1. Avoid collisions with obstacles

References to the positions of all the obstacles are kept by each agent. If the agent is within a specified distance of the obstacle, a force is applied to the agent in the opposite direction of the obstacle, thus keeping them away from it.

1. Avoid members of the other tribe

References to the positions of all the other group’s agents are kept by each agent. If the agent is within a specified distance of a single other agent, a force is applied to the agent in the opposite direction of the obstacle, thus keeping them away from it.

1. Avoid collisions with other members of your tribe

Same Story as above, but with the other members of the group

1. Move towards the goal position

The goal position is set for each agent, and a force is applied to the agent in the direction of the goal.

1. Match the motion of your other tribe members to form a group moving towards the goal

With the references to the other members of the group, the average direction is taken of the other members, which is then added to the agent’s own movement.

All of the code specific to the behaviour for the agents is located within Boid.scr. Object loading and such is located in source.cpp.

Controls:  
wasd – up, left, down, right

Shift – forward

Space - backward