MIDTERM ASSIGNMENT

AMATEUR GARDENING CORNER: INTERACTIVE PLANT GROWTH

In this midterm project, you are asked to implement an interactive plant growth system in your amateur gardening corner created in Assignment II, using Unreal Engine 5 (or Unity). Your goal is to design a simple gameplay loop where the player plants seeds, waters the plants, and observes their growth, all while managing the plants' health and growth through different stages.

Requirements

- Create a HLDD for the “Amateur Gardening Corner” game, based on the HLDD outline given in Assignment I.
- Continue working with your project from Assignment II. Improve the map/level design based on the last weeks’ reviews.
- Implement a simple planting system, allowing the player to plant seeds at designated locations.
- Implement a watering system:
  - Allow the player to water the plants using the watering can asset.
  - Use an animation or visual cue (particle effects) to indicate the watering action.
- Create a plant growth system with multiple stages:
  - Design different stages of plant growth, from seedling to mature plant.
  - *Optional:* Ensure that plants grow gradually over time, progressing through each stage.
- Design a user interface (UI) system:
  - Implement a list of instructions, either as a non-diegetic UI (widget UI system) or as part of the environment (spatial UI or diegetic UI).
  - The instructions can be as simple as a set of instructions on a board.
- *Optional:* Manage plant health and growth:
  - Implement a system where watering plants helps them grow, but excessive watering can cause them to rot and decay.
  - Show the plant’s water levels on a progress bar, or as percentage.
- The game engine, requirements and the asset packs are given as recommendations. You are free to use other game engines (such as Unity) or assets.
- Record an in-game walkthrough video of maximum 60 seconds. The file size should not exceed 120 MB[1]. You can use OBS or NVIDIA ShadowPlay to capture the video.

Assessment

High-Level Design Document (HLDD): 30%
- Quality of the HLDD, clarity, and organization of ideas.
- How well it addresses the requirements of the project.

Level Design: 25%
- Visual appeal and improvements made to the map/level design based on previous feedback.
- Cohesiveness of the environment and consistency of the design.

Gameplay Implementation: 30%
- Planting system: 15%
- Watering system: 15%
- *Optional:* Plant health and growth management: +10%

User Interface Design: 5%
- Clarity and usability of the UI.
- Integration of the UI with the game environment.

Presentation: 10%

Resources

- Basic Plant Growing Gameplay in Unreal Engine 5.1 | https://youtu.be/qJ02DnAB9jA

Deadline

2023-05-11 Thursday (w10), 12:30

Please make sure to submit your work on time and follow the guidelines carefully to receive full credit for this midterm project.

If you have any questions, don’t hesitate to contact us via Microsoft Teams.

[1] You can use Adobe Premiere/Premiere Rush or HandBrake with "Web > Creator 1080p60" preset to optimize the video size (H.264 coding format, .mp4 container format, 60 FPS framerate, 8Mbps target bitrate, 48 kHz AAC stereo audio).