Student's Name: ___Austin Horner_____ Date: __2022-10-22_____ Block/Period _Monday noon____

GAME:IT - Unit 2
LEARN JOURNAL: Building Games with Construct

INSTRUCTIONS: Use this journal to document your notes and findings as you complete LEARN sections in GAME:IT. This will come in handy when preparing for tests and building games!

Define what a game engine is in your own words.

A game engine provides a convenient, intuitive interface for creating games. It saves you having to create every line of code from scratch.

What are the benefits of using a game engine? Potential negatives?

Benefits: 1) they save coding work. 2) help you make your game awesome
**Negatives: 1) may be they might cost money, 2) limit creativity a little, 3) have a learning curve.**

Explore four game engines. Research and report the costs and features.

Construct allows you to easily build 2D games and export them to HTML5 format. This allows you to embed your games in websites and online arcades.

Construct 3: builds 2D games with some 3-D effects mixed in, exports HTML5 for websites and online arcades. Our class will use this. In this featured game, Ground Shift, you navigate a 3-D maze by jumping between a main world and an up-side down world.
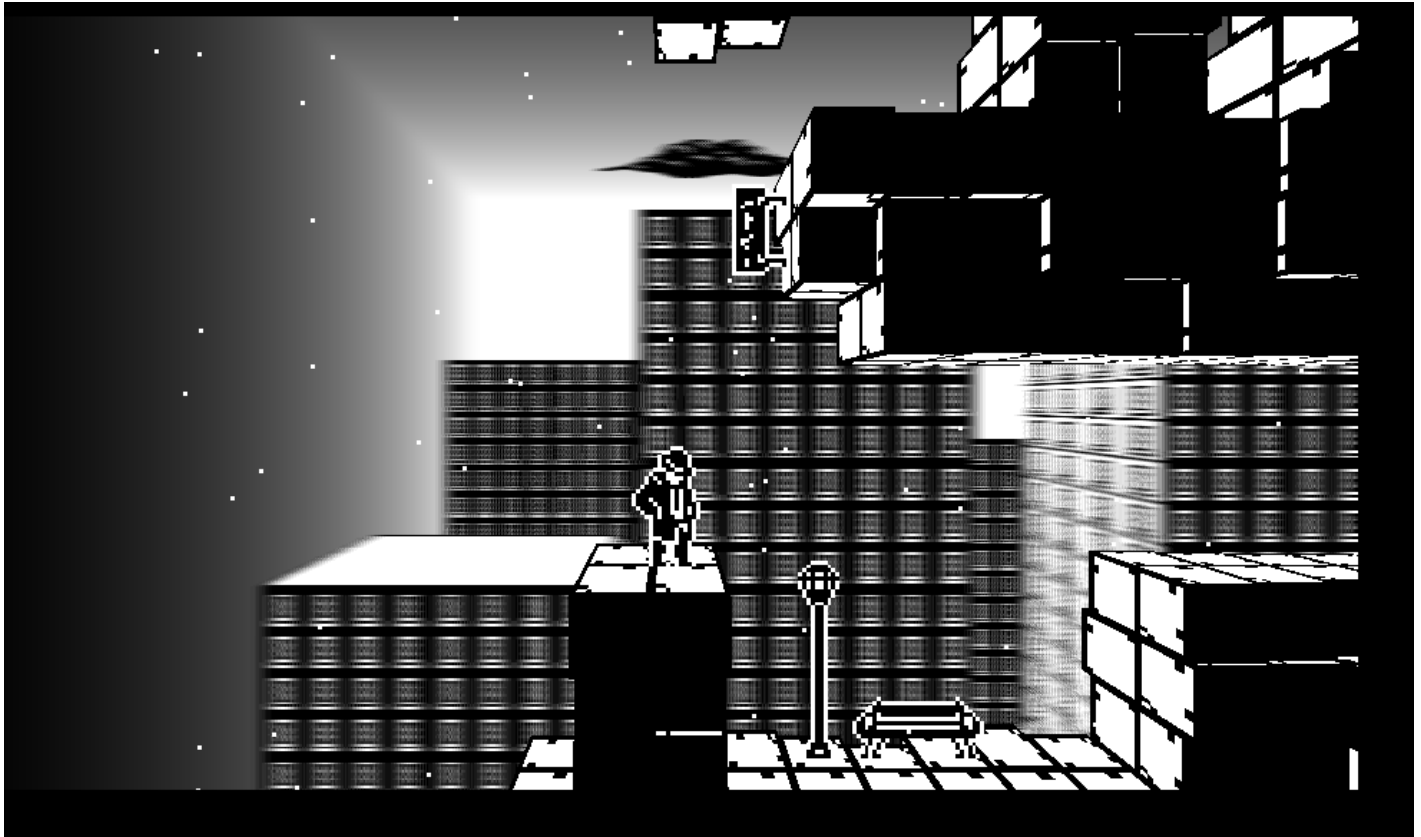
Unity: Very powerful beautiful 3D graphics: global shading, accurate reflections, character animation tools, physics simulation, high quality audio, many players, many platforms, bundles of awesome assets. The cost is a very long learning curve. One video documents spending multiple years learning.

