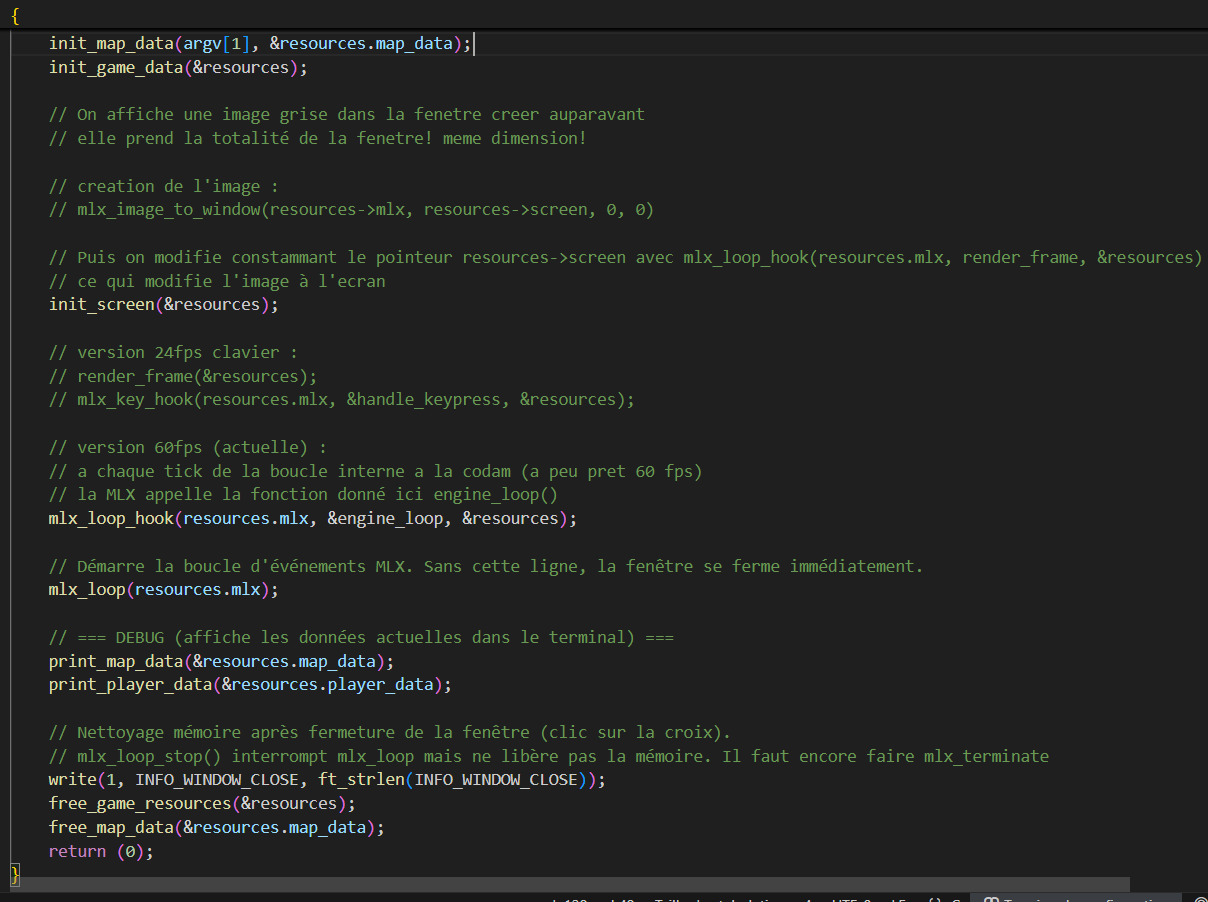
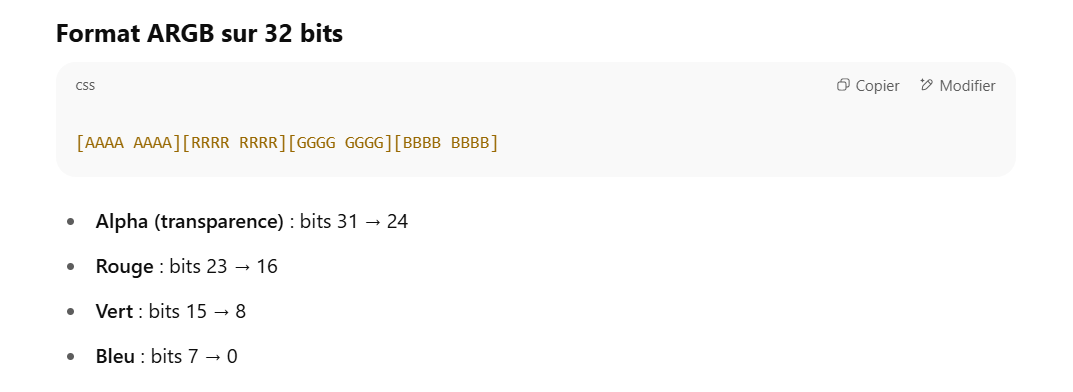
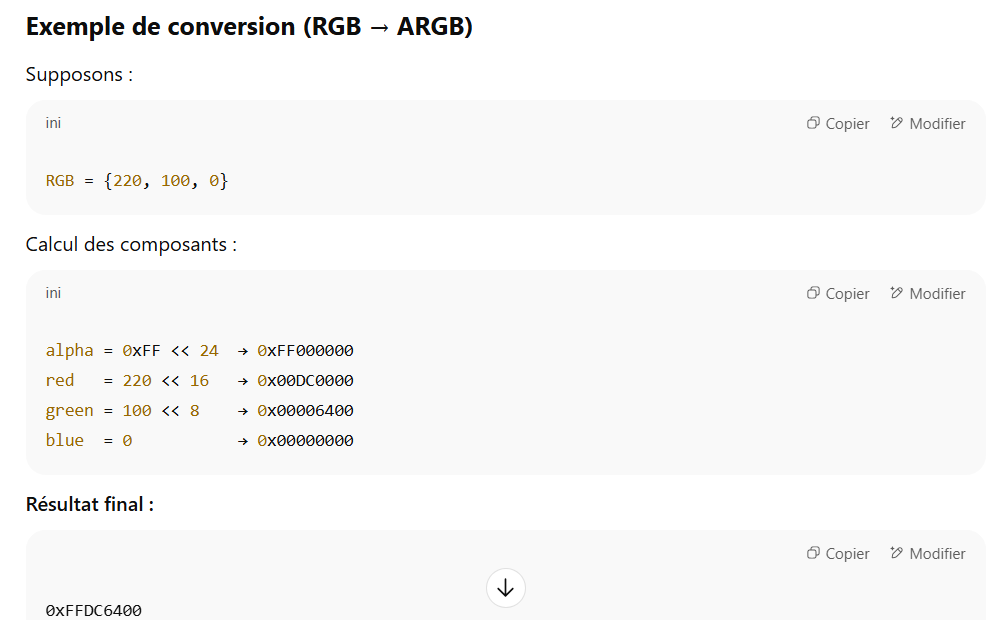
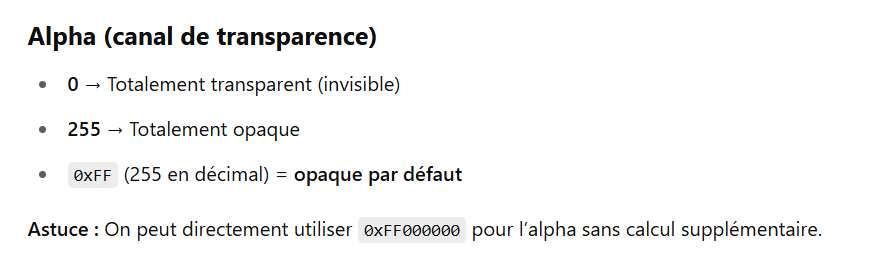
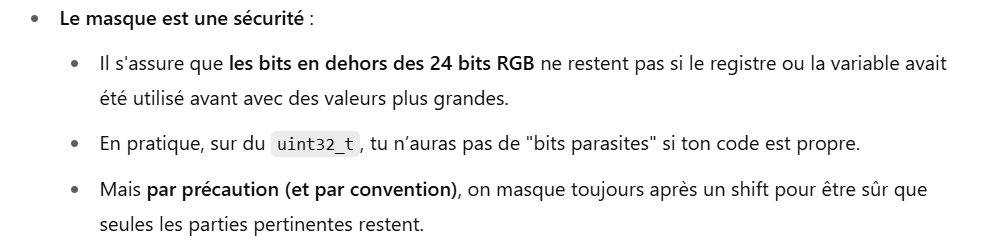
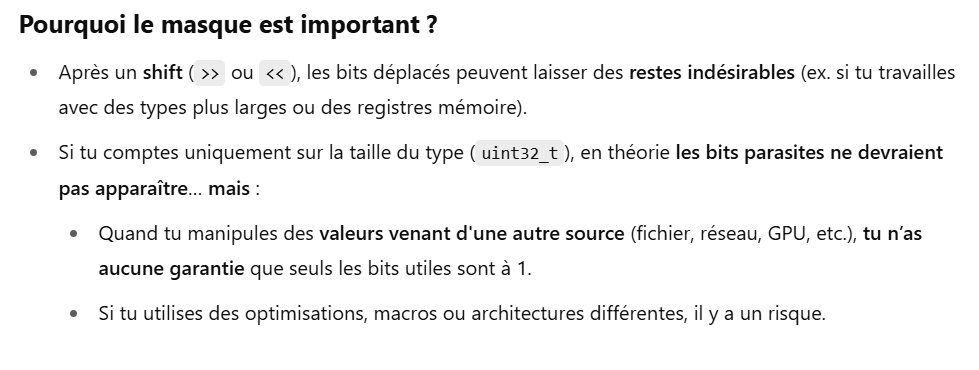
1. Main :

