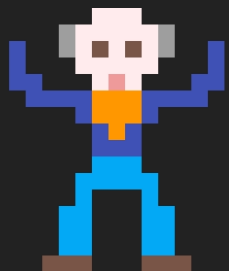


Hi There!

This class is CS-UY 3113



Before we get started!

Mac: Install Xcode

Windows: Install Visual Studio with C++

Welcome to CS-UY 3113

Intro to Game Programming

Fall 2019 - 16643

Monday/Wednesday - 10:30 - 11:50 - 2 MTC 812

Instructor: Carmine T. Guida

Email: cguida@nyu.edu

Prof. Carmine T. Guida



Quintet



Quintet

Free to Play Indie Action Space Multiplayer +



The Captain's Orders

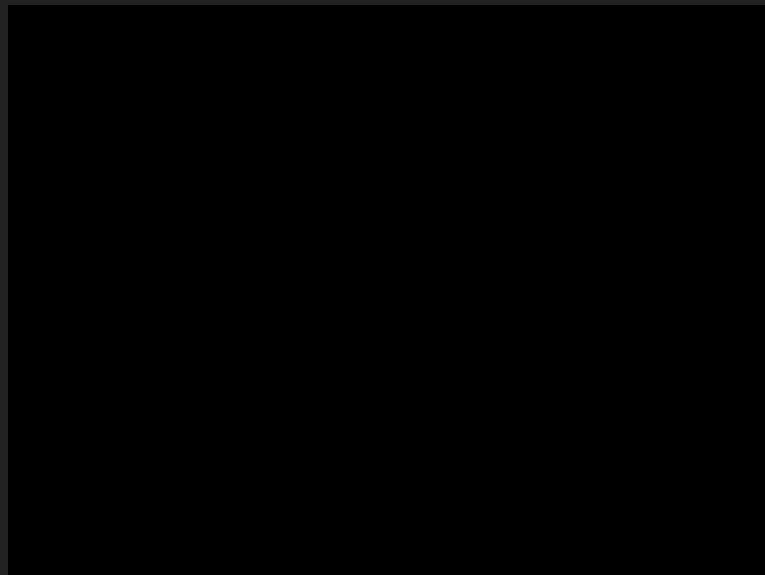
Prototype

Audio Only Game

Spatial / Binaural Audio

Works with Voice or Typing

... and let's listen!



Museum Accessibility

Prototype

Proximity Based Audio Tour

Affordable for small museums

Same proximity technology could be used
for virtual bookmarking, avoiding photos.

... walking demo (iPhone)

What is a game?

“a game is the voluntary attempt to overcome unnecessary obstacles”
- Bernard Suits (The Grasshopper)

“a game is a series of interesting decisions”
- Sid Meier (Creator of Civilization)

(I need a volunteer)

What is Game Programming?



What are some common things video games have?

Graphics

Input

Audio

Game Logic

Physics, AI, UI

The Three Cs

(From “Level Up!” by Scott Rogers)

Character, Camera, Control

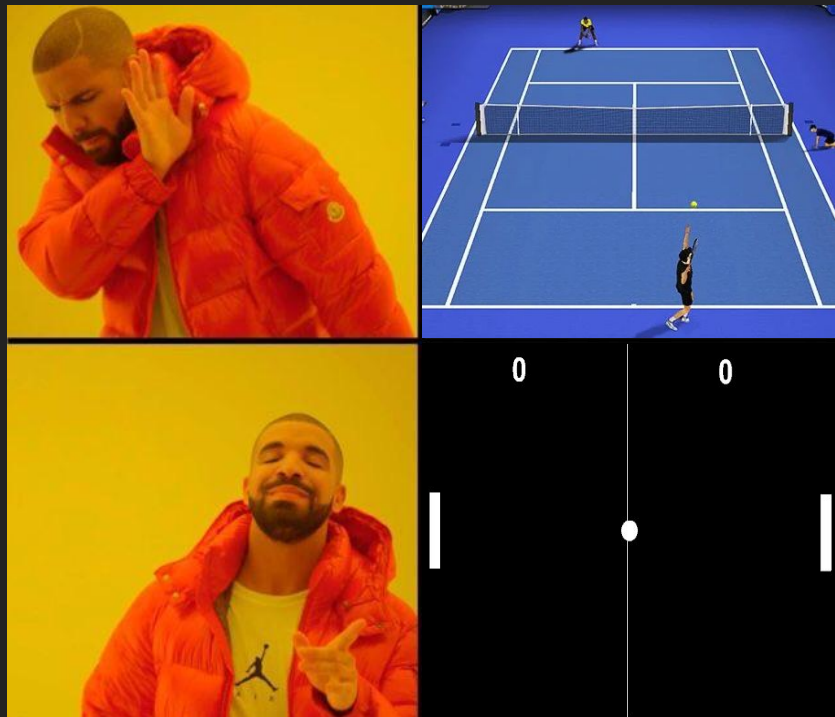
The heart of Game Programming:

```
Startup();
```

```
while (gameIsRunning) {  
    ProcessInput();  
    Update();  
    Render();  
}
```

```
Shutdown();
```

