

Crous Man

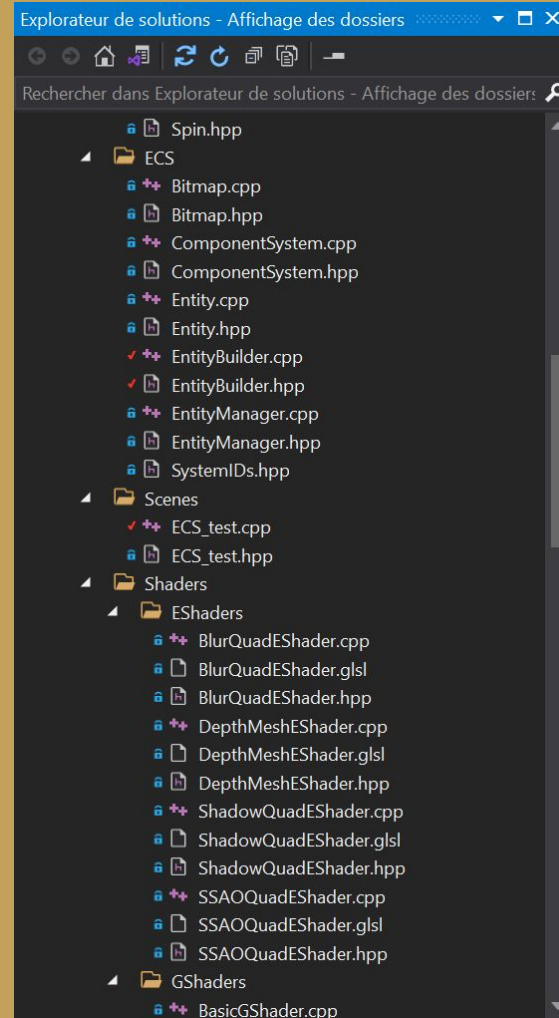
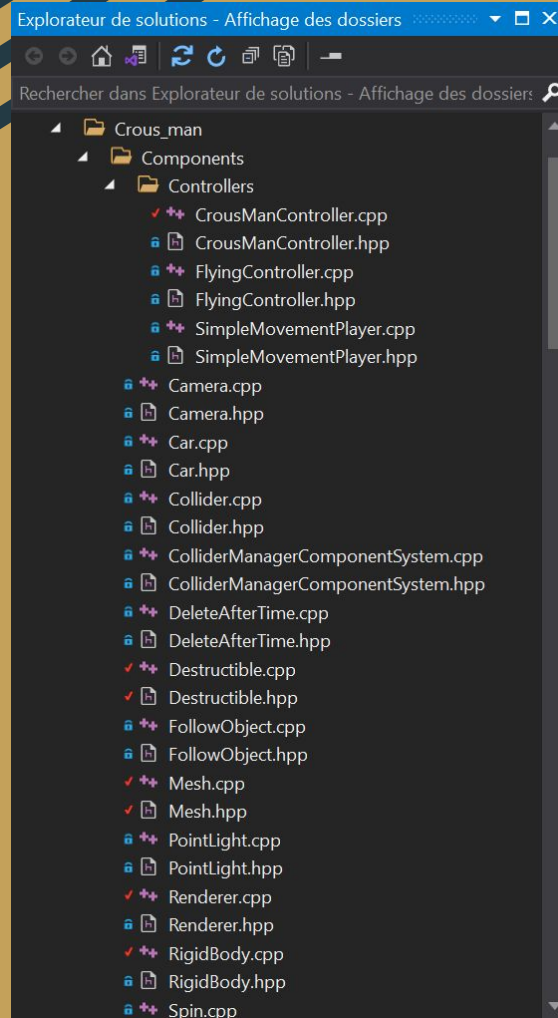


