# Differences from original plan

The plan for the game has completely changed since part 1 turning into a space invaders clone rather than a side scrolling shoot me up style game. The about and main landing page ended up getting cut due to time constraints this has the unfortunate impact of the controls and powerups not being explained.

Where the original planned to use images for the entities (player, enemies, bullets etc) to simple coloured squares rendered using canvas. This has the advantage of potentially more compatibility with non-chromium-based browsers which could format things differently. Saffari was the main browser considered as it is the 2nd most popular according to w3counter with the other popular options all being based on chromium except for Firefox.

# Changes that I would like to make

The late change of plan for the project resulted in features being cut including the home and about page these two things I would like to add back in future. The power up system is limited in its current form to essentially as it only gives the ability for a shot to pierce doing damage to both the enemy hit and the one behind. The original plan for upgrades had 3 types piercing, fire rate and lives these were intended to stack if you had piercing 1 a shot could go hit and then go through the enemy and hit the one behind with each additional piercing upgrade giving the ability for a shot to go through one more enemy before stopping. The life upgrade was planned to work slightly differently as it was just going to increase the number of lives by 1. A new special enemy type similar to the UFOs from the original that would reward a random upgrade,2 alternative ways to get upgrades were tried one had a random chance every time you got x amount of score there was a random chance of getting a random upgrade the other method tried was random chance based off when an enemy was eliminated, both of these were scrapped for being unsatisfying More waves to increase the length of the game with varying rates of fire and movement speed so each wave would feel more varied.

# Challenges

The biggest challenge encountered was with the original game just not being and stuck in that area where it isn’t hard but very quickly gets to a point where there are just too many enemies on screen to do anything apart from just stay still and wait until there are more appearing in your path that you can destroy before colliding. And these issues occurred before they started shooting back, this resulted in completely changing the game at the start of march. A lot of the collision was able to be altered to work with the new game, but this still resulted in having a massively reduced timescale to create the sight. The large amount of java script which is a language I haven’t used in years before the start of the project resulted in a lot of syntax errors and minor issues that took a lot of time to find and correct. My natural aversion to commenting before I call it a day made picking the project back up after a week or two of doing other things a lot harder as finding the parts of the code that controlled certain aspects of the game weather it was to change something or even just checking the spelling of a variable name a lot harder as I couldn’t just skim the code reading the comments.

Not using version control was a massive mistake as I wasn’t able to compare my code to previous versions to find out what I changed to get a better idea as to why something has stopped working after multiple tweaks and changes to the code.