bar depletes when special attack uses
* New Phase class to handle multiple simultaneous patterns
* Boss damage resistance when super phase
* New bullet pattern prototype: spiral
* Boss special phase handling moved to Phase class
* Boss pattern shooting is handled in Phase
* Phase turned into monobehaviour
* Tweaked giantweb pattern so that each layer has less bullets
* Tweaked enemy movement speed and acceleration to be a little faster
* Tweaked enemy movement patterns to wait until target position is reached instead of seconds for easier movement speed tweaking
* Library for bullet sprite types
  + + Set sprite function (shape, effect, color)
* Enemy movement pattern handling moved to phases
* Phasing loop condition recognition hotfixed with force break while
* Bullet acceleration
* New pattern “weave” shoots lasers (boss1)
* Initial Boss art (boss1)
* First static sprite for boss1
  + Added sprite setting function to library
* Created a 3D environment for later graphical testing
  + + Lightsource
  + + Perspective camera
* Boss music played when boss battle
* Patterns reference phase when checking if should end
* Removed unnecessary multiplier from enemy movement speed calc
* New bullet pattern: curtain
* New bullet movement: find player mid-movement
* Magnetic range now permanent, scales up/down when focus/no focus
* Everything resets to Stage 1 start at restart
  + Full reset
* Transition to next stage works
  + Soft reset
* Added boss identifies to wave
* Patterns customizable from phase class with a function
* Can clear 2 stages
* Phase execution finally responsive
* New movement style: Teleport
* New movement pattern: Swing (rotates around centerpoint)
* As shooting patterns ,enemy movement patterns also have a customization function now to reduce the need for pattern cases if not recyclable
* Enemy sprite flips according to movement direction
* Enemy sprite float in place animation (to be patched)
* All projectiles are destroyed when player takes a hit
* Started concepting a new boss
* New bullet art: spear
* Widened play area
* Unity bug caused left arrow not to work
* Enemies grant less core points, destroyed bullets grant none
* Statpoints are powered up when meter threshold reahed
  + Toast appears when powered up
* Fixed stats not resetting when restart
* Fixed boss namepanel not resetting when restart
* Pause function
  + Restart at pause menu
* Character spawns weapons when powerup, loses them when powerdown
* Focus mode now focuses the weapons
* New bullet pattern: Cluster
* New bullet art: fireball
* New programmer art: boss 1 sprite
* New programmer art: speech bubble
* Tweaking dialogue graphically
* Programmer art for weapons (pumpkins)
* Added sound effect for enemy shooting
* Layover graphic for core meter
* Added char selection screen
* Menu translated to keyboard
* Menu selection controllers
* Made stage 1 rough music
* Started designing stage 1 spawns
* Stage Handler handles all stage events
* Mid-boss template
* Mid-boss comes, shoots and goes
* Homing weapon for player
  + Finds nearest enemy
* Player Night Core Special: Trick-or-treat done
  + Null field that destroys all bullets and enemies inside
* Core meter redesigned to have two sides
* New core points: Night core points, Day core points
* Visual indication of which core in use
* Starlight special attack base
* 3Denvironment camera layer
* Tree sprite testing for 3Denvironment
* Parallax can be handled from stagehandler routine
* Pause menu translated to key input
* Added environment camera movement and rotation
* Stage environment duplicated 2 times so camera can move lower
* Reworked menu controller to check context when menu is opened
* Stripped down coroutines that broke the initialization
  + WaitUntils are not affected by timescale changes
* Level now restarts and initializes perfectly
* Acceleration/deceleration on environment
* Added template for stage end
* Added score gain for corepoints with multiplier
* Visual indication for score and hiscore

