

A clone of “The Line” game. The game will be made using Unity and C# and it is only for the purpose of demonstrating my game development skillset as a part of an interview process for a job position. It won't cover all the features that are part of the original game but will include and not include some of these features as outlined below:

- 3 features NOT needed for this game clone
  - X6 boost and path logic
  - Sound
  - Jump booster
- 2 features being added
  - Invincibility
  - Size shrinker

Couple key points to mention:

- Use of VContainer for dependency injection
  - Avoid tight coupling between different systems and classes
- Use object pooling (potentially use existing implementation in VContainer)
- Road guard blocks
  - These are the blocks that user needs to avoid and surrounds/blocks the road; road on the other hand is an empty space void of the “road guard blocks”
- Road guard block generator that would generate blocks to fit the screen
- For UI, will be adopting MVC design pattern

#### Architecture Overview

- Systems
  - GameSystem
    - Managing overall flow of the game including UI state management
    - Will include game state
  - RoadSystem
    - Manage road generation
    - Using object pool to manage RoadGuardBlock instances
  - GameEventSystem
    - Event listener registration
    - Propagates events to listeners
  - BoosterSystem
    - Invincibility and size shrinker booster handling
- Other Classes
  - InputHandler
    - Handling of player input and appropriate response
    - Use command design pattern if possible
  - RoadGuardBlock
  - RoadGuardBlockGroup
  - ObjectPool
  - PlayerSpawnSystem