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unreal blueprint project

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Project - Learning Objectives

- Manipulate **static meshes** to create interactive barriers.
- Use **Blueprints** to define passage rules.
- Work with **variables**, **conditions**, and **rotations**.
- Manage the display of objects and update the score based on a mathematical equation.
- Implement a **game-over condition**.

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Project - Context

The player is in a scene consisting of:

- 4 barriers **(static meshes)** blocking access to an area containing 3 collectible boxes.
- Only one barrier is active **(state = "OK")** and allows passage when the player approaches; it **rotates 90° around the Z-axis**.
- Once past the barrier, **the player can interact** with the boxes.

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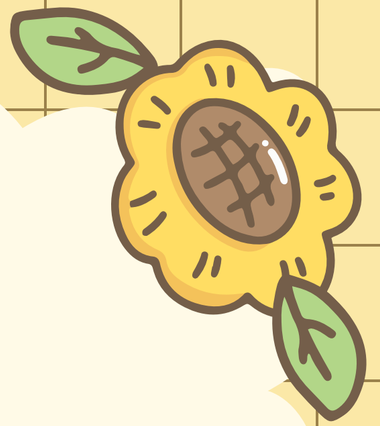
Project - Game Rules



1. Barriers :

- Each barrier has a boolean **state variable (isOK)**.
- Only one barrier has **isOK = true.**
- Upon interaction, if **isOK = true**, the barrier **rotates 90°** on the Z-axis to open.

2. Box Collection :

- Each box triggers the evaluation of a quadratic equation of the form:

  ==> $f(x) = ax + b = 0$

  ==> The value of x is provided by a function calcul_x.

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Project - Scoring Rules

- **If x > 0 :**
  - The box becomes invisible.
  - The score is increased by 2 points.

- **Si x ≤ 0 :**
  - The score is decreased by 1 point.
  - The box remains visible but non-interactive.

- **When x ≤ 0, the game ends immediately.**

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Get in touch

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