# Game Engine Development – Assignment 1

# Part 3

# Fedor Andreev – 100842078

# Adam Andri - 100970401

I.

The limitations that the Alien Invasion game engine has is that’s it not very flexible because it is hard-coded with a simple main game loop.

A.I can’t be updated at different frequencies. Everything is fixed at the time of the loop which makes it inflexible. This means that all actors are rendered at a specific frequency; actors like the player and the aliens.

II.

Our game is a shooter genre and our game engine will do its job well. This is because it only uses a main loop with hard coding. If we wanted to change our engine so that it was adaptable to other genres like a platformer we would have to make a few changes. Our main loop renders everything at once. This means that all actors must follow a single frequency.

Let’s choose a platformer as our new genre. The player moves across the screen via player input. An enemy unit might appear anytime from behind a bush as a surprise factor. This enemy unit needs to appear at a different frequency or else it wouldn’t be a surprise since the player could predict it by just paying attention to the monotonous pattern.