### 0.2.0 (2022)

* Refactored and reformatted the project
* Decoupled a lot of components from GameControl and UI
* Fixed stage initialization after restart
* Inherited boss phase routines from Phaser so it doesn’t get crowded
* Upscaled stage canvas
* Changed all normal textassets to TMPro
* Added toggleable invulnerability indicator to boss hp bar
* Moved boss init from enemylib to stage init
* Added a difficulty modifier to stage init that affects enemy shootspeed and bullet count in patterns. Difficulties 1, 3, 5, 7
* Added a difficulty selection screen to main menu
* Fixed character movement speed, wasn’t using deltatime so it was different between dev and build
* Fixed midboss timer
* Moved stagehandling routines from handler switch to their corresponding files
* Handle stage switching by reloading the same scene but swap scripts
* Reworked dialog handling to be more flexible
* Made options menu with Autoscroll toggle, BGM and SFX volume control
* Added gameover menu
* Options JSON save/load
* Added options menu to main menu
* Hiscore JSON save/load
* Damage gives score
* Spiral pattern spawned too slowly on build because Unity was limiting the framerate. Added unlimiter and disabled vsync in Game.Start();
* Disabled scoresave for now, crashes build because of the path path
* Upgraded old spider boss script (stage2), added new boss music
* Added a SaveLoadHandler.cs to handle i/o
* Added persistent data path to save/load so build doesn’t crash
* Added default settings to fall back onto if options file not found
* Major resource folder reorganizing and dependency fix
* Stagetimer didn’t reset correctly before, that’s why enemyspawner kept bugging out
* Optimized dialog ui handling, edited boss1 dialog
* Restored GiantWeb-pattern for Boss2
* Restored SmallWeb-pattern for Boss2
* Restored Laser-pattern
* made a crawling spider bullet for boss2 phase2 with a “wave” movement pattern
* StageComplete checks for pickup points before handling end
* Default BulletMovementPattern set to “Explode”
* Restructured phaser class
* Separated patterns into their own classes
* ScorePanel UI made to mainmenu
* Scoresaving on gameover and gamecomplete
* Lives persist through stages
* Boss special for boss0.5
* Separated bulletmovementpatterns into their own files
* Separated many different ui modules to their own files for readability (uictrl 1000+ lines -> ~150lines)
* Visual minitoast for scoreget, corepoint, xp point
* XP points now grant lives after reaching cap
* Score bonuses at stage end
* Boss1 BGM
* Added homing spears as fluff to Boss1 phase2
* EnemyMovement overhaul, enemymovementpatterns (EMPs) now in their own files, made simple pos change a lot less convoluted
* Made a grid system for determining enemy positions
* Made a smoothly translating movement option
* Finished stage2 design
* Finished boss2 design
* Added a colored fx layer for fadeins from white and black
* Added forcemove() for player for stage2 end
* Made PickUp points accelerate towards the hitbox so they don’t drag behind
* Visual indication for available bombs to core meters

## 

## 0.3 (2022)

Release.Build.Commit

#### 0.2.1.1 (old indexing)

* Widened play area (+1 grid, allows centering), widened environment and adjusted UI to play area width
* Enemylib became obsolete, moved stagewaves to stagehandler and vectorinfo to new VectorLib class
* Reworked player shooting, more levels, scale and range to bullets. More player shoot speed, reworked shoot level calculation from core levels. New starbullet as normal bullet

#### 0.2.1.2(old indexing)

* Reworked player day core bomb
* Boss phase timer and phase timeout
* BossLife class inherited from EnemyLife

#### 0.2.1.3 (old indexing)

* Experimented with a full 3D terrain but looks off + adds bloat
* Point pickup zone at the top of the screen (with no requirements)
* Allowing input during restart loading executed func repeatedly. Now fixed with check
* Added start lag for dialog so spamming Z won’t skip it entirely

#### 0.2.1.4 (old indexing)

* Separated bullet sprite and glow sprite, made base bullets smaller
* Can set bullet size while setting sprite (1-5)
* Fixed pickup point movement

#### 0.2.5

* Stage 1 enemies (reoccurring gandharvas) concept art
* SFX for point pickup, menus (cursor, confirm, cancel, pausemenu), SFX for player spells
* Menuctrl cleanup
* Boss spell name stays up for the duration of the spell
* Customizable corepoint cap works with ui
* Visual life count (star sprites)

#### 0.2.6

* Converted all PSD files to PNG files to reduce bloat. PSD working files in a folder outside of git
* Moved world canvas so that all coordinates are +0 for ease of calcs

#### 0.2.7

* Most of enemymovement converted from lerps into rigidbody force for smoother movement + curves. Made all EMP files obsolete
* VectorLib, EnemyMovementPattern, EnemyMovement cleanup

#### 0.2.8

* Setting up Stage3 for definitive stage design

#### 0.2.9

* Boss3 music “Mother’s Fears, Mother’s Tears”
* Plotted out Boss3, Boss4
* Basic enemy 1,2,3 plain sprites

