

Game engines

game architecture, game framework, gameframe

Games have engines?

Tools for game developers

Framework (libs., methods, classes)

Sub engines:

Physics, audio, rendering engines -> **MIDDLEWARE**

But i hate history Martin!

Singular entities

80's game golden era (game creation systems)

90's - Complexity, 3D

id Software -> id Tech (Quake 3 Arena)

Epic Games -> Unreal (Unreal)

GE nowadays

Unreal (Fortnite, PUBG)



Unity (Cuphead, Escape From Tarkov)



CryEngine (Crysis, Kingdom Come)



Source (Counter-Strike, DOTA 2)



Game Engine	Number of projects	% of total games identified
Unreal	1726	25.6 %
Unity	889	13.2 %
Source	270	4.0 %
Cryengine	238	3.5 %
Gamebryo	215	3.2 %
IW	192	2.9 %
Anvil	166	2.5 %
id Tech	113	1.7 %
Essence	73	1.1 %
Clausewitz	68	1.0 %
Identified games with other engines	3266	48.4 %
Total games identified (from Wikipedia, incl. DLCs and expansions)	6743	
Unknown/unidentified games	42538	
Total games in Steam database (incl. DLCs and expansions)	49281	

Table 1: Game engines used in games released on Steam (data from 2018-12-20).

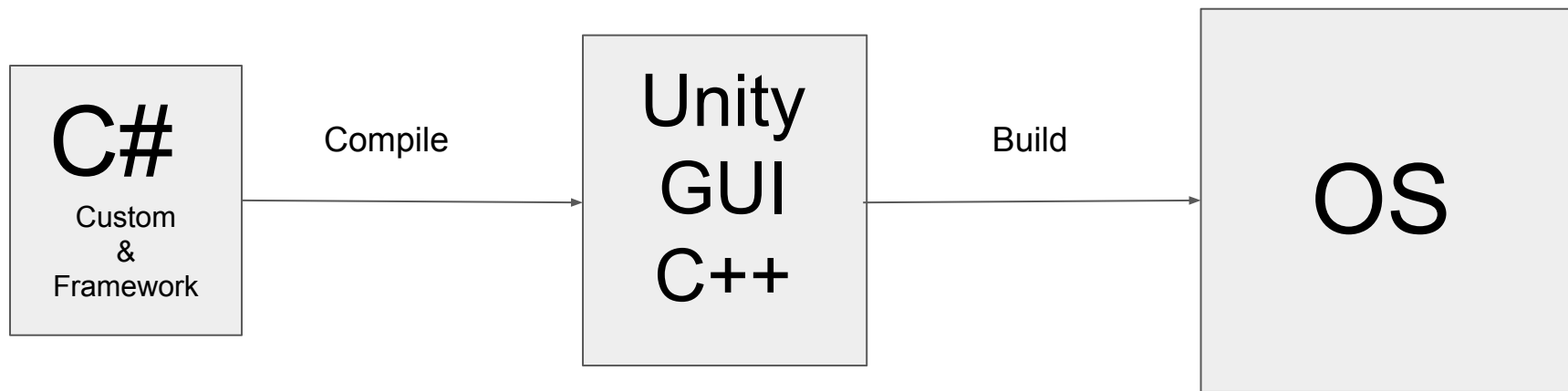
Game Engine	Number of projects	% of total games
Unity	24200	47.3 %
Construct	6275	12.3 %
GameMaker	5643	11.0 %
Twine	3184	6.2 %
RPG Maker	1982	3.9 %
Bitsy	1683	3.3 %
PICO-8	1479	2.9 %
Unreal	1458	2.8 %
Godot	1274	2.5 %
Ren'Py	1008	2.0 %
Games with other engines	2993	5.9 %
Total games	51179	