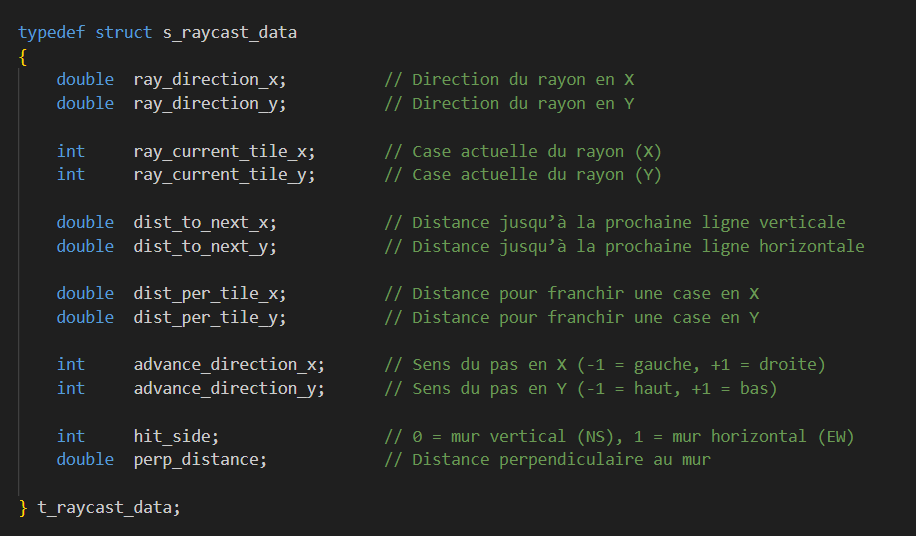
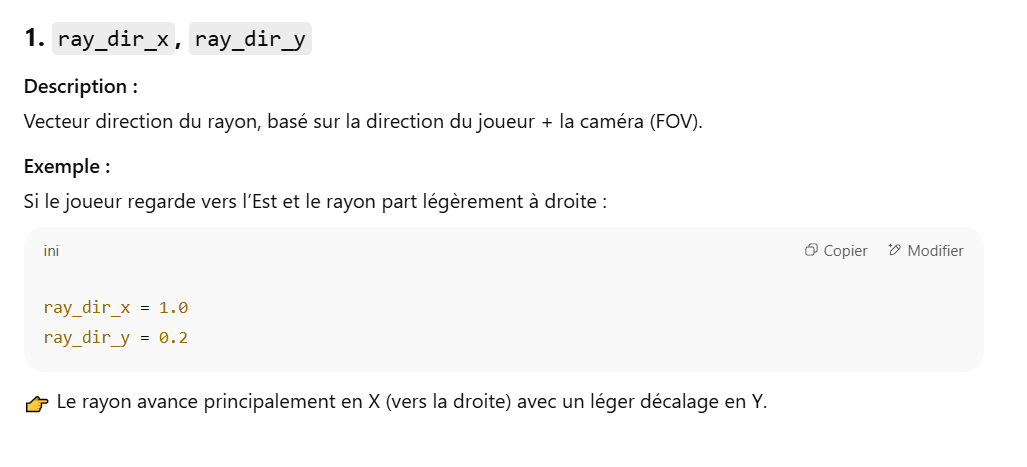
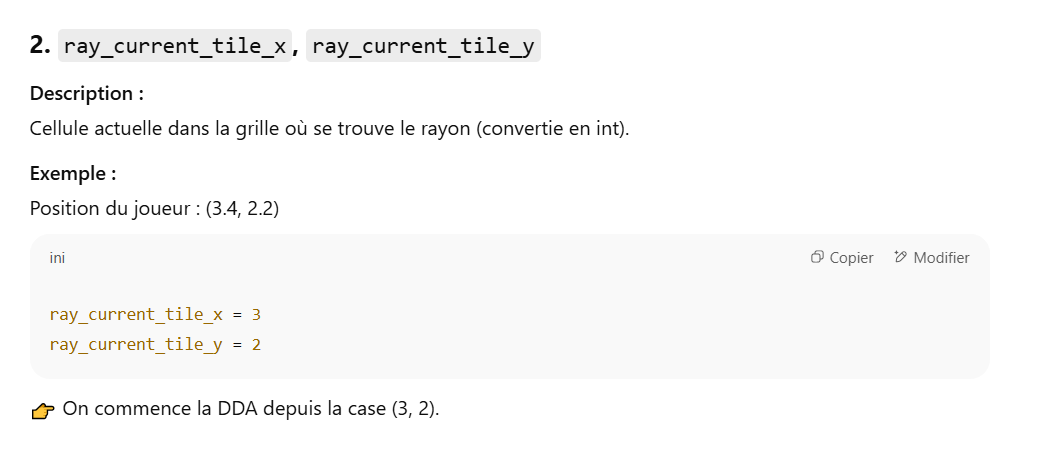


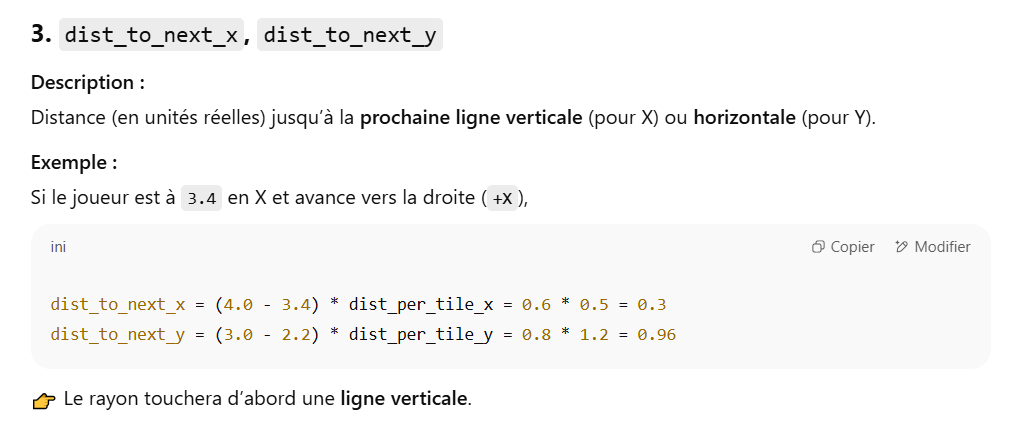
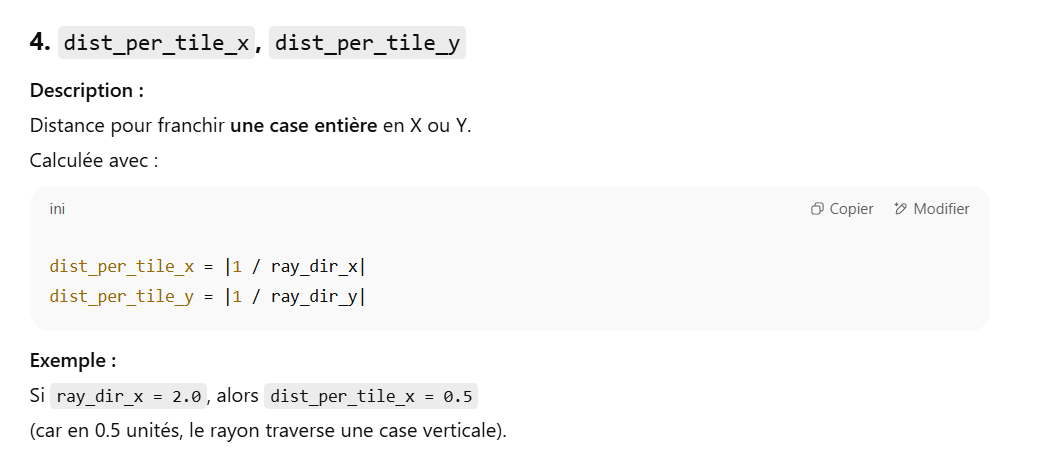
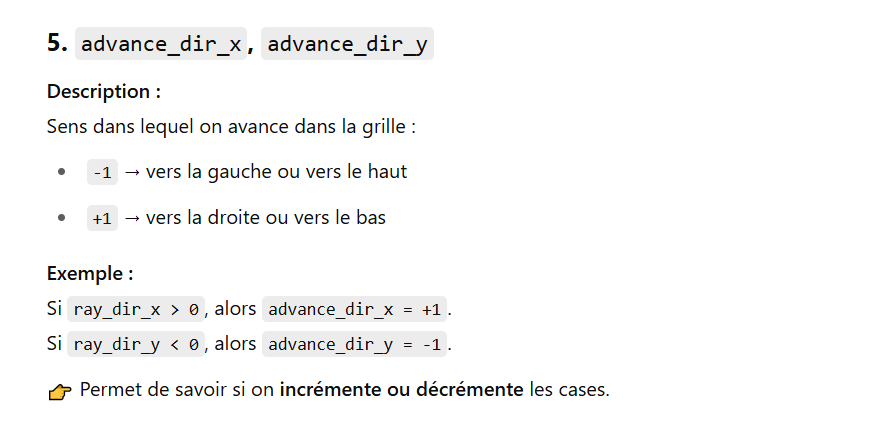
1. ARGB :