#### 0.2.10

* CopyValues func for BMPs
* New patterns Rain, Shower for Boss3
* New BMP RainDrop
* New audiosource for looping SFX
* Bullet Rigidbody2d movement
* Func to make visual trails for the bullet
* BulletBouncer bounces the bullets off of the bottom wall (and can multiply them)
* Ton of fixes and adjustments to patterns and BMPs

#### 0.2.11

* New MusicalNotes pattern
* 21 New musical note sprites
* Boss can have timer on “normal phases“ as well

#### 0.2.12

* Animated Magic circle bg for bosses
* Restored toasts
* New life toast + sfx
* Stage1 new bgm
* Reworked boss1
* Reworked some of stage2

#### 0.2.13

* Pooling system for enemy bullets, instantiate a couple hundred \* difficultymultip at stage start
* Toggling bullet physics on only when applicable, having hundreds of box colliders cause unbearable lag
* Turned off boss minitoast & changed boss timer to normal text asset, constant TMPRO generating & updating causes huge lag

### 0.3.1.

* Slowed down focus mode movement speed
* Removed wave information from rightsidepanel
* Changed level timer to normal text since its only for debugging and will be removed (TMP lags)
* Boss1 phase2 timer (30sec)
* Visual indicator for pickup threshold when in FocusMode
* WorldUI FXLayer + player specials activate a color tint
* Bullet checks VectorLib OOB floats instead of worldUIwall pos
* Enemies invulnerable outside playarea walls, but destroyed when over OOB coors
* Enemies won’t get destroyed at gameover
* “Very Easy” difficulty elevated to modifier 2
* Small boss death animation + sfx
* Boss phase timer 5sec countdown SFX
* Boss bonus score + exp drop at the end of every phase if player hasn’t taken damage or used a bomb

### 0.3.2

* Player invulnerable during special
* Fixed spear hitbox scaling
* Fixed enemies being able to shoot off-screen
* Fixed player diagonal movementspeed and boundary check
* Centered all bullet sprites + glows to hitboxes
* 1 sec pause when player is hit to better determine what hit player. Doesnt pause stagetimer or boss phase timers
* Faster player focus projectile speed, smaller hitbox
* Fixed stage not waiting for pickups to be cleared before boss end dialogue
* Halved pickup point drop speed
* Boss1 spell2 foxfires reaccelerate when dir change so its easier to dodge
* HomingSpears show a line to player before launching
* Downsized transparent bigcircle bullets for hitbox
* Bullet hitbox shape determined by bullet shape (circle default)
* Boss takehit SFX

### 0.3.3

* Fixed spiderweblasers
* Moved accel vars from BulletMovement to BMP, causes bad refs
* Intensified boss0.5 phase 2
* Screen Mode & Resolution options
* Set all bulletglows to white by default, color controller by renderer

### 0.3.4

* Disabled all other aspect ratios than 16:9
* Separated graphicscontrol from gamectrl
* Deny boss bonus on timeup
* Pickup points force zrot to 0
* Pickup points now have only 1 prefab
* Destroy all pickup points when hit
* Player special attack range scales with core level
* Routed audio sources through a mixer
* Changed bulletmovement fixedupdate to update (fixedupdate GC lags)
* Tried to remove bullet pooling, instantiations and destroys actually do cause lag. Optimized bulletmovement as much as possible, runs 60+FPS on nightmare

### 0.3.5

* Basic HitFx when boss gets hit
* Minitoast sprites for score, cores, xp instead of constantly generating TMP
* Separated Libs and stage modules from gamecontrol for readability and to lessen awake load
* Inherit mainmenu/stage uis from one class
* Cleanup menuctrl, apply menuitem strings to ui TMPs so it’s easier to customize

### 0.3.6

* Intro screen to explain the premise of the story
* Pauses when app unfocused
* Removed level time bonus since the bossfight time is largely fixed

### 0.3.7

* Tutorial screen for mainmenu and pausemenu
* InputHandler class for handling all inputs (for now handles skips in intro/dialog/bonus screens)
* Scorepanels no longer generated to avoid misplacement
* Asura + bossAsura sprites
* Added randomrange 1-2 to lootamount