

## Lab 7

**Total : 8 pt.**

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Note: Be sure to upload results (only necessary files) to **YZU Portal** before the deadline.

Following “**Tutorial 5, Part III**”, change the light source into a **spotlight**, adjust its **inner/outer angles** as well as **direction**, and modify the **fragment shader** to support the **spotlight factor** in DirectX and OpenGL (refer to the following two links: [Spotlight Factor](#) and [Mathematics of Lighting in Direct3D9](#)).