Unity 5 Trailer (Official)
AUDIO
0:58 / 2:37

Unity 5 Trailer (Official)
EDITOR
PhysX 3.3 for more Physics power
1:13 / 2:37

Unreal Game Engine

Unreal Engine 4 is a fully featured 3D game engine designed to build advanced 3D games for Mac, Windows, Linux, or console gaming systems.

The code for Unreal Engine 4 is written in C++ programming language.

Unreal: can build 3D games. It looks like this game engine can work with sophisticated cinema quality 3D graphics. It has smart handling of complex scenes like a city-scape with lots of traffic, only computing the nanite segments that are necessary. It gives you layered sound design, lets you share skeleton animation between characters of different designs, and makes it possible for a team to collaborate in making a game.

CHARACTER RETARGETING
EASILY REUSE & AUGMENT ANIMATIONS

Welcome to Unreal Engine 5 Early Access

streaming thousands
of actors in and out,

7:50 / 15:36

GameMaker Studio is a 2D game engine that makes use of its own programming language called GML to build games.
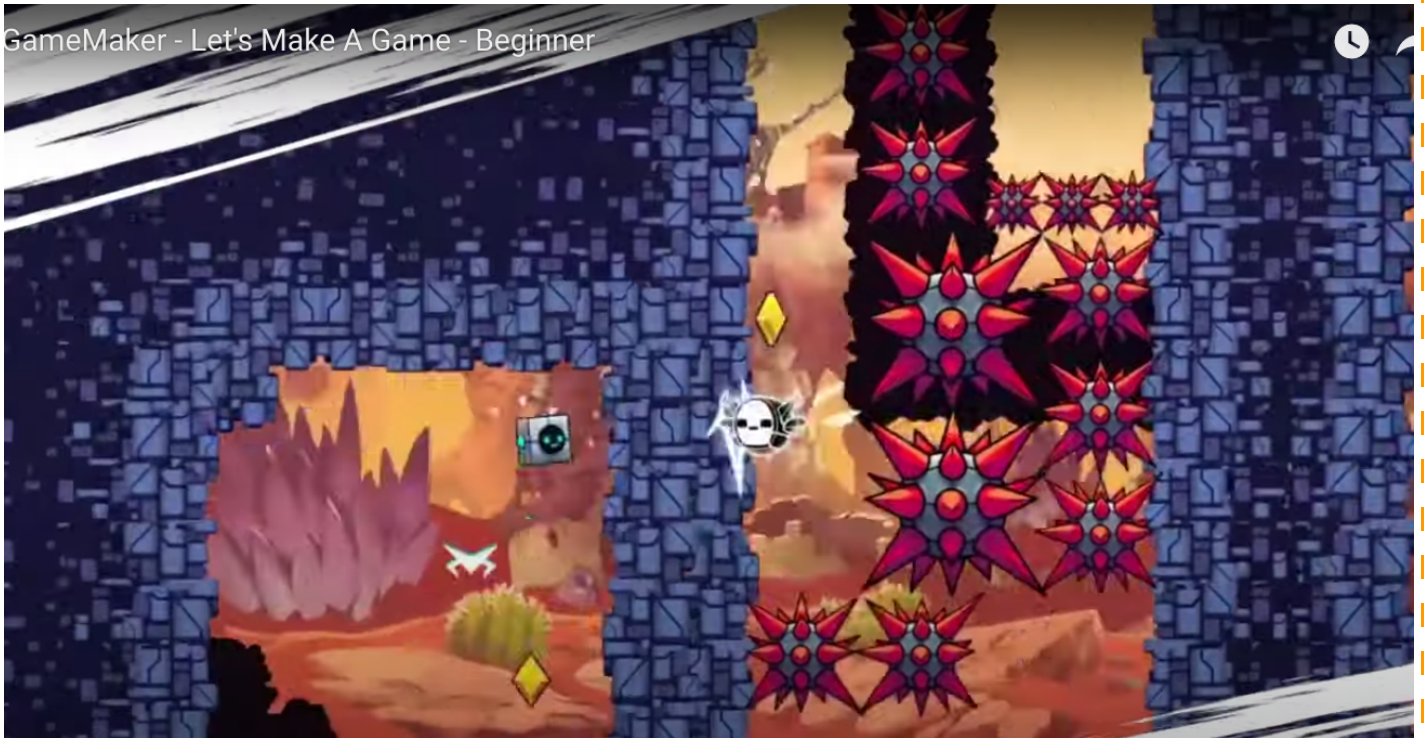
Games built with Game Maker Studio can be built for iOS, Android, desktop, and the web.

