

Game Dev with Unity3D

# PARTICLE SYSTEM



# Why do you need it?

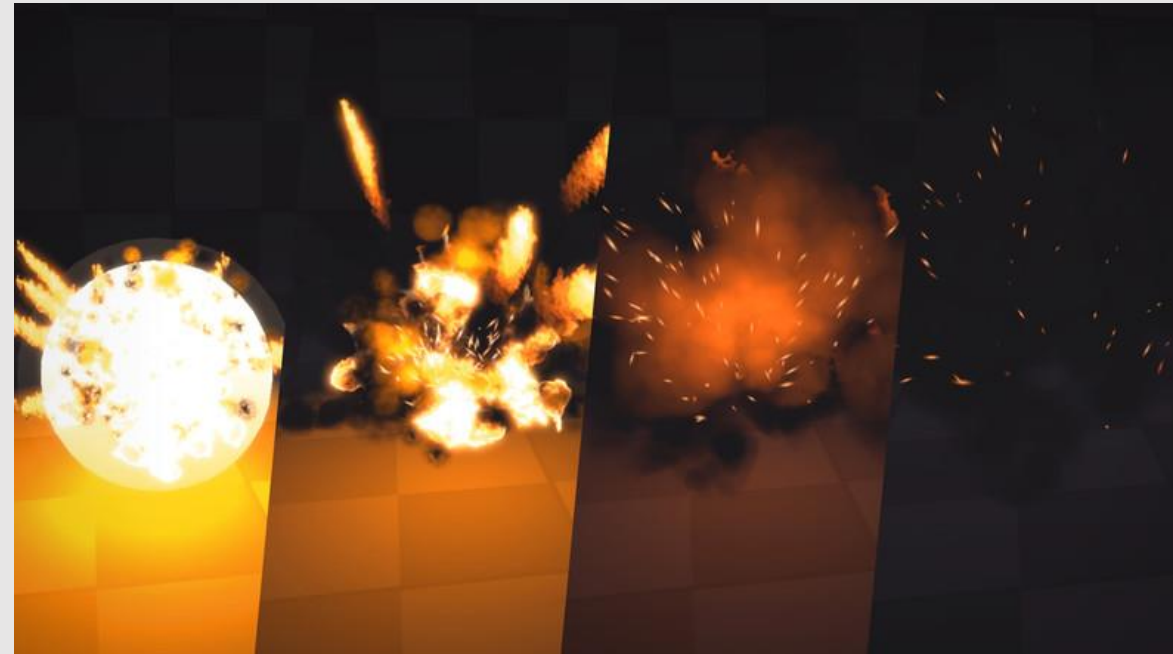
- Fire / water / dirt
- Physics integrated inside
- Randomized parts
- Defines “animation” variables inside the system
- Use cases:
  - Environment effects created easily: water (fountain, pool); fire (torch, campfire, fireball); smoke (car throttle, ...) ....
  - gun shot;
  - hit effects for different materials; splinters;

# Exercise

- Try to recreate a particle system by yourself using code and 3d models.
- Watch a video of particle system and make a recreation of it.
- A good particle system should take something between a few days to a few weeks to recreate with simple tools.

# Using Particle System

1. Download something ready according to your needs from the asset store.
  - Example: the [Unity Particles Pack](#)
2. Define the system as a prefab
3. Fix its properties according to the use case
4. Spawn it whenever you need the effect



# Particle System: Important Features

- **Looping:** yes / no
- **Life Time:** number of seconds to stay alive
- **Play on Awake:** should effect start automatically once it is spawned, or only by a Code Command
- **Renderer:** defines the method of the particle system. The 2 most important types are: Mesh and Billboard.
  - **Billboard** means a 2D sprite animation.
  - **Mesh** means physical 3D models controlled by physics.