The types of games we are making:



What is going on for the next 15 weeks?
Let's look in the...

Syllabus

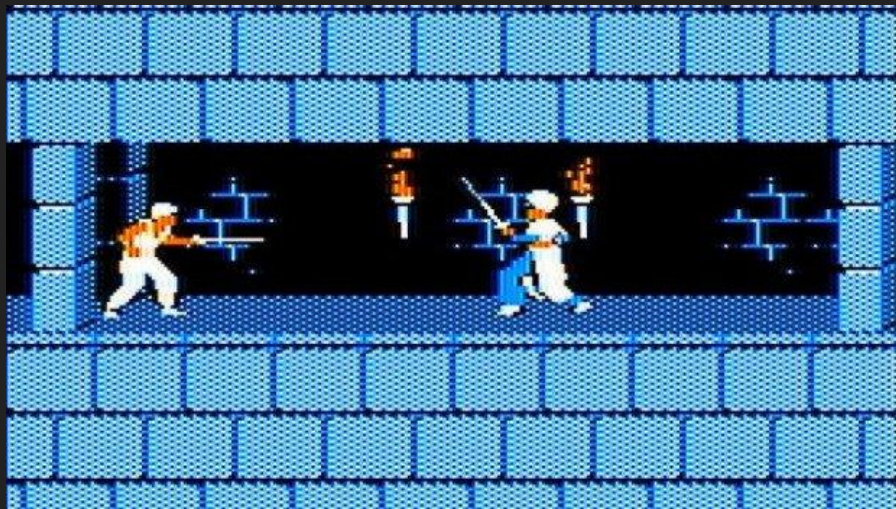
A brief history of Video Game Programming

"This archive contains the source code for the original Prince of Persia game that I wrote on the Apple II, in 6502 assembly language, between 1985-89.

The game was first released by Broderbund Software in 1989, and is part of the ongoing Ubisoft game franchise."

- Jordan Mechner

<https://github.com/jmechner/Prince-of-Persia-Apple-II>



Back in the day...



OpenGL and DirectX

(1992)

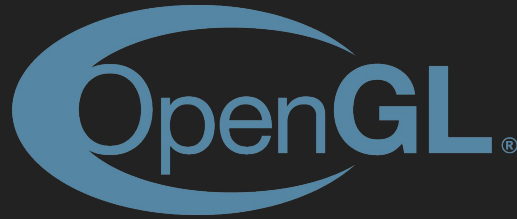
(1995)

Game Engines

(We're not using these.)



This course:



What is SDL?

Layer on top of OpenGL

Window Management, Input, Events, Audio, Game Controllers and more.
(OpenGL is a Graphics Library and does not provide these things!)

Mac OS, Windows, Linux, iOS, Android

SDL in the real world!

[https://en.wikipedia.org/wiki/Source_\(game_engine\)](https://en.wikipedia.org/wiki/Source_(game_engine))

“The first of Valve's games to support Linux was Team Fortress 2, the port released in October 2012 along with the closed beta of the Linux version of Steam. Both the OS X and Linux ports of the engine take advantage of OpenGL and are powered by SDL.”

Dota 2, Half-Life, FTL: Faster Than Light, VVVVVV
Linux version of Unreal Tournament, also popular with Emulators

Let's get you
ready to code!

git and github



For each project, you will submit a link to your github repository.

If you have not already done so...

Setup an account at github: <https://github.com>

Install git: <https://git-scm.com>

Learn how to use git (Create a repository, push code to github): <https://try.github.io>

Course Resources

Resources, libraries, assets and lecture slides are available in the following GitHub repository. Note that lecture slides and project requirements may be delivered as we go:

<https://github.com/carminguida/CS3113>

(Review Windows and Mac Setup)

Project 0:

Setup a github account.

Install git and familiarize yourself with how to use it.

Setup an empty repository for this class.

Setup Visual Studio or Xcode.

Make sure you can build and run the sample project!