**AG 131  
Lab 5 – Extending The System**

<https://www.youtube.com/watch?v=7TYJyCCO8Dc>

**Readings:**[**https://unity3d.com/learn/tutorials/topics/graphics/fun-lasers**](https://unity3d.com/learn/tutorials/topics/graphics/fun-lasers)

[**https://docs.unity3d.com/ScriptReference/LineRenderer.html**](https://docs.unity3d.com/ScriptReference/LineRenderer.html)

[**https://docs.unity3d.com/Manual/class-LineRenderer.html**](https://docs.unity3d.com/Manual/class-LineRenderer.html)

**Written Work:***(do this after completing the Lab below!)*

Create a Game Design Document for a small game. *(Atari 2600 \ NES \ Flash Era Games)*

* Must have Console Controller input as well as Keyboard + Mouse
* Document the flow of the application
  + You are required to have an application exit
* Document the Game rules
  + Must show game components
* What is the class structure used by your components.
* You will be required to use the game frame work
  + Before you alter framework Classes, see Prof. Walek.

**Lab Work:**

You will be given an updated Project with a working HUD system in place.

* Create 2 new Pawn Scripts
  + Inherit from PWPawn
  + These are NOT Spectator Pawns.
  + One of your new Pawn Scripts must use an instant fire (hit test \ raycast) fire method
    - Fun with Laser and Line Renderer documentation has been provided to in the readings to help you visualize this weapon.
* Create 2 (or more) Prefabs for each new Pawn Script
  + You will have at least 6 different non-spectator pawns
    - 2 Existing PWCarPawn Prefabs
    - 4 new Prefabs, 2 from each Script
* Add a list of pawn prefabs in PWPlayerControler
  + Populate this list with the non-spectator pawns
* Add and provide implementation for NextSpawnPrefab() and PreviousSpawnPrefab() in PWPlayerController.
* Enable the Spectator Class to call these functions to change which Pawn the player spawns in as. Use Fire2\Fire3
* Add a new string “PawnPrefabName” to PWPawn. Show this string in the Spectator HUD Pannel for the current Pawn Prefab the player will spawn in as.

**EXTRA CREDIT:**

* Track Score. 1Pt for each player killed.
* Main Menu, Timed Rounds, End of Round Scores
* Support for more than 2 Players
* Right now each pawn handles how it fires. We can encapsulate this behavior with a weapon class. Fully implement a Weapon system for your game pawns to use.
  + You will need to Add “InstantFire” Weapon Script