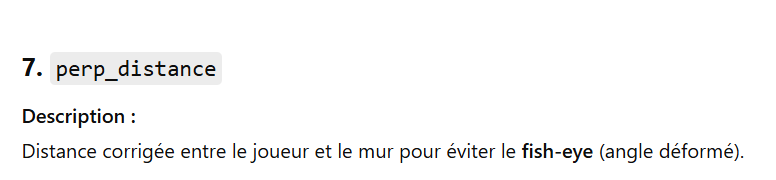




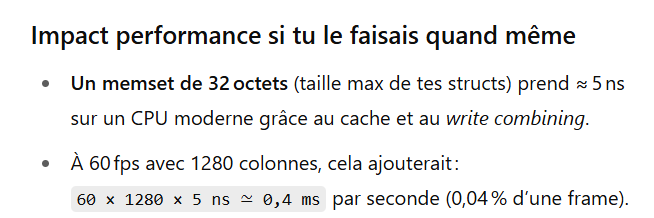


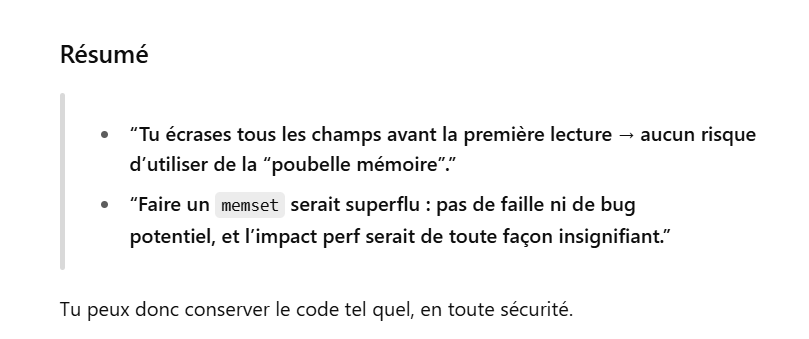
1. Raycasting :

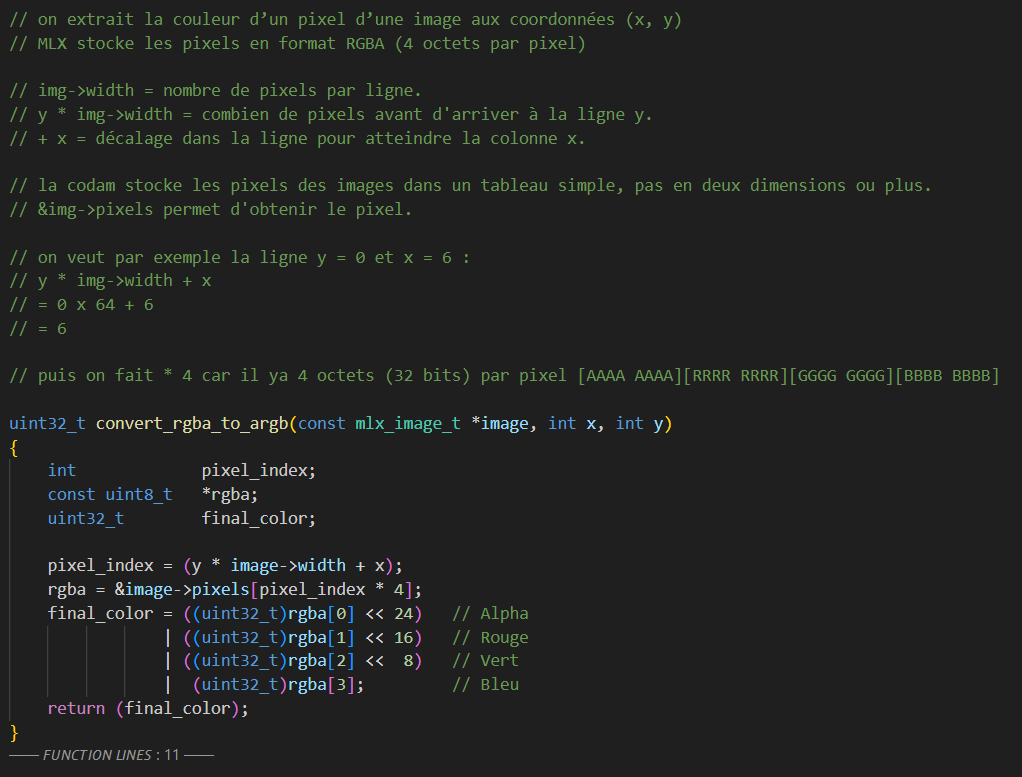


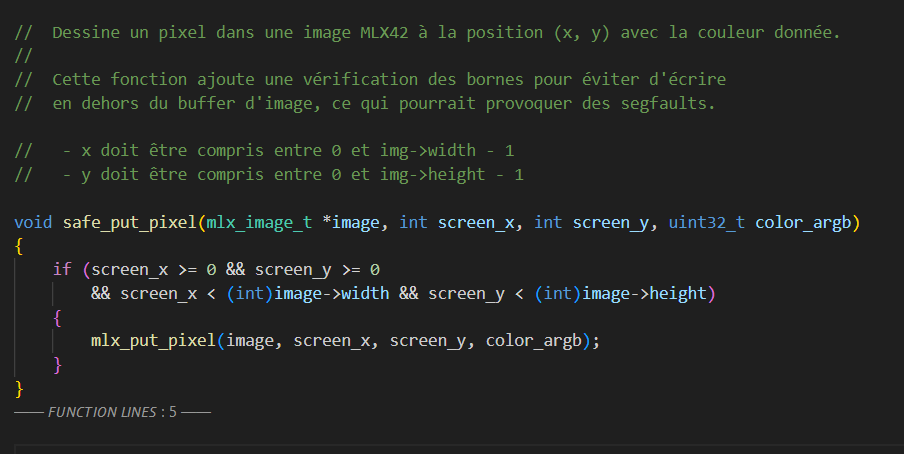


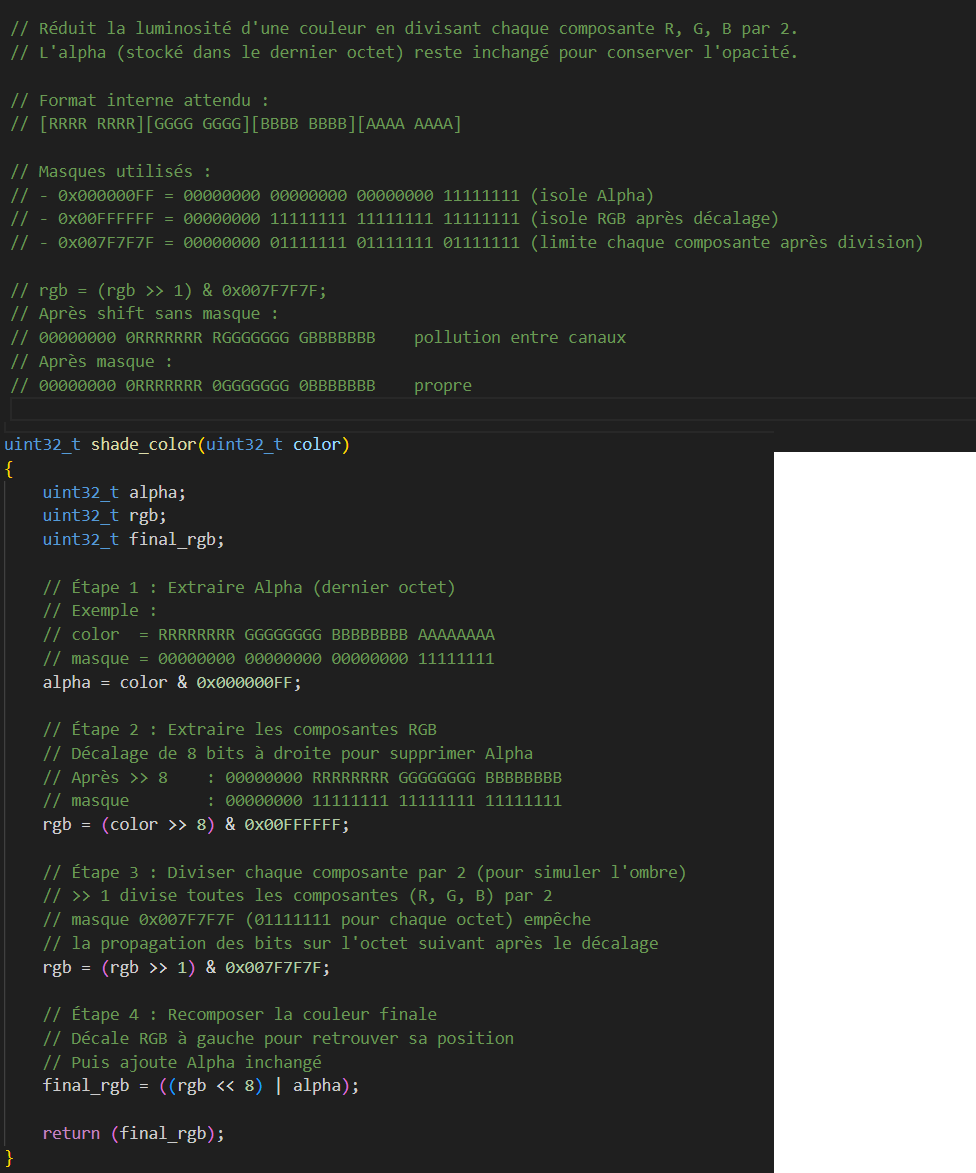
Inutile de sanitizer la structure du dossier raytracing, ce serait une perte de puissance :



