HOMEWORK - 2

Game Engine Simulation: Soldier Waypoints and Target Shooting

Introduction:

This project demonstrates a simple simulation between two soldiers:

Soldier 1 moves randomly between waypoints.

Soldier 2 tracks and shoots Soldier 1.

Waypoints

Four waypoints define the movement space for Soldier 1. The soldier moves randomly to any of the other three waypoints.

Soldier 1 - Moves randomly between waypoints, switching between walking and running.

Uses a random selection function for choosing the next waypoint.

Soldier 2 - Has to always keep track of the position of Soldier 1 by facing him through rotation.

Shoots Soldier 1 when he is within range and also in the line of sight.

Key Implementation Details

Navigation along the Waypoints: The first soldier moves toward randomly chosen waypoints.

Randomized Speed: It changes between walks and runs upon reaching each waypoint.

Target Tracking: Soldier 2 calculates the angles and rotates to face Soldier 1. Shooting Mechanism: Fires when it is aligned with the position of Soldier 1. 4. Video Demonstration A video recording shows how Soldat 1 moves randomly between waypoints, while Soldat 2 tracks his movements in real-time and fires at him.