Game Development Elective

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Program: Communication & Multimedia Design

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# GitHub

<https://github.com/DemiTavares908/GameDevElectiveDemiTavares>. The unity version that was used is f1.

# AI Methods

Because I had no group it was difficult to create an AI competition on my own. That is why I chose to three different ways to display AI. I used Case switches, Finite State Machines and the framework that was made available for this course which uses Coroutines. Case switches are useful for when you want to compare a single variable against a series of constants. It provides an efficient way to transfer the execution to different parts of a code based on the value of the expression. The switch expression is of integer type such as int, char, byte or short of an enumeration type, or of string type. Finite state machine is a design pattern where automation comes in play. It is commonly used in AI implementations for certain behaviors. I.e.: Walking, Attacking, Idling, etc. FSM can also be used for NPCs and is also used in Open World RPGs. Coroutines are methods that run independent from and simultaneous with the main thread. This allows Coroutines to run across frames, making it easy to perform large tasks that would otherwise bring a project to halt. The Coroutine retains flow control, allowing for easy looping and/or conditional behavior. Coroutines are always of return type IEnumerator and when it is finished it needs to yield control.

# Polishing the game

Due to time restraints I was not able to polish the game or even finish it. I focused more on understanding the concepts. One of the AI methods which is the Case Switch method has been finished but not tested. If I had more time to polish the game, I would add a scoring system to the game and different game styles so the player can change the game style of the AI.