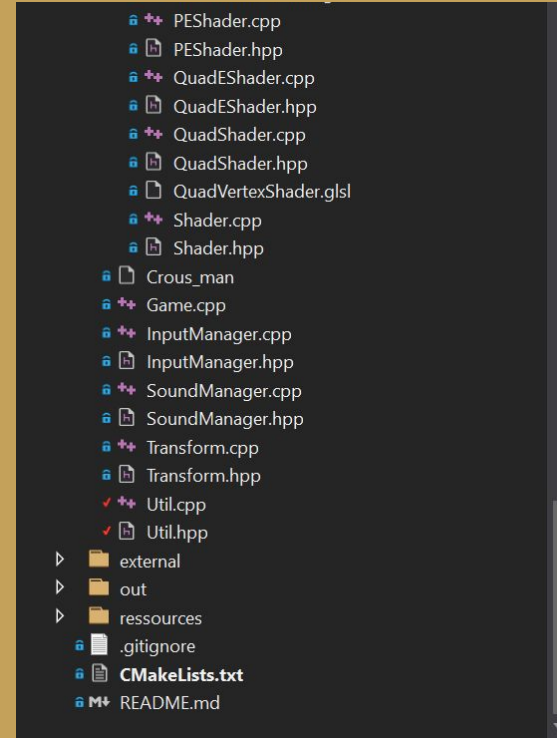
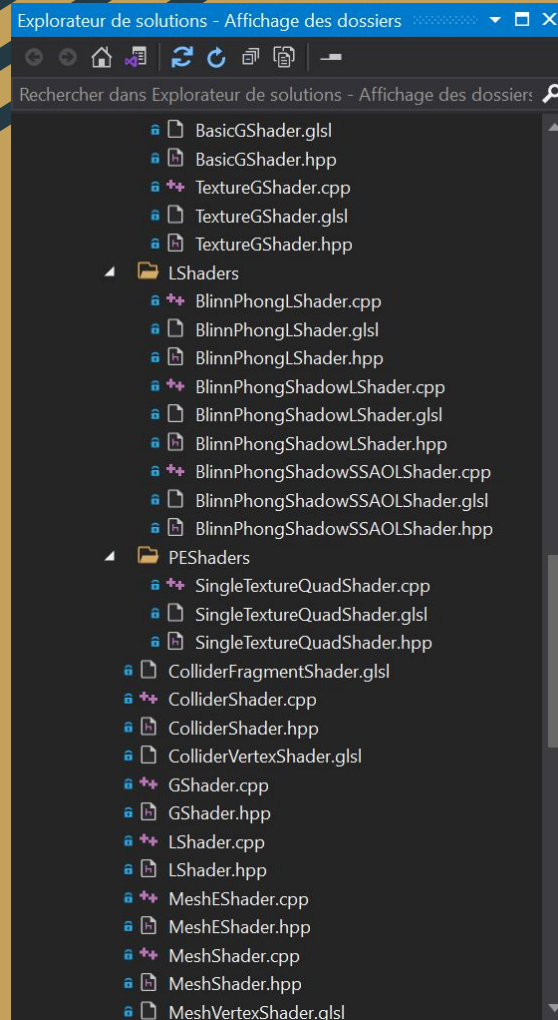
Crous plan

- 1. Architecture**
- 2. Fonctionnalités**
- 3. Pistes d'amélioration**

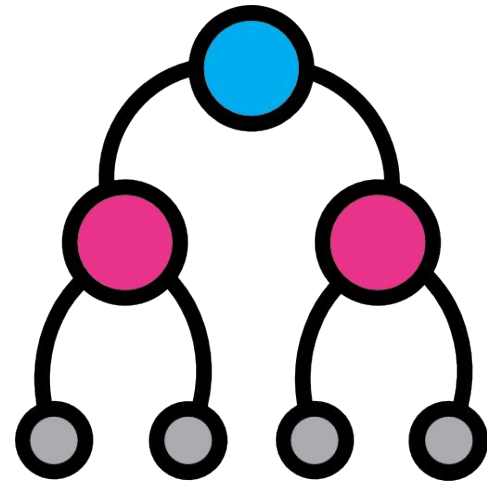


Architecture





Entité



Composant - Système

100
1010
01

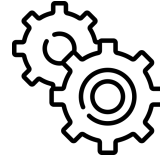


Exemple

```
Entity* saucisse = (new EntityBuilder({ SystemIDs::MeshID, SystemIDs::RendererID }))  
    ->setTranslation(glm::vec3(0.0f, 7.0f, 0.0f))  
    ->setMeshAsFilePLY("../ressources/Models/saucisseCentre.ply")  
    ->updateRenderer()  
    ->setRendererDiffuse("../ressources/Textures/saucisseColor.ppm")  
    ->build();
```


