# Space Escape Postmortem:

## Overview:

Space Escape is a retro style, pixel art, action game I developed. The game places the user in space on an alien planet after their ship has crashed. The core gameplay surrounds the player fighting against the aliens, collecting ship parts to repair their ship, and jumping between planets with rift vials, all while surviving with limited lives and health.

The game targets sci-fi enthusiasts and action game lovers.

The game was built scene by scene, but in no particular order. The scenes were worked on by priority, which was allocated based on the game’s main needs, e.g. level was created first as this was the scene the entire game was based around. Other scenes like the instructions or game over screens were created last as those weren’t as crucial. The scene system kept everything organised, even with development being flexible and random.

This project initially had a larger scope with about 20 different levels and 5 different planets, as well as a larger boss fight at the end.

## What Went Right:

Tile parser works well

Item drops look good

Player moves well and animated and can go multi directional

Levels are completely random

Weapon progression works well

Design is minimalist and cohesive with the theme

## What Went Wrong:

The original scope of the game was far too large for an individual developer working within the specified timeframe. I had to make the decision to reduce the amount of features to ensure the game could be completed to a high-quality standard while also remaining compelling to play. While this was the right decision, it required reworking a couple systems that I had already mocked up, which consumed valuable development time.

A persistent issue throughout development was the improper loading sequence of image textures and created text textures. Textures that loaded after the text rendering loaded as lines and with coloured stripes instead of the proper image texture. This was a large issue as text was used in almost every scene, so this caused majority of the image textures to load wrong.

Scope was large at the start, reduced it to ensure the game could be completed to high quality.

A number of issues with textures loading after text had loaded

Had to split both weapon and ship parts for drops

Player started to randomly disappear – fixed by ensuring game over was called properly

First boss sprite had a strange hit box as it had a large amount of white space above the sprite to make it look like it jumped

Issue with input after added xbox controls

Didn’t account for xbox controls on the menus?

Changing effects within the class stopped working

Text was showing as transparaent

Collision detection was not working properly initially with player getting stuck on the edges – added rebound to ensure player wouldn’t get stuck

## Lessons Learnt:

Realistic scope setting

## Conclusion:

Developing Space Escape has been both challenging and rewarding. While the final product successfully captures the retro, pixel art feel with sci-fi elements I imagined, the development process revealed important areas for improvement in my approach to game development.

The biggest insight gained was how important it is to balance ideas with practical constraints, especially when developing solo. The unique planet effects and weapon progression scheme shows that well-executed mechanics can create compelling gameplay without requiring a huge scope.

If I started over, I would maintain the core concept but implement a more structured development process with feedback from people outside of the development, stricter scope control, and more extensive prototyping of key functions before implementing them into the product. The technical challenges I encountered have expanded my problem solving knowledge, particularly around testing?

Despite the challenges faced, “Space Escape” was … The lessons learnt throughout this project have provided good experience that will improve my future development in games.