Project: Interactive 3D Scene

- **Goal**
  - ✓ Create an interactive 3D scene with visual effects.
- **Requirements**
  - ✓ Plan (**PPT** 10+ pages): title, overview, main screen (image or sketch), interactions, visual effects, resources
  - ✓ Main stage: 3D models (textured), skybox (six textures)
  - ✓ Lighting: Phong illumination model, multiple light sources
  - ✓ Scene navigation (DirectX Input): camera control, collision detection
  - ✓ Visual effects (3+): lighting, billboard, particle, noise, image/normal mapping, user interfaces, etc
  - ✓ Scene info (texts): FPS, CPU usage, # of polygons, # of objects, screen size
  - ✓ Sound (DirectX Sound): BGM, effect sounds
  - ✓ Multi-scenes: title (goal, control instruction, developer info.) → main (exit anytime)
  - ✓ Production report (**PDF**, 2+ pages): features, implementation issues, difficulties, etc.

- Plan Presentation **(10/12)**
  - ✓ Present the project plan.
  - ✓ Submit a plan file (**PDF**) to **ClassRoom.**

- Progress Checks **(10/26, 11/09, 11/30)**
  - ✓ Demonstrate the project progress.
    - - 1st: Main stage, scene navigation (camera control)
    - - 2nd: Skybox, lighting (Phong illumination)
    - - 3rd: Visual effects
  - ✓ Submit a project file (**ZIP**, limit: **100MB**) to **ClassRoom.**

- Final Demonstration **(12/14)**
  - ✓ Demonstrate the final project result.
  - ✓ Submit an entire project and report files (**ZIP**, limit: **300MB**) to **ClassRoom.**

- **Evaluation**
  - ✓ Plan: 10%, Progress: 60%, Final: 30% (quality & completeness)

- **Submission instruction**
  - ✓ Delete any folder(debug, release, ipch) and file(*.sdf) that is not required for program build.
  - ✓ Use ONLY a **ZIP** file for compression.

- **Cautions**
  - ✓ Use the framework used in the class.
  - ✓ Use ONLY Visual Studio **2019** and DirectX 11 in **Windows SDK**
  - ✓ Project that is not building or copied from others will get **0** score.
  - ✓ Any work not demonstrated or submitted after the due date will get **0** score.

- **Examples of interactive 3D scenes**