Fonctionnalités

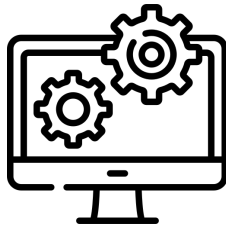
Structuration



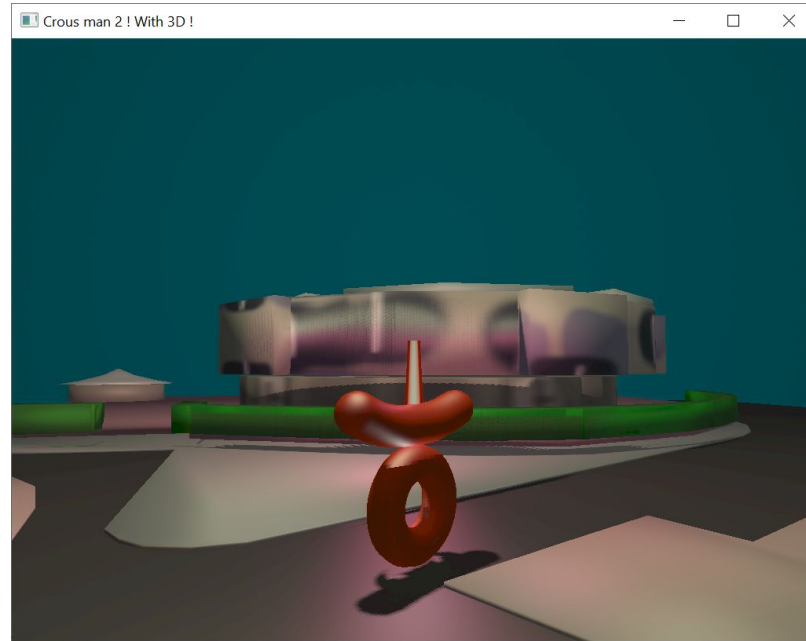
EntityManager

Systèmes

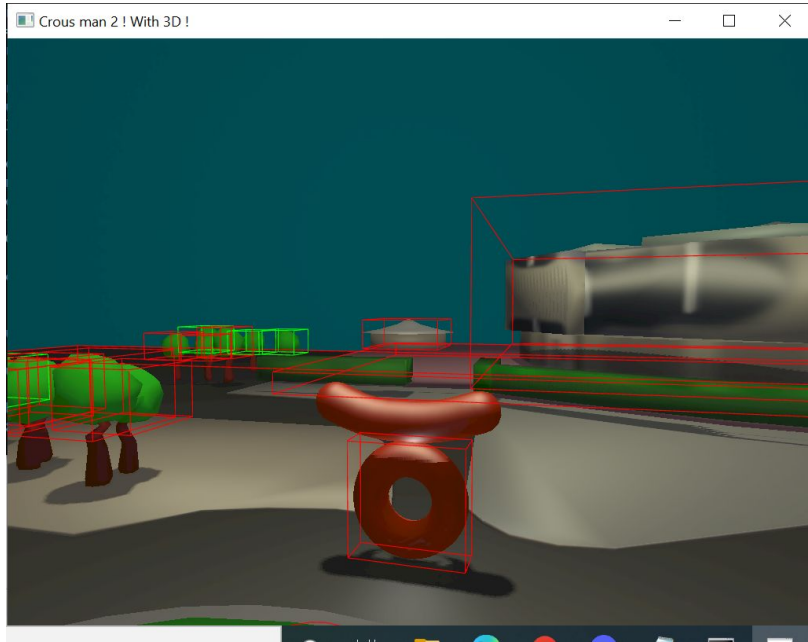
Shaders



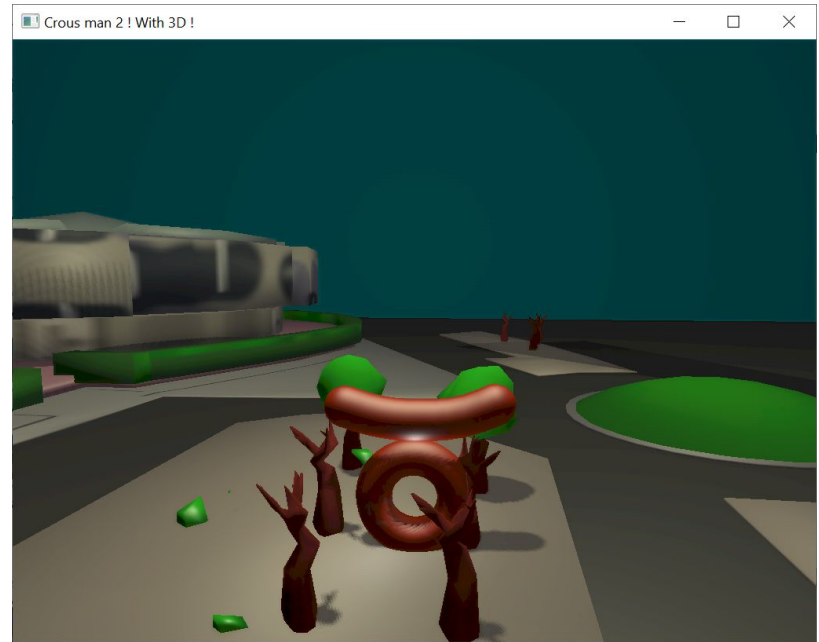
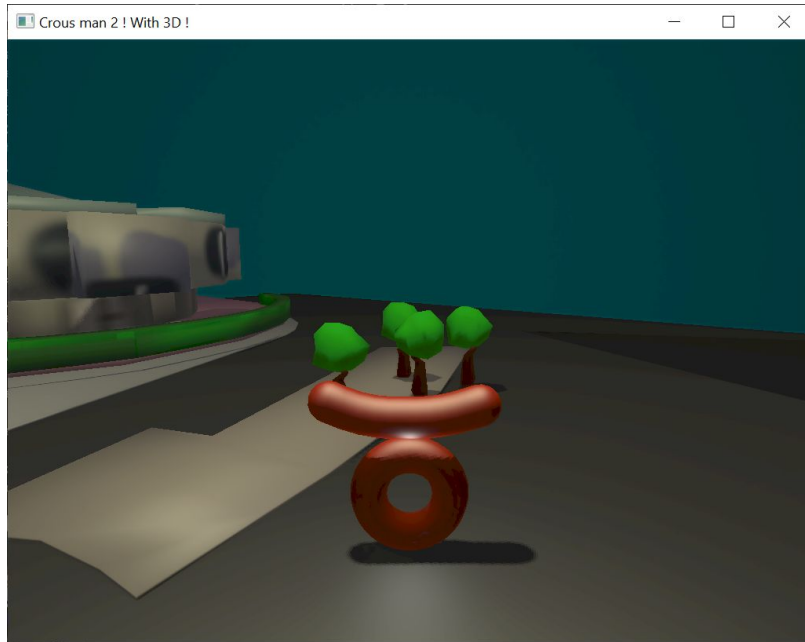
Exemple