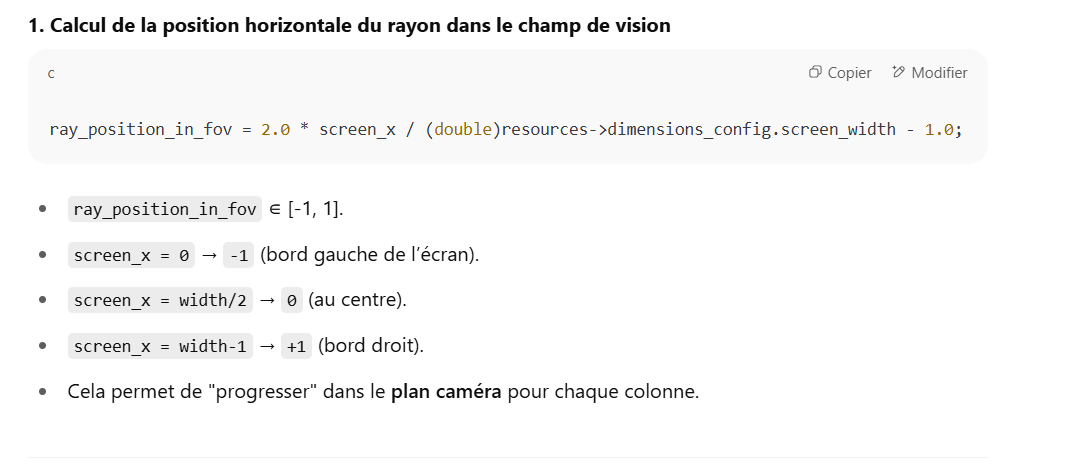
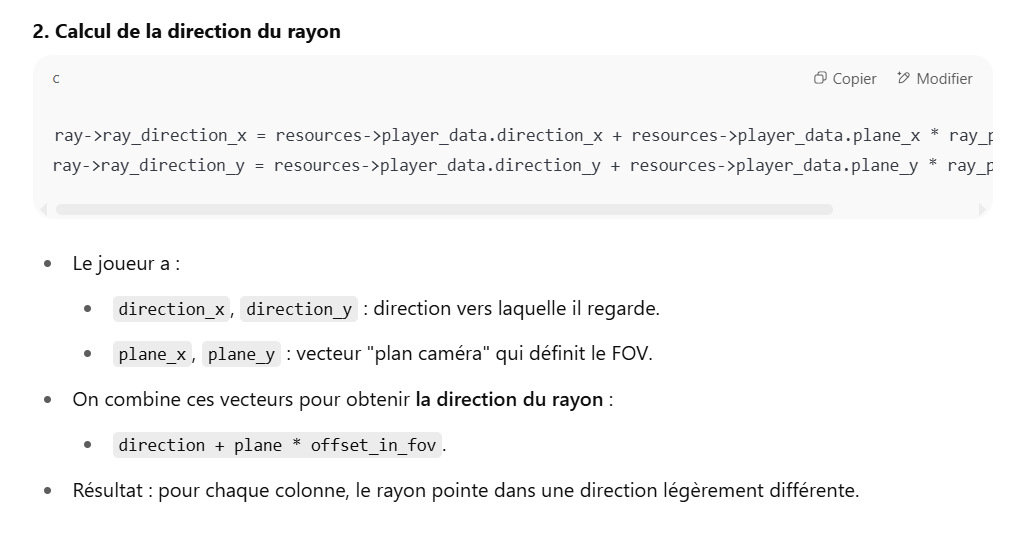


Code détaillé des fonctions utils.c :

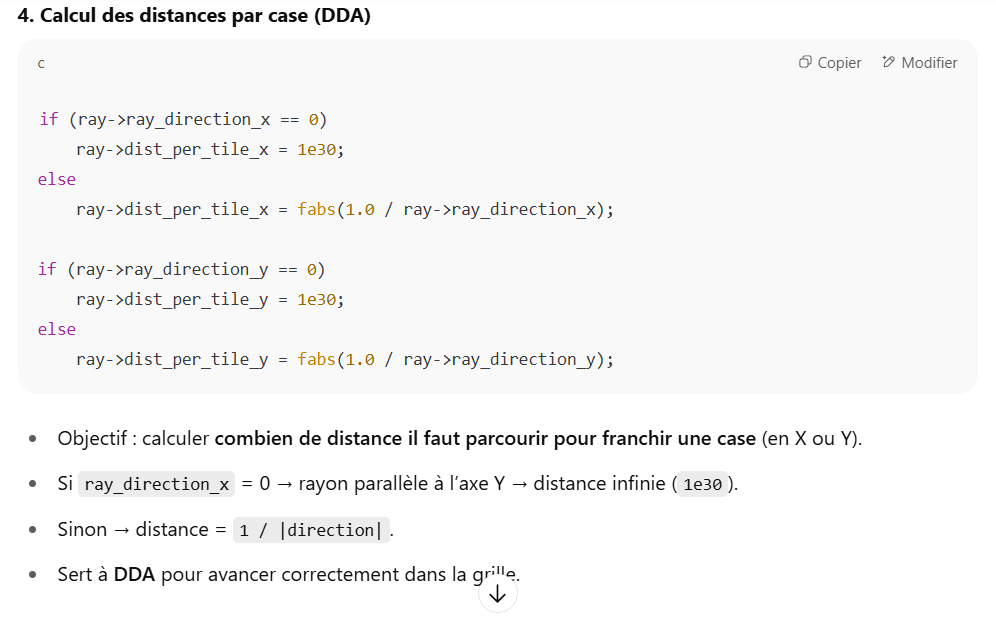
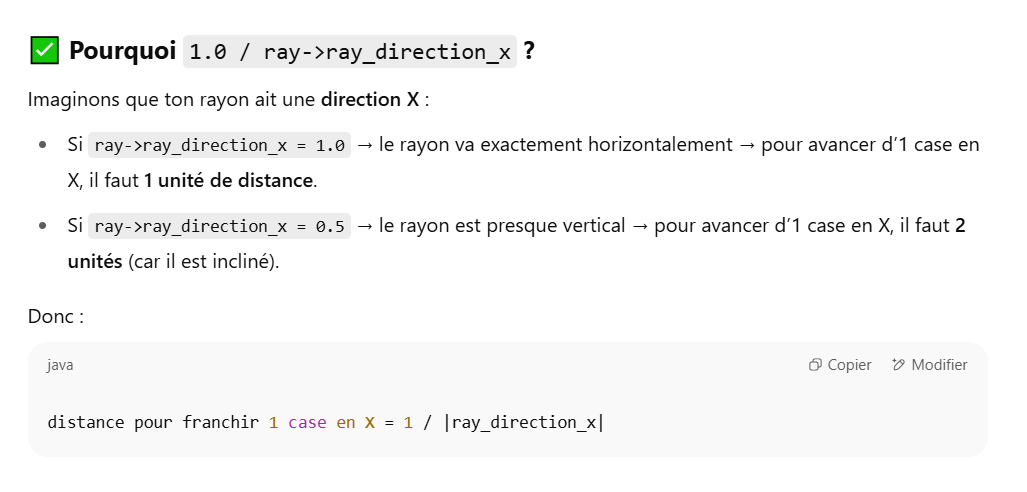




init\_raycast





PS : 1e30 = 1 puissance 30 = 1^30

fabs = valeur absolue (float abs).

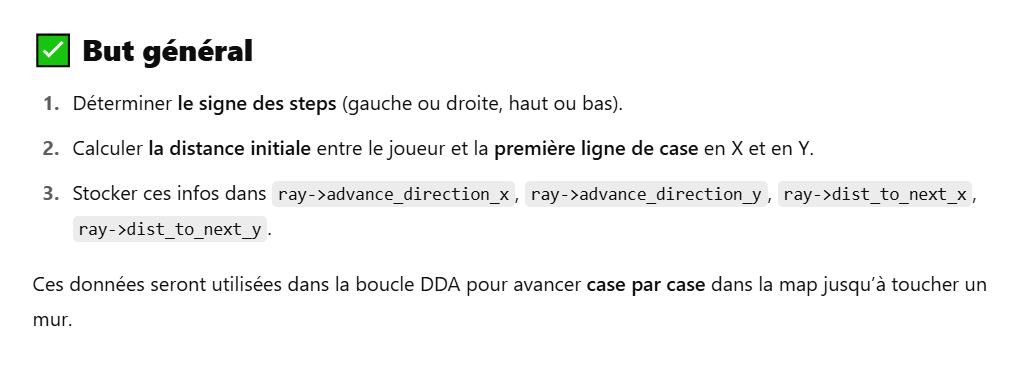
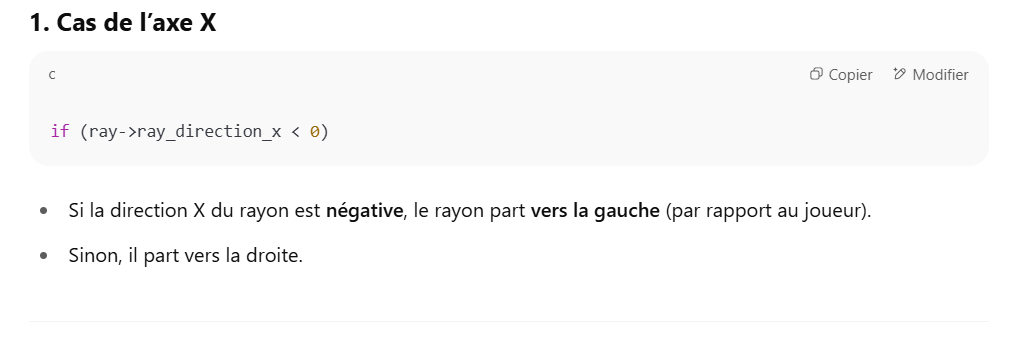
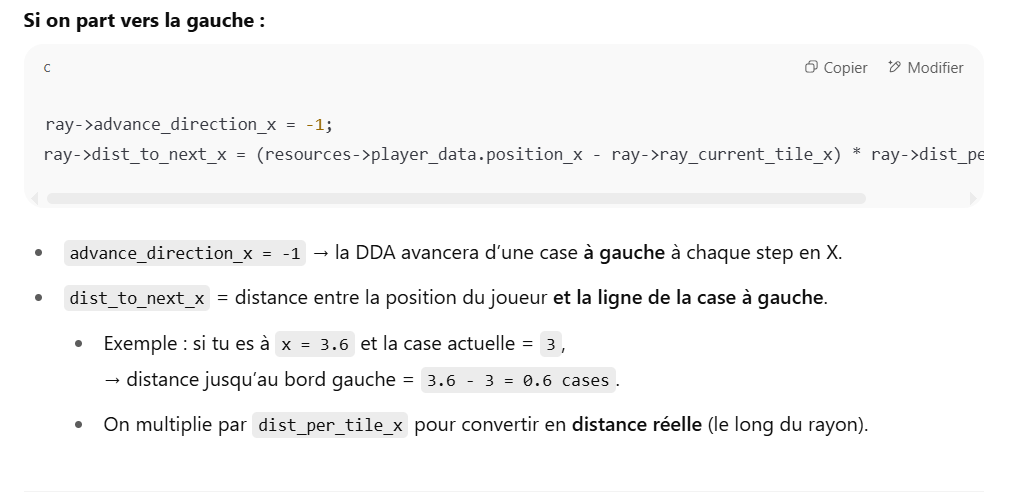
On ne veut pas de distance négative (car la distance est toujours positive, même si le rayon part vers la gauche)

