**System requirement:**

Hardware:

Requires Nvidia RTX GPU.

System:

Windows 11 Home/Pro

**Build Instructions:**

1. Please make sure the following components are installed before building process:

Visual Studio 2022 with “Desktop development with C++” selected:

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Description automatically generated

1. CUDA 11.3 ~ 12.1 (Tested on latest 12.1 version) and OptiX 7.7.0 (Since OptiX is constantly changing its API, 7.7.0 is mandatory).

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1. Open the EcoSysLab folder as a project in Visual Studio 2022. The Visual Studio will automatically recognize it as a CMake project.

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1. Wait for a little while until Visual Studio loaded the CMake project, and you should see building configurations are set:

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Description automatically generated

1. Open the drop-down menu for building target by clicking the button highlighted with blue box, and select EcoSysLab.exe and click start button marked with red box to start building:



1. Once the build is finished, the program will run automatically. You will see a small window as the welcoming window of the framework.

A screen shot of a computer

Description automatically generated with medium confidence

**Operation instructions:**

1. Once you have the framework opened, click the “Create or load New Project” button:

A screen shot of a computer

Description automatically generated with medium confidence

1. In the file dialog, select the “test.ueproj” provided in the /SourceCode/Project folder:

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Description automatically generated

1. You should be able to see the project is loaded and the framework’s running:

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Description automatically generated

1. The project folder comes with a sample scene. Select EcoSysLab Layer panel and check “Auto grow” box to see the sample plant grows automatically:

A screenshot of a computer

Description automatically generated

1. You should be able to see the tree with its root system:

A computer screen shot of a plant

Description automatically generated with low confidence

1. Click “Generate Meshes” to generate mesh so the tree will appear in the Scene window:

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Description automatically generated