1. **(Programming)** Bird’s-eye-view generation. The geometric transform between the physical plane and its bird’s-eye-view image can be simply described by a similarity transform matrix. Bird’s-eye-view is very useful in autonomous industrial inspection, ADAS, etc. For example, most lane detection approaches first transform the perspective images into bird’s-eye-view ones.

![bird’s-eye-view image](image1)

![original perspective image](image2)

The basic steps for creating bird’s-eye-view have been discussed in our lecture. In this assignment, your task is to implement a bird’s-eye-view system. **The system should be implemented with C++ and openCV.**