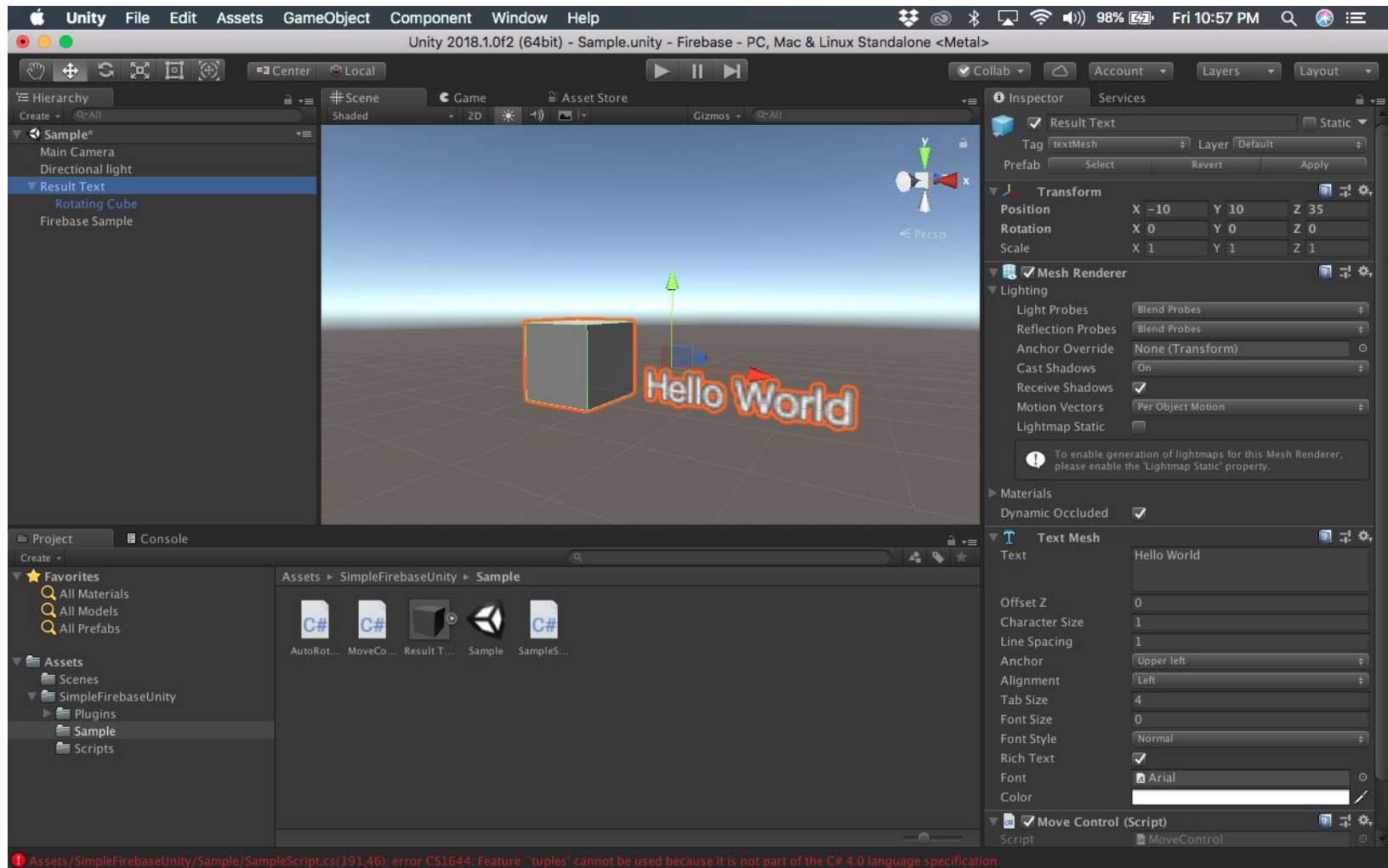
Table 2: Game engines used in games released on Itch.io (data collected 2018-12-28)

Unity, oh you beautiful tramp!

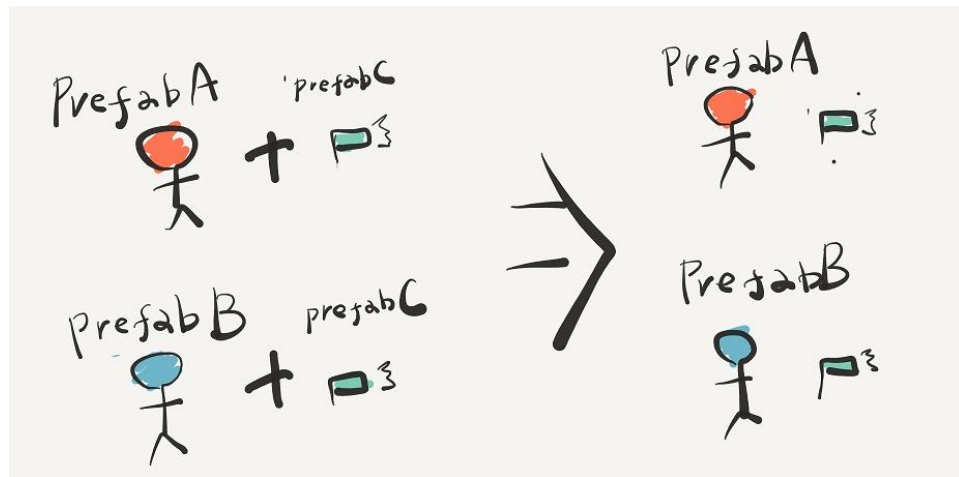
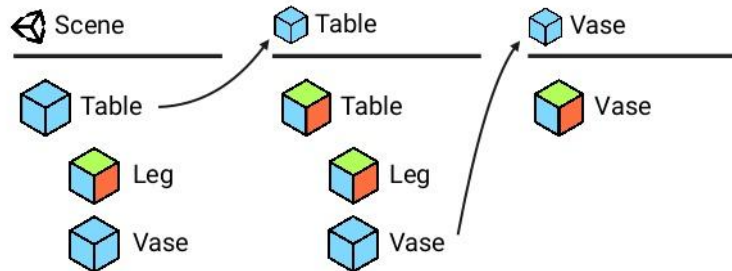


