

Space Invaders with Functional and Reactive Typescript

Basic Controls

Observable streams were created to detect each control. The output of the stream was mapped into 'actions' that represent what the keyboard controls do. These were then piped into `reduceState`, which performs the corresponding actions, e.g moving the cannon left and right, shooting, based on what the action was.

Alien Leveling up

Aliens level up based on a leveling up factor which is a constant. The factor is multiplied by the current level to affect the aliens' y-spawn point and speed. This was performed in the `createAliens` function.

Alien Shooting

The `Math.random()` function was used to randomly select an alien that is alive, and use their position to create a new bullet. Bullets are the same for both the cannon and aliens.

Extension

Ultimate

Shield deterioration:

was really laggy so implemented ultimate shields. Toggle invincible shields if laggy!

Sorry for brevity of this report!