Exemple :

ray\_direction\_x = 0.8 donc 1.0 / 0.8 = 1.25 → Pour franchir 1 case en X, il faut avancer de 1.25 unités dans la direction du rayon.

ray\_direction\_x = 0.2 donc 1.0 / 0.2 = 5.0 → Il faut avancer beaucoup plus loin pour franchir une case X. Ici de 5 cases

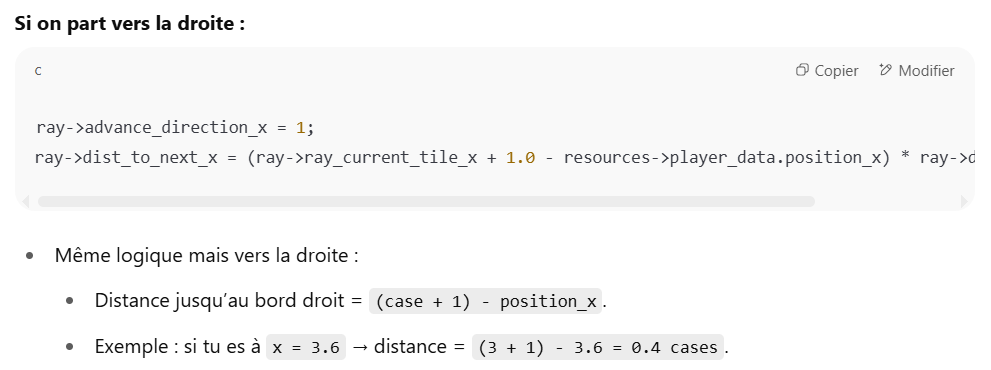
setup\_raycast\_traversal



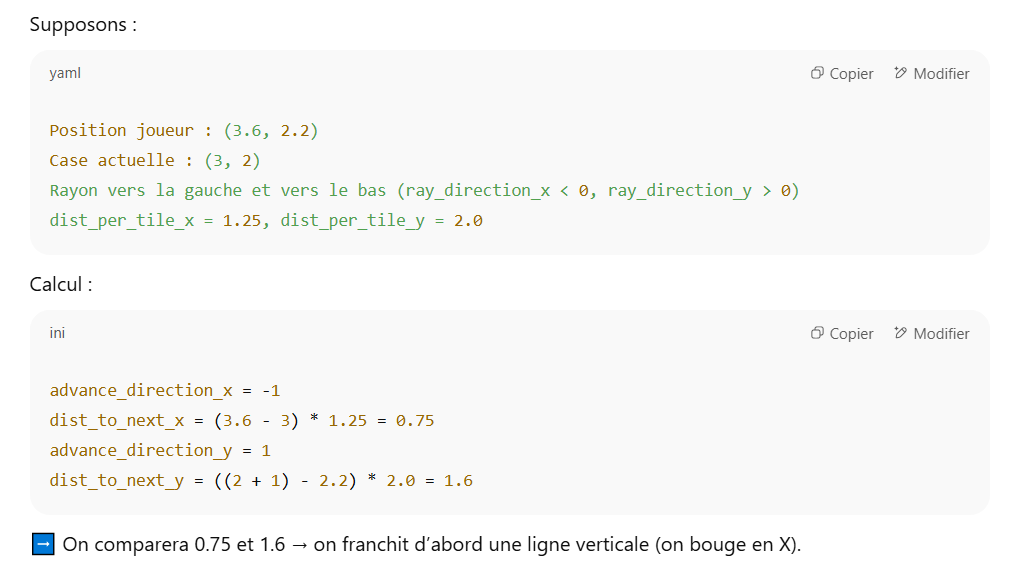
Décomposition :

(position\_x - ray\_current\_tile\_x)  
→ Distance partielle entre la position actuelle et **le bord gauche de la case**

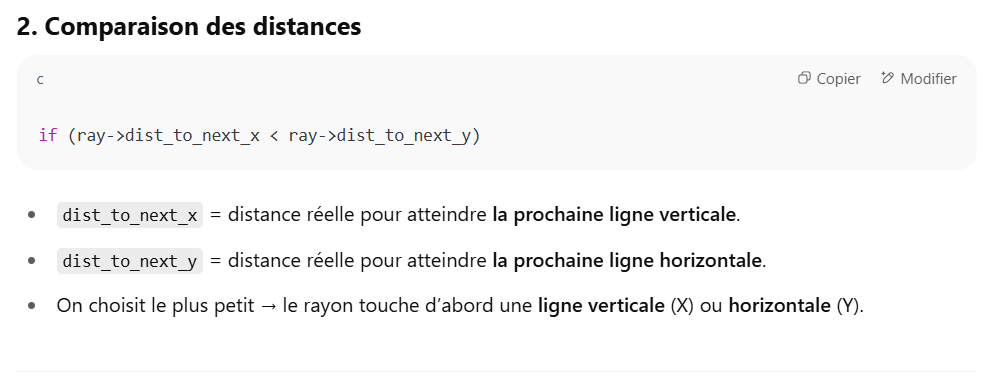
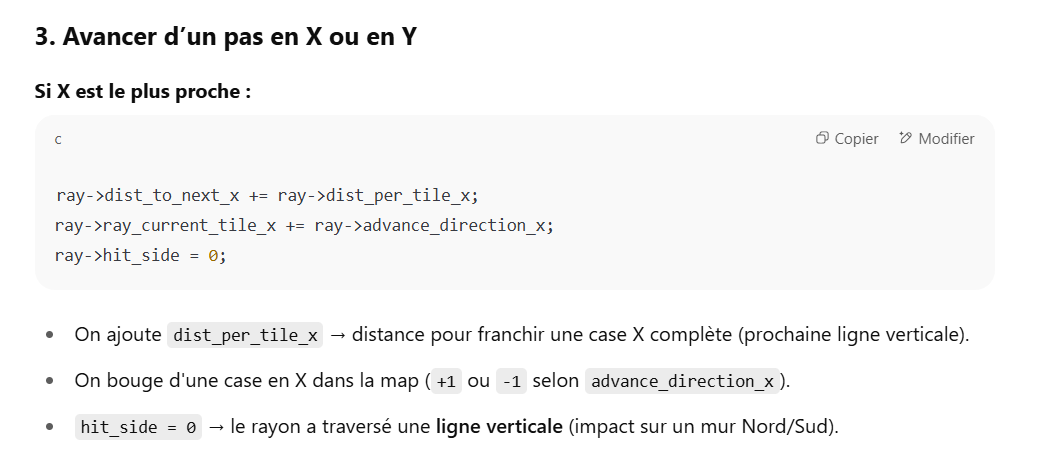
\* ray->dist\_per\_tile\_x  
→ Convertit cette distance (en cases) en **distance réelle le long du rayon**

