# Critters – Design Document

# Introduction

This application features critters which bounce around the screen and are eaten by a creature called the “destroyer”. Using maths and vectors, the critters bounce off each other and of the side of the screen. The application does not end and will continue until the user exits the solution.

# Destroyer

The destroyer character moves across the screen, set at a random starting velocity. From there, it will bounce off the edges of the screen, changing the velocity. On each frame called, the destroyer will check to see if they are colliding (circle collider) with any of the critters, if so, they will “eat” the critter (deleting it). Every second, the destroyer will spawn a new critter on the reverse of the destroyer’s movement direction (vector).

# Critters

All critters are set to have a random direction and position at the start of the game. Each frame, they move and are then have their position tested against all of the other critters, the edge of the screen and the destroyer. If it collides with the destroyer, it will be destroyed. The starting and max amount are set in the code (defaults to 50). Once every second (if the critter count is less than the max count) a new critter will spawn behind the destroyer in the opposite direction of the destroyer.