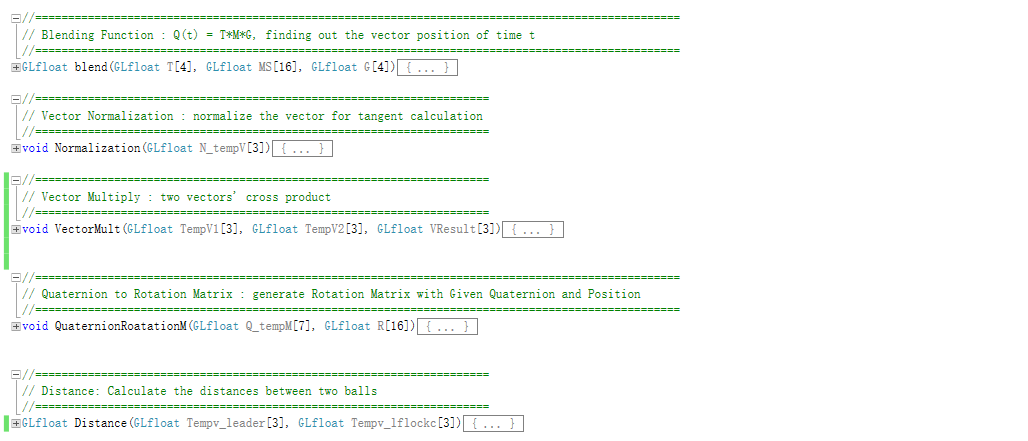
# Behavioral Motion Control System

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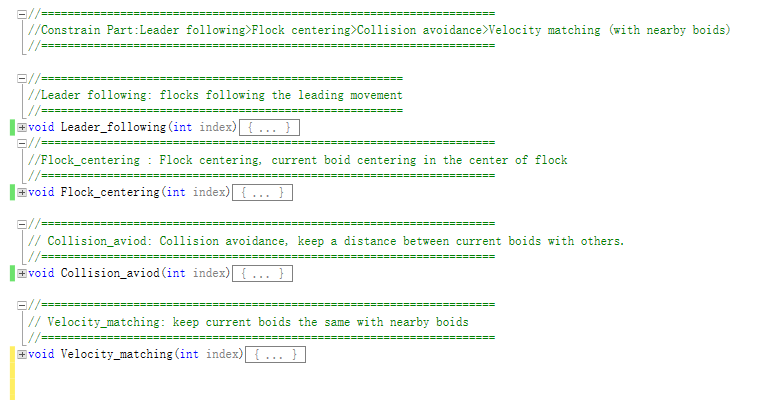
Here is the basic structure of my project:

It’s contain three parts:

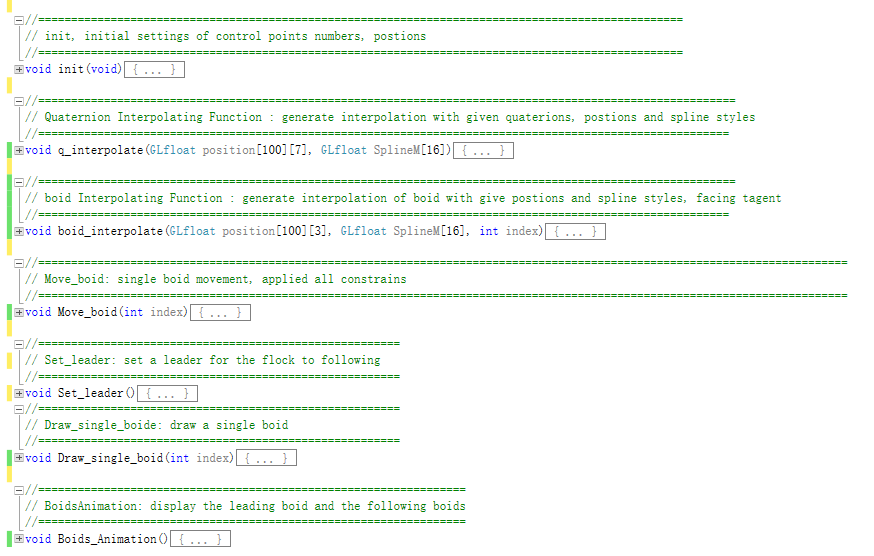
Support Functions part:

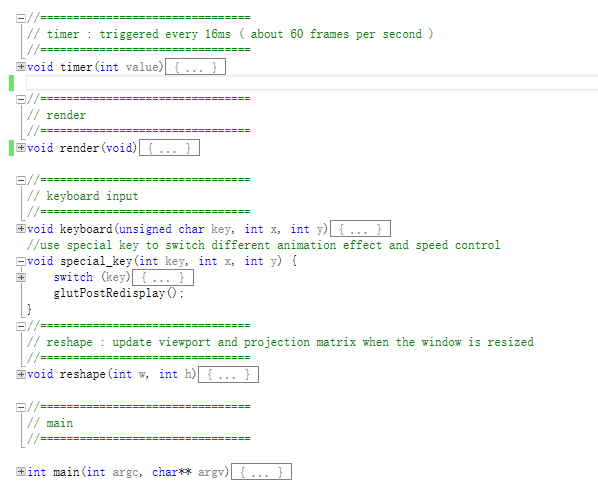


Constrain part:



Main part:





For this lab, I implemented the animation of flocks using four constrains, Leader following>Flock centering>Collision avoidance>Velocity matching (with nearby boids). In the begin, the init() function wthen initialize the initial position and colors of each boid. In the render function, it would call the Boids\_Animation() function to animate all the boids under those four constrains. And Move\_boid () would deal with each single boid’s movement using matrix of each boid by calling four constrains functions to calculate its next position and velocity. And I also implement the boid moving facing their tangent direction by boid\_interpolate() function.

## Control description:

Press R to reset dt to the default value (0.005)

Use up and down to increase or decrease dt (spacing).