I used to play ROBLOX, and at some point Zombie Defence games were really popular. I enjoyed the process of buying/upgrading gear and a base while fighting the zombies that spawned, but it got pretty stale pretty quickly because the pathfinding was so basic. Essentially, the zombies moved in a straight line to the nearest player’s position with no regard for obstacles. The most sophisticated it ever got was having the zombies jump at random intervals so they could clear low obstacles, which isn’t very sophisticated at all. That’s pretty par for the course for a ROBLOX game, but I’m interested in trying to improve on that, though I’m going to be working in a 2D environment rather than a 3D one.

I mostly want to focus on the real-time enemy movement aspect in my term project. I have the framework to add other things, e.g. different types of terrain and enemies with different effects (provided I can code said effects), but those are secondary goals. I also probably need to add various weapons and a shop (probably via splash screens) for the player to use so that it’s actually a game and not just a mediocre pathfinding simulator. In that vein, a menu and help screen are probably also necessary. I’d like to let players create maps on their own (not an option in most ROBLOX games), which shouldn’t be hard, and I also want to include some pre-made maps as well. That about covers the main parts of what’s been done in ROBLOX. Creating a base for the player doesn’t really seem feasible in a 2D setting, unfortunately, so I won’t bother with that.