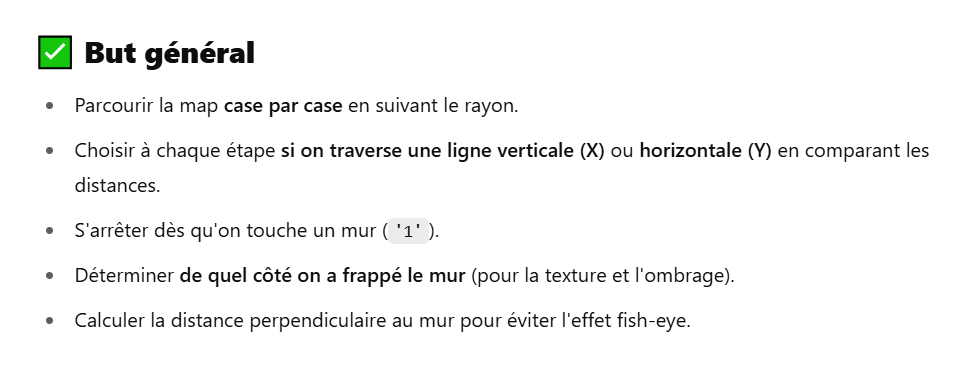


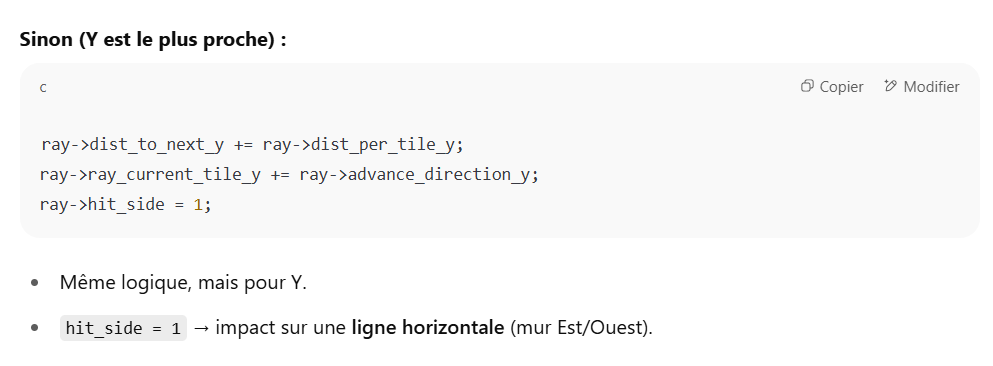
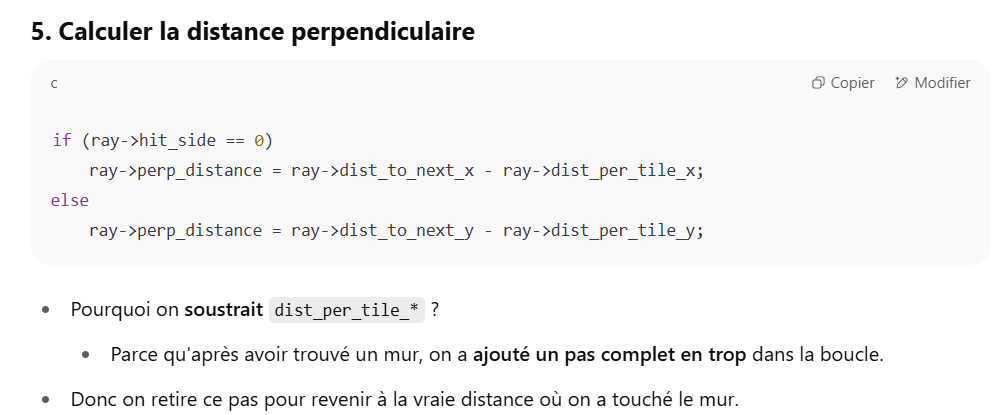
On applique la même logique pour y.

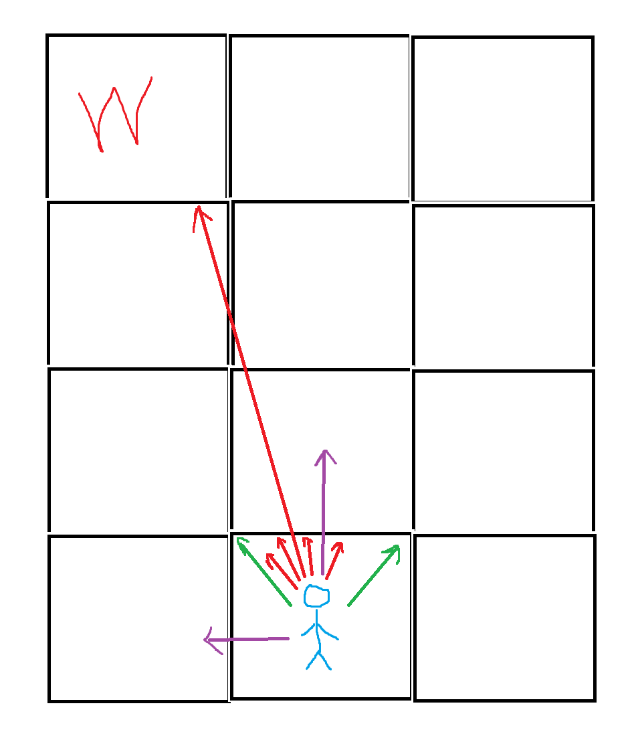
Exemple :

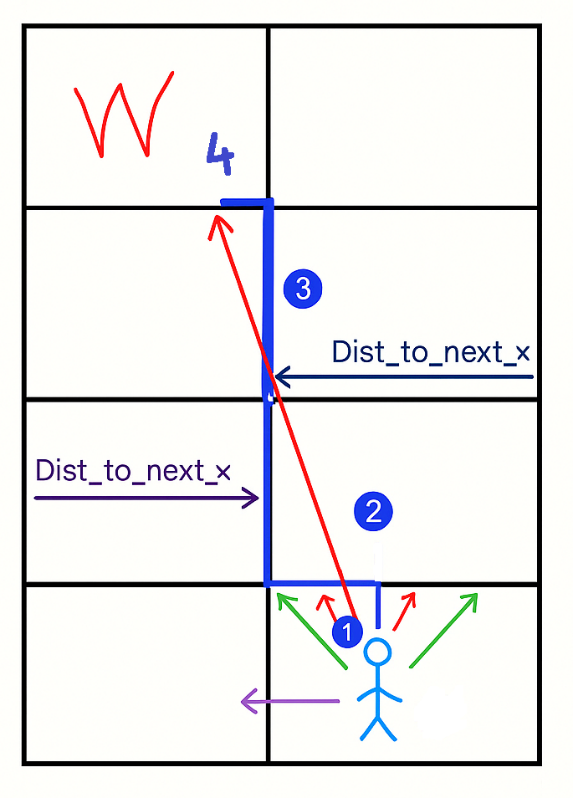
raycast\_digital\_differential\_analyzer