Collisions

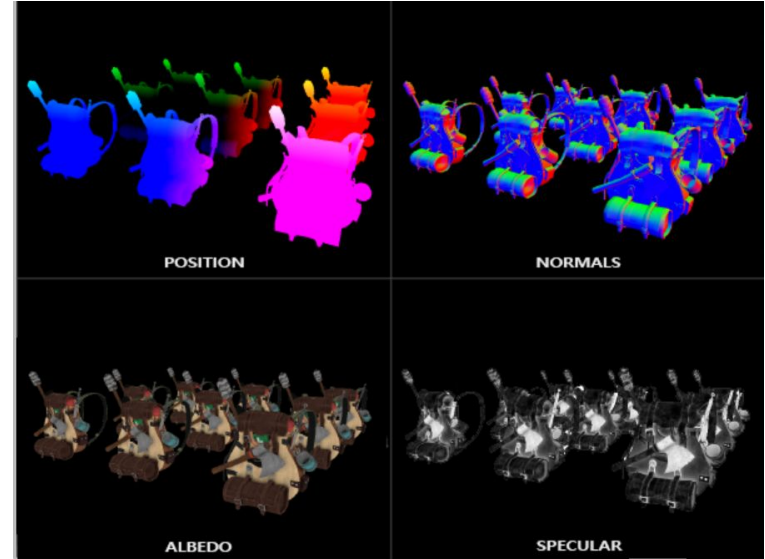


Physique



Shaders

Rendu différé



<https://learnopengl.com/Advanced-Lighting/Deferred-Shading>

GShader → EShader → LShader → PShader

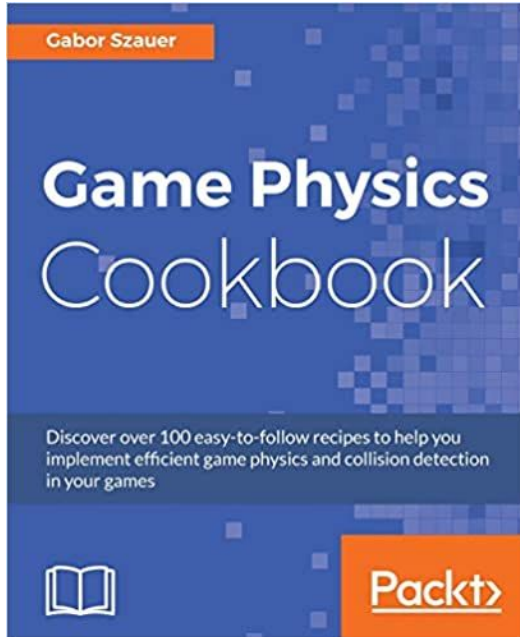
Pistes d'amélioration

Rendu

Plus d'effets : cube mapping pour les réflexions

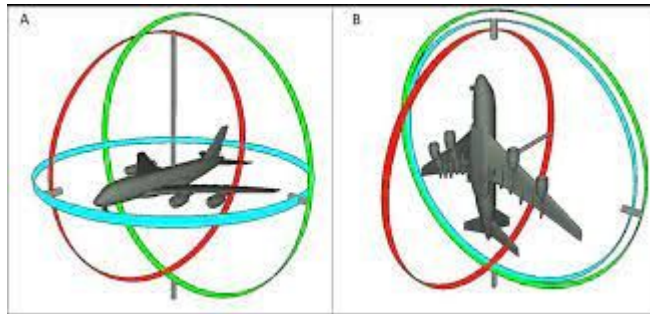
Meilleures textures

Physique

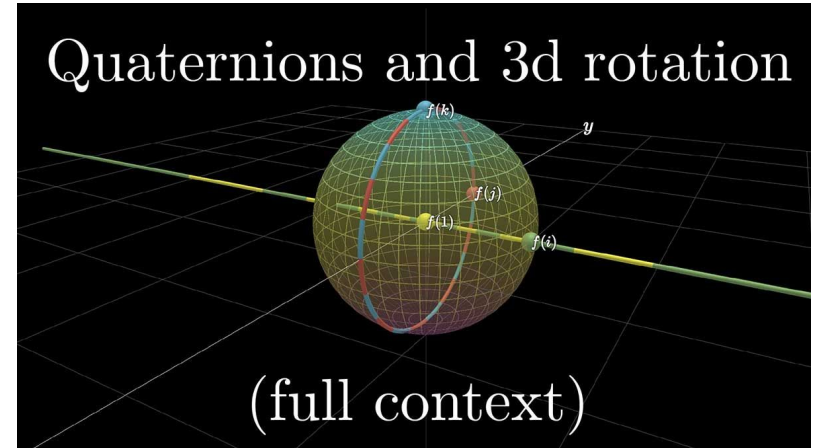


Rotation

Gimbal lock -> Quaternion



