Unity - Session 5

Building & project start

Presentations - What is this about?

- Session 1: Unity’s basics
- Session 2: OOP basics + Unity scripting
- Session 3: Inputs + Physics
- Session 4: UI + Data management
- **Session 5: Builds + Final project start**
- Session 6: Final project development
- (holidays)
- Session 7: Final project presentations

Today's plan

- Build
  - How to
  - Persistent Data, resources, Streaming Assets...
  - Alternatives
- Project start

Additional features

- 2D (spriteMask, sortingLayers…)
- 2D Renderer expérimental (lights, shadows…) / URP|HDRP + Shaders/PostProcessing/Particules
- New InputManager
- AudioMixer, filters
- UnityEvents, C# actions
- “Advanced” OOP: Generics, delegates…
- EditorWindow, CustomDrawer
- Plugins : Odin, Amplify, InControl/Rewired, Bolt, FMOD, Shapes
- Prefab variants
- Saving

Project start - Guidelines

- Work groups between 3 and 5 people
- You have to make a 3D game
- Include the following features :
    - Use of an animator
    - Prefab instantiation
    - Physics using collision code (**OnTriggerEnter, OnCollisionEnter**...) with Collision Matrix optimization
    - **At least use mouse movements and one button (keyboard/mouse)**
    - **Presence of a UI** (example: dialogues, health bar, inventory…)
    - Some advanced logic (example: inventory management, persistent saves, rewind…)
    - Data storage through **ScriptableObjects**
    - The **Windows Build** will be presented in-class alongside a slides presentation which should include: Presentation of the game, roles of the team with individual presentations of the work done by each, project management, oral explanation of the most interesting code snippets, technical difficulties, ways to improve the project)

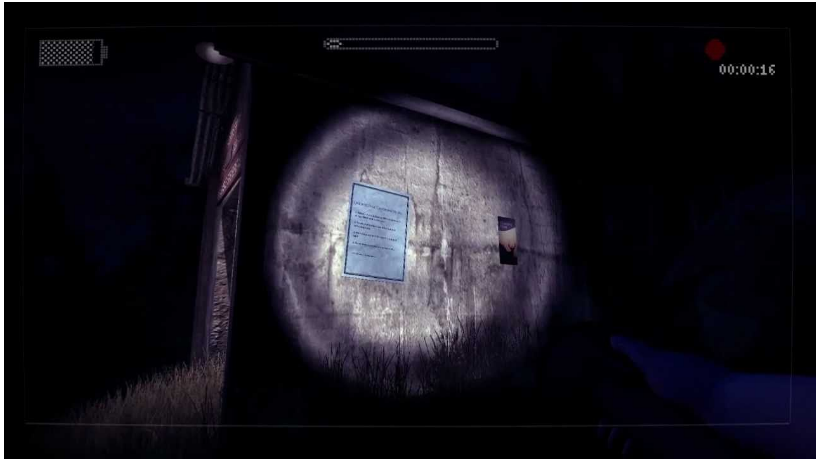
Grades are per person

Project start - Expectations

- **Compliance w/ guidelines**
- **Originality,** have fun!
- **Functional**
- **Code quality**
  - **Abstraction** (one class = abstraction of one idea/feature)
  - **Encapsulation** (private/public)
  - **Tidyness** (indentation, spelling, pas de fichiers inutiles, variables naming, same for methods…)
  - **Documentation** (no need to explain the obvious)
  - **"Business logic"** before all, focus on developing features that make your project special rather than re-invent the wheel
- Wow effect, use of advanced features/stuff not seen in class

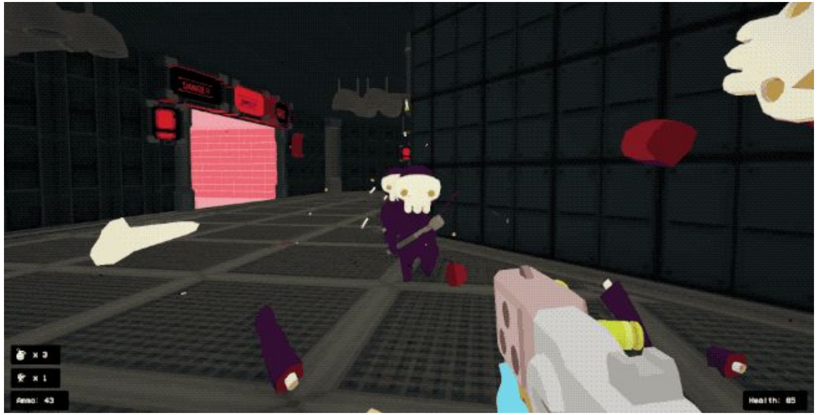
Project start - Examples

- Slender-like
  - First person view
  - Flashlight use
  - Looking for scattered notes (SO description)
  - Display of the number of notes retrieved
  - Chased by a monster with random spawns



Project start - Examples

- Shooting game
  - “Classic” FPS
  - Shooting on enemies/targets
  - Weapon variety (specs in SO)



Lancement des projets - Exemples

- Hack n Slash
  - Vue 3e personne, vue du dessus
  - Variété de coups/pouvoirs (caractéristiques dans SO)