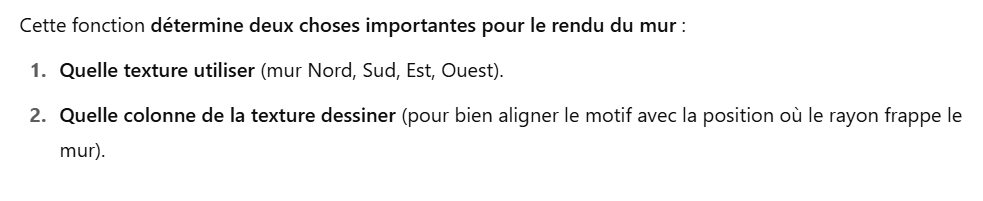


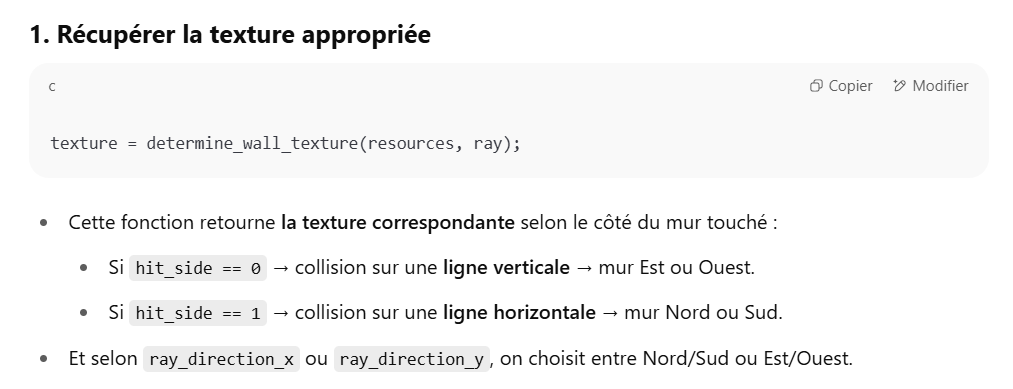
Vecteur direction /Vecteur plane

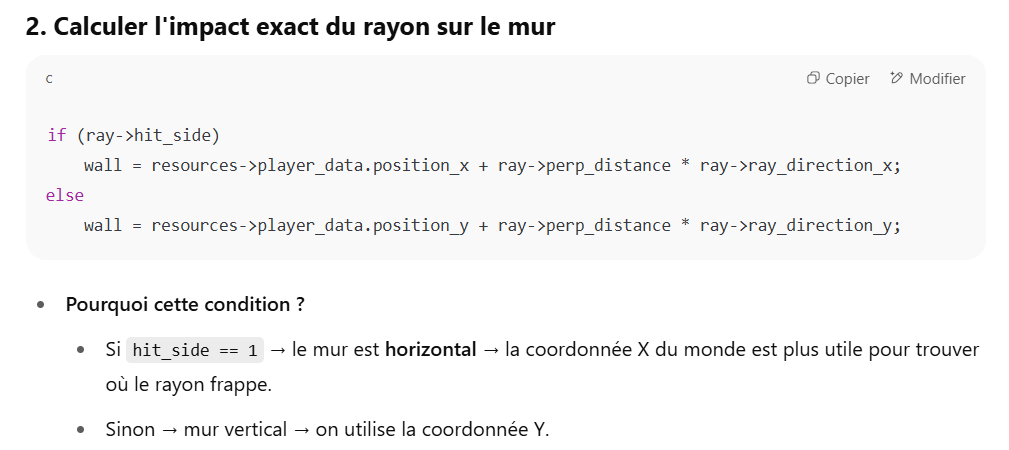
Vecteurs FOV

Vecteur ray\_direction

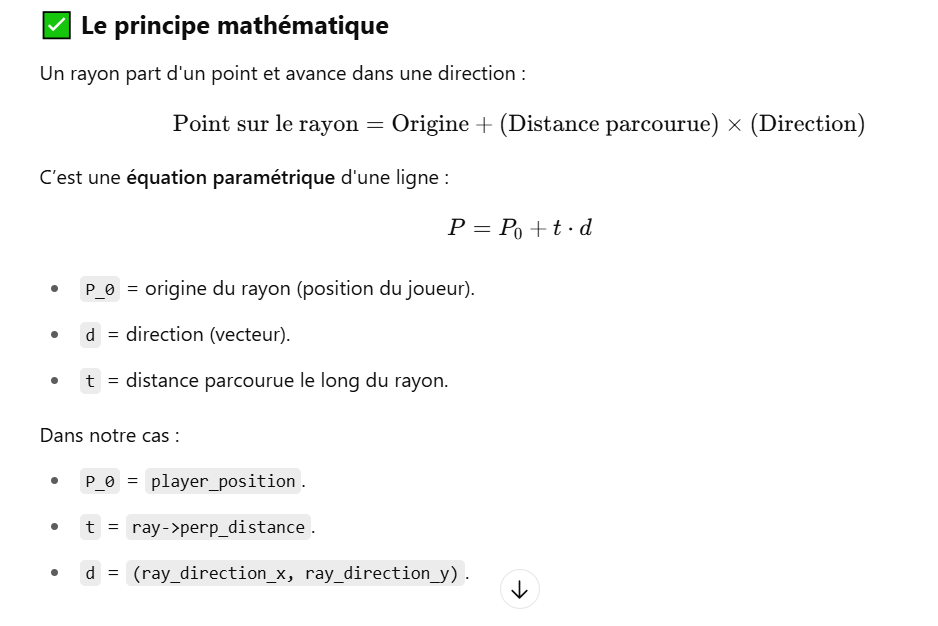
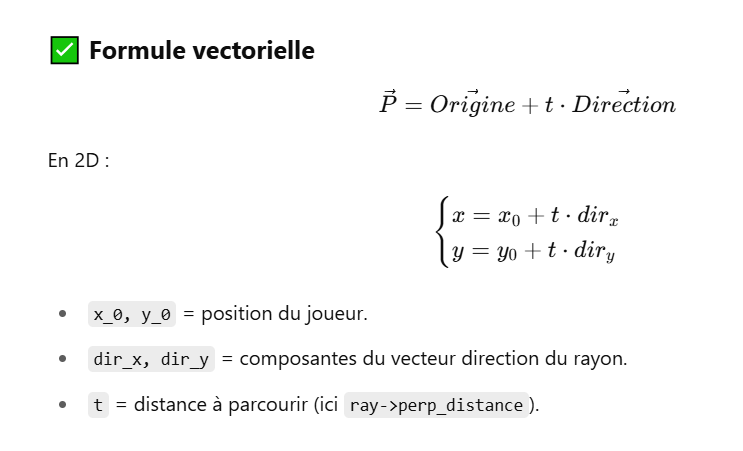
determine\_texture\_and\_hit\_column



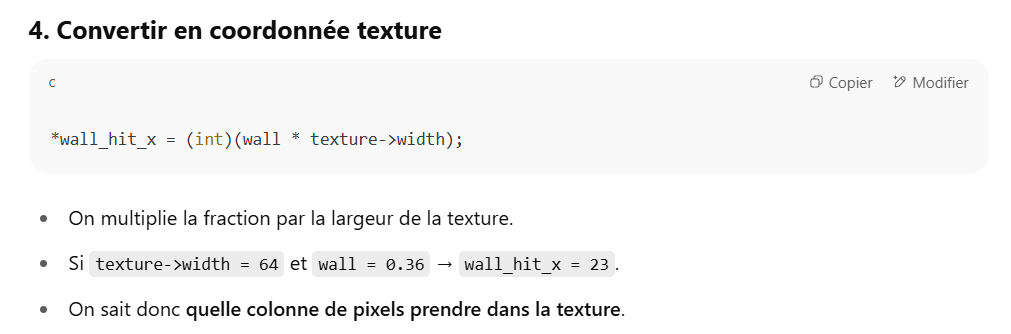






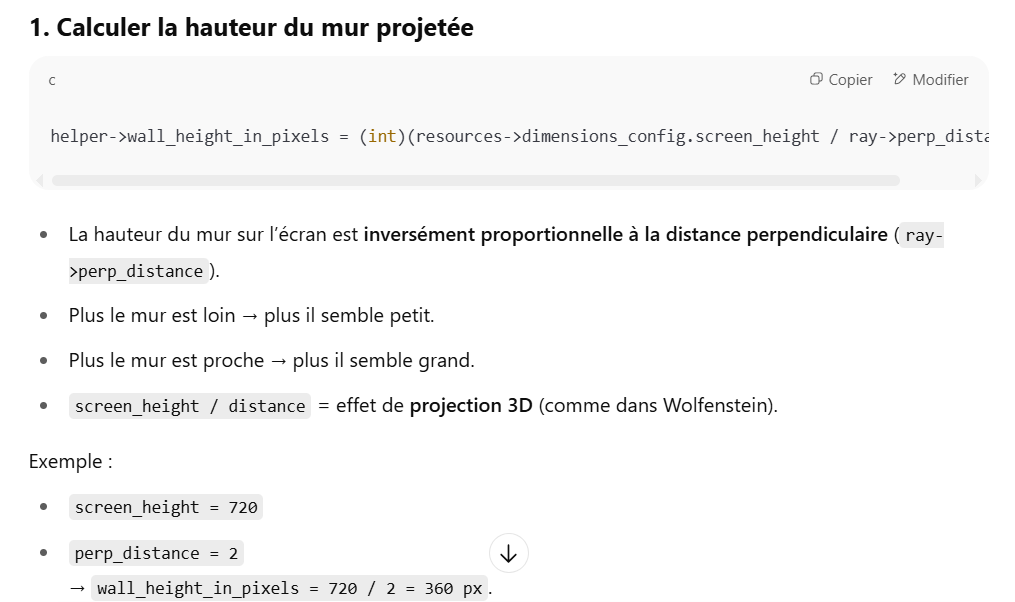


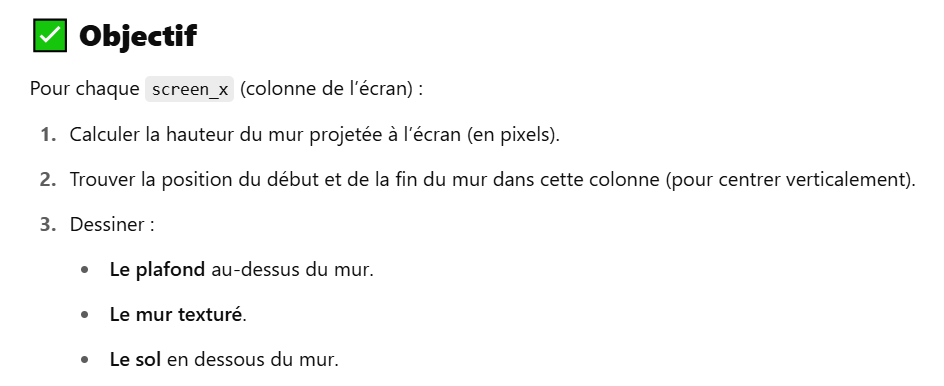


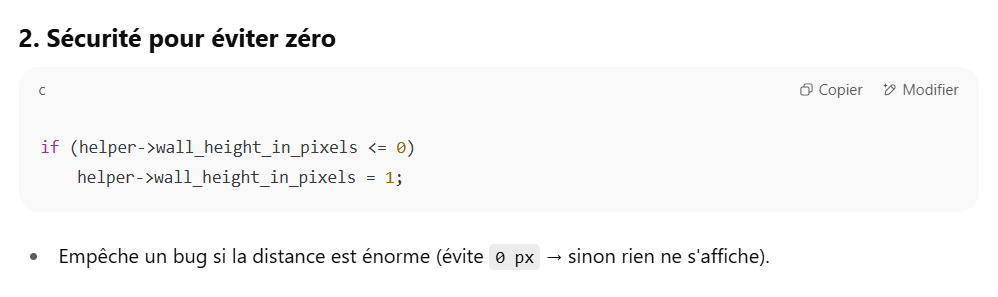




draw\_entire\_pixel\_column

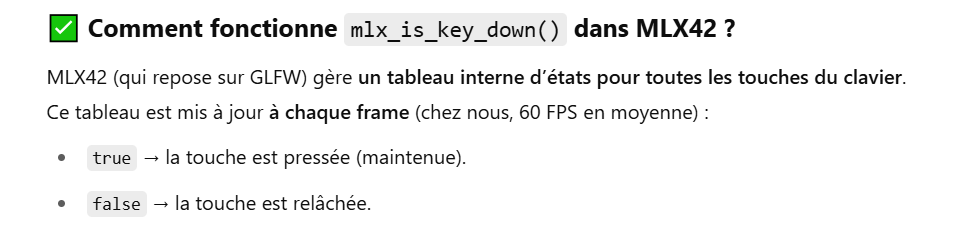




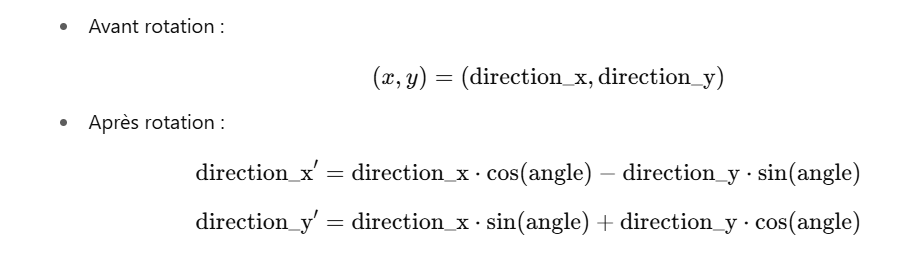
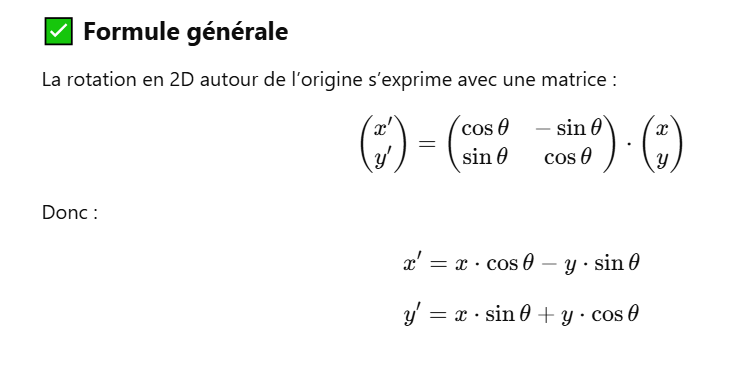