researchgate.net



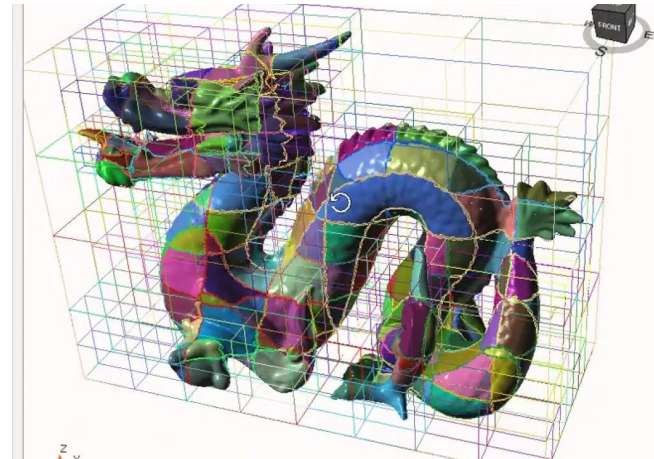
3Blue1Brown

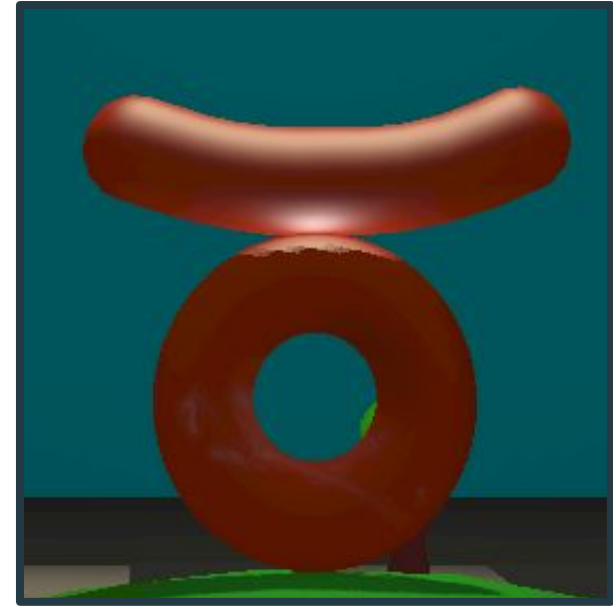
Structures d'accélération

Rendu seulement si dans caméra

Quad tree

...





Sources :

<https://github.com/gszauer/GamePhysicsCookbook>

[Learn OpenGL, extensive tutorial resource for learning Modern OpenGL](#)

[Vector Icons and Stickers - PNG, SVG, EPS, PSD and CSS \(flaticon.com\)](#)

<https://moodle.umontpellier.fr/course/view.php?id=25797>