GameMaker Studio makes 2D games that can be used on the web. Lets you drag and drop effects like opening windows and flames. Supposed to be a fast way to make professional looking 2D games.
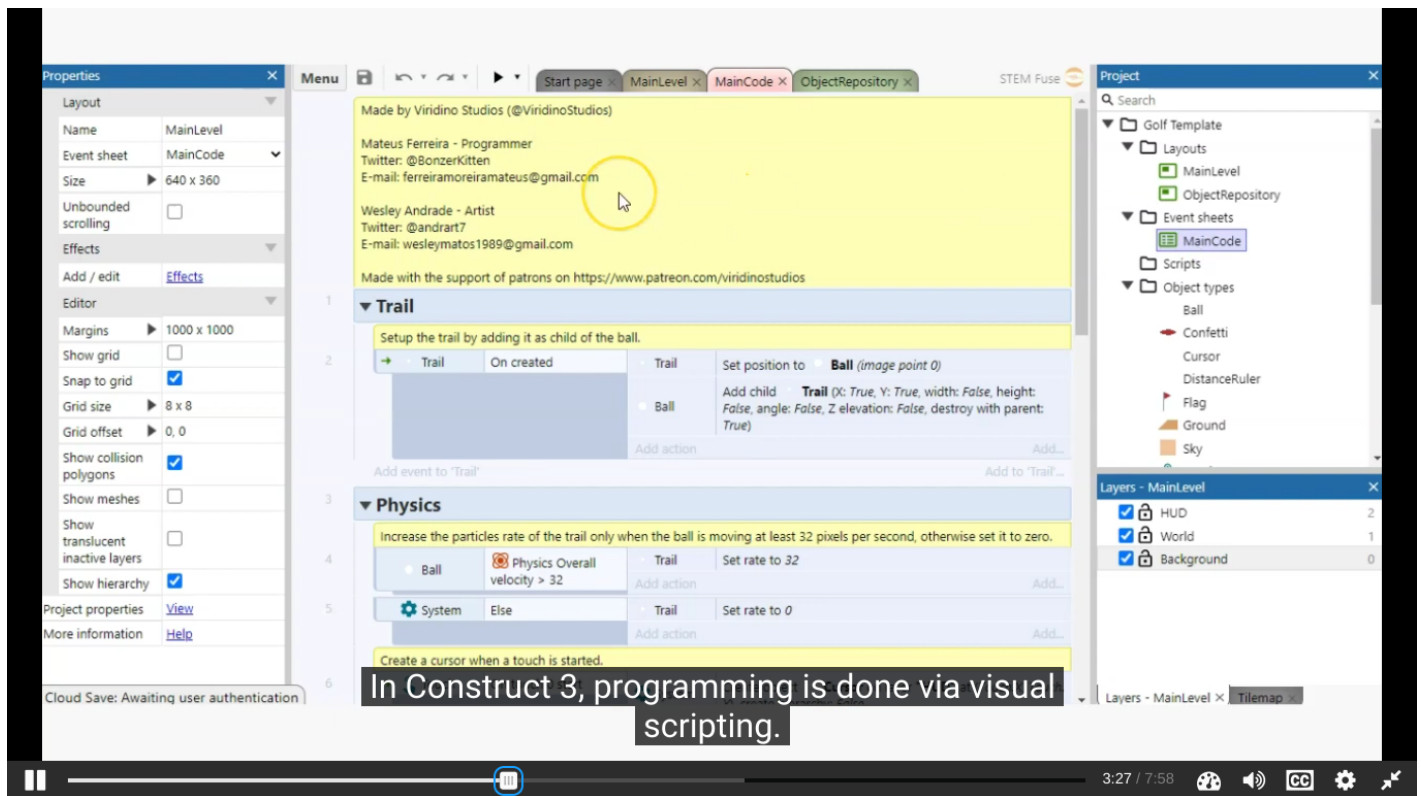
GameMaker - Let's Make A Game - Beginner

List three reasons why Construct is a great beginner game engine.

Construct is free, available on the web, usable by simple computers, and fairly easy to learn. Events are programmed with visual scripting.

In Construct 3, programming is done via visual scripting.

How would you go about testing your game without exporting it?

There is a play button that you push to see your game without leaving the engine. You can also generate a URL so that someone else can view the demo.

How are XY coordinates utilized in Construct?

XY coordinates are used to place and size scale objects, sprites, layouts, and backgrounds. Mouse position and cursor position are tracked with XY coordinates.

List three types of objects and how you might use them in game design.

GAME:IT

There are sprites that act as main active characters, and keyboard, mouse, and touch sensors that provide action controls during the game.

What are game engines and how will you be using them in this course?

Game engines provide lots of special effects assets, and the service of doing low-level coding so that the user can concentrate on higher-level aspects of their games. Users can drag and drop special effects, and select options from menus that would otherwise take a lot of coding to produce. In this course, we will be using the Construct 3 game engine.