

DESIGN PROCESS:

The original idea was for the game to be a stealth horror esq game where the user is an astronaut who wakes up in an unknown spaceship filled with hostile aliens and must find a way to escape. The plot of the overall game deviated somewhat early into development due to me not being able to find good assets. The plot then transitioned over to something along the lines of you being a knight who wakes up in an unknown dungeon and must find all the keys in order to progress to more levels and hopefully find a way out.

After obtaining some basic assets for the game, I then had to do some research about some things in PixiJS before I could really get some semblance of a game made. I was able to create a basic menu screen with instructions and a game scene with a sprite that could move anywhere on the screen. I still needed to do more research along the way as I looked to create the overall level.

I was eventually able to create a basic level which had a large wall to designate the playable area, a set of stairs, and random boxes and keys (the collectable) that would spawn. Now I had to work on collision for some of the items such as the walls and the boxes so the player could not just walk through them. I used a clamp function to ensure the player could not exit outside of the playable area (the walls), made it so the player would be "hidden" when they pressed space on a box which would be indicated by the player becoming transparent within the box, and for collision I used axis-aligned bounding boxes (AABB) collision in order to handle the collision physics in the game. After this, I started creating the enemies and made it so at the moment they just wandered around and made it so that if the player were to collide into them, they would die.

I implemented an enemy field of view allowing them to start chasing the player once the player is within the enemy's field of view using circle and AABB collision. I decided to add sounds to the game. Collectables would make a chain rattle sound, a heartbeat sound would play when the player is being chased, and a splat sound would play when the player is killed. I also decided to add some animations for the player character and the enemies. I then decided to implement the game over a portion of the game where it would clear everything and store the highest score within local storage for the next run through.

Overall, this was a very exciting yet stressful experience due to the large amount of other work I had during this time. Some challenging things I had to look into was figuring out how to do collision, issues with adding in textures which would cause the game to outright crash, and implementing animations as I had to make my own character sprite and I had a tough time figuring out how to implement animations in Pixijs. In the end I would say that although these things were the pains that I had, I would say that these are also the points I'm most proud of as well since they were so challenging.

SOURCES:

- Images:
 - Player Sheet: User Created
 - Enemy Sheet: <https://www.seekpng.com/ima/u2w7r5r5q8a9a9r5/>
 - Key: <https://www.pngaaa.com/detail/782285>
 - Crate: <https://twitter.com/davitmasia/status/1195262851516116992?lang=ar-x-fm>
 - Stairs: https://i.etsystatic.com/6902723/r/il/4ac70e/2286611388/il_fullxfull.2286611388_e8y.jpg
 - Walls: <https://pixelation.org/index.php?topic=14734.0>
 - Tile: <https://minecraft.novaskin.me/skin/3973303204/Cobble-Is-Life-Cobble4Life>
- Sounds:
 - <https://soundbible.com/1077-Chain-Clink.html>
 - <https://soundbible.com/511-Squish-1.html>
 - <https://soundbible.com/381-Spooky-Heart-Beats.html>
- Font:
 - <https://www.dafont.com/arcade-classic-2.font>