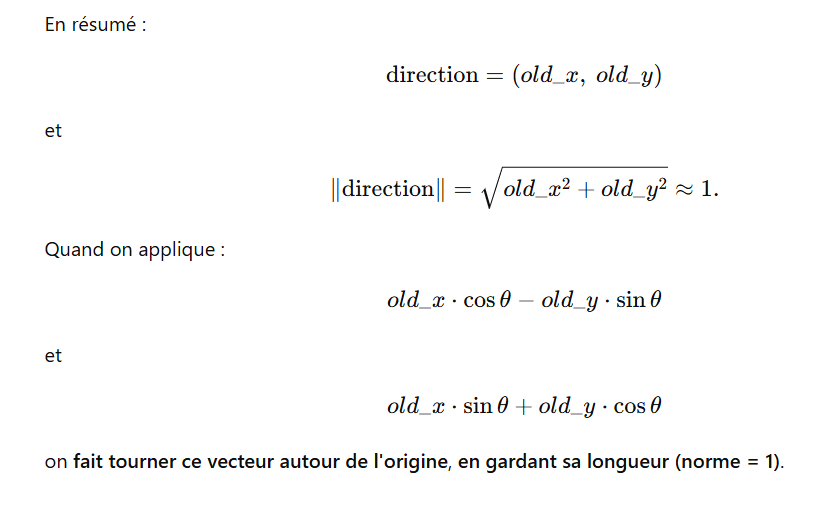


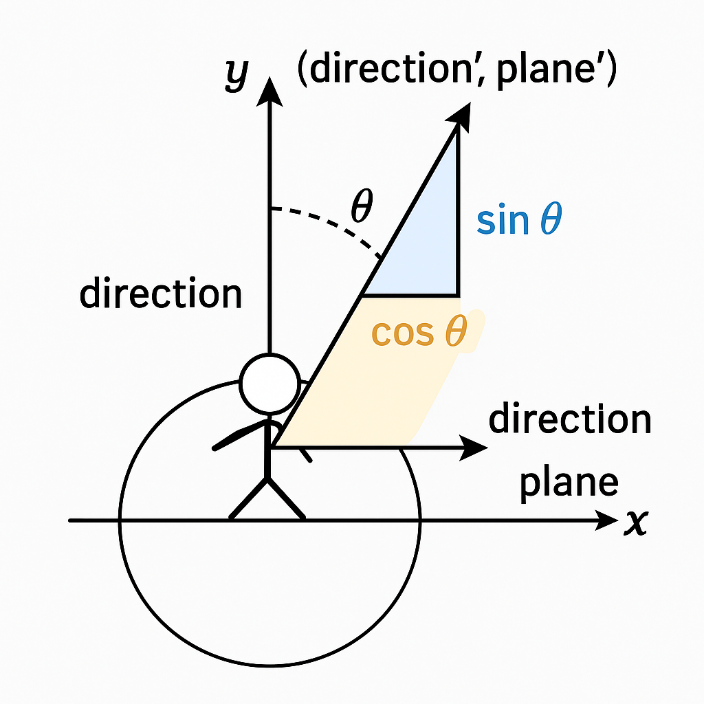


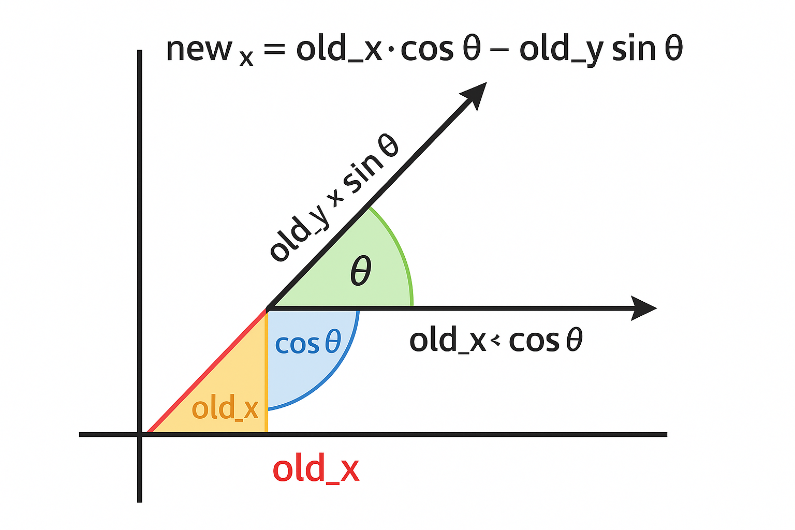
1. Dossier game :

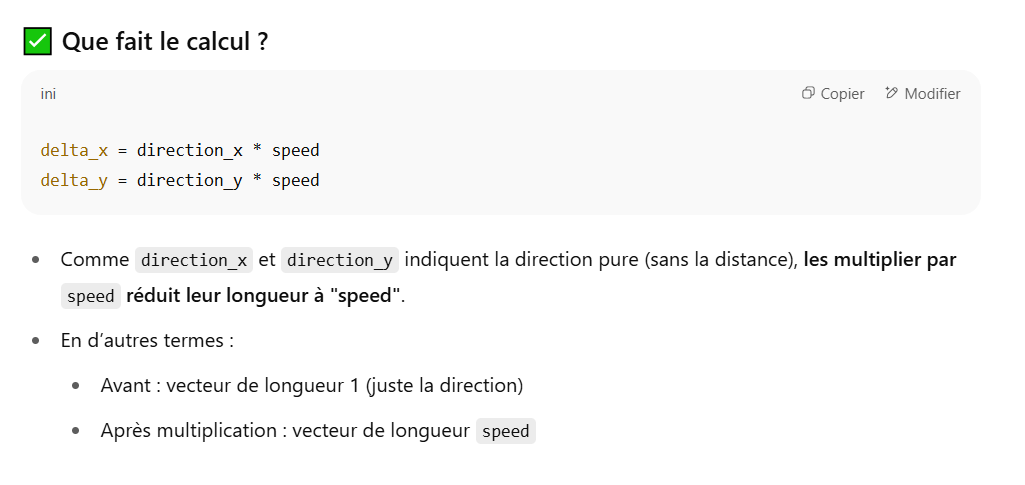
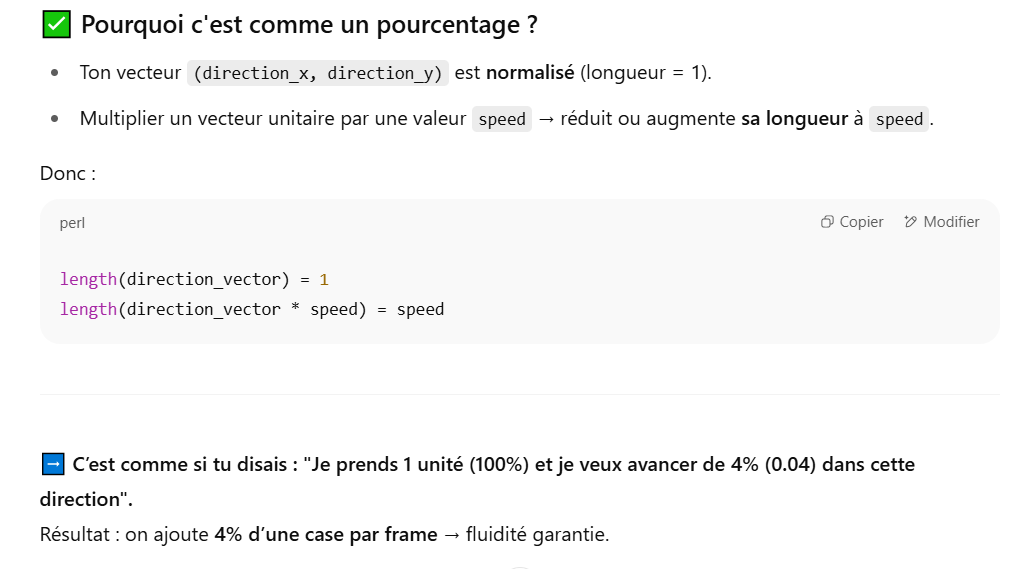
Rotation dossier game :









Linear /Lateral dossier game :

Triple vérification dossier game :