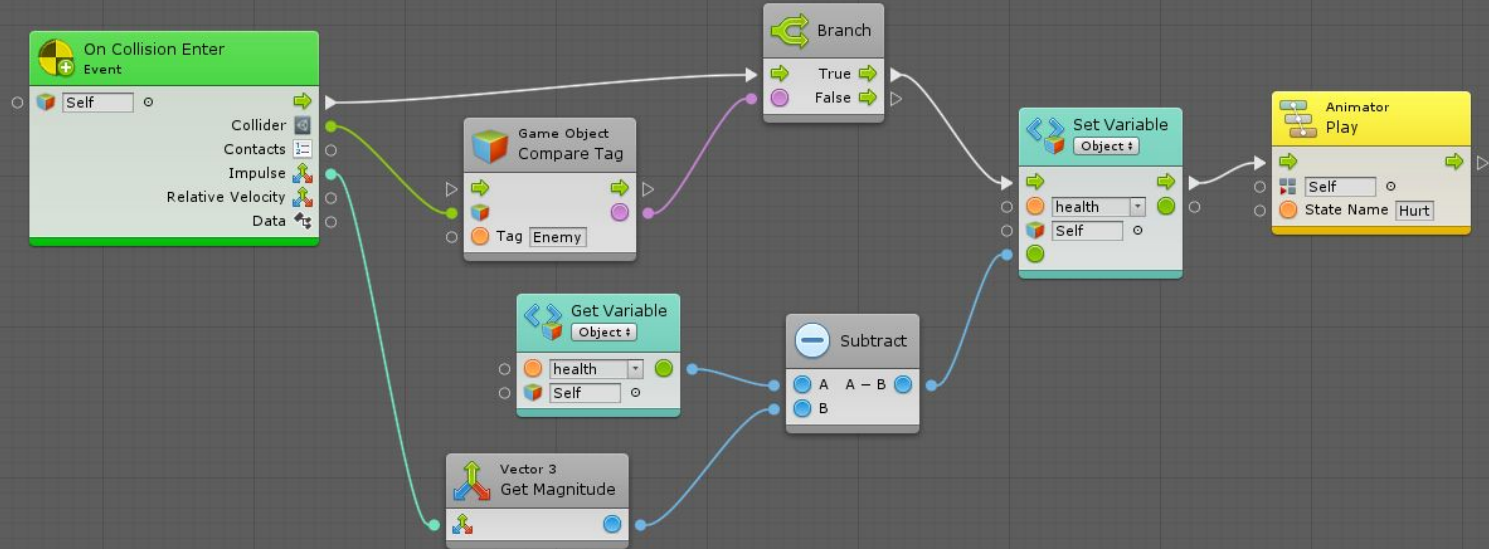
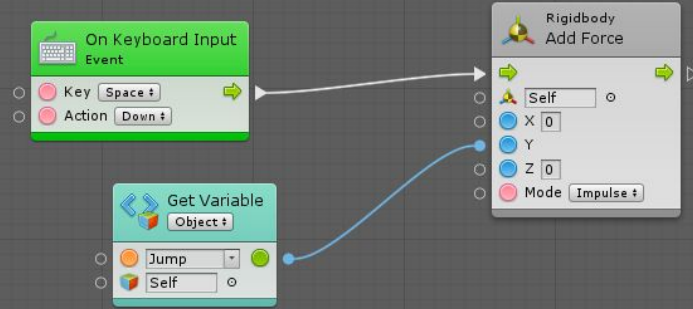
- + Free (no revenue share like Unreal)
- + Beginner friendly
- + Assets import (PS, Blender etc...)
- + Community
- + GameObject - Prefabs
- + C#
- Graphics
- 100k+ licence cost
- C# (MonoBehaviour)





Nested Prefabs





What else?

Housing (furniture)

Architecture, civil engineering

Animations, Graphics

Applications, Showcases, etc.....

But we want JAVA!!!

Engines:

libGDX (game development framework)

jMonkeyEngine

LWJGL (Lightweight Java Game Library)

Android -> Mobile games

Minecraft, Bejewelde



Since no questions...

...thanks and THE END