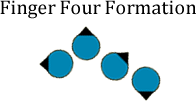
ITCS 4236/5236 Artificial Intelligence for Games  
Homework #2

**Instructions**Using Unity, implement a two-level finger-four formation with four characters (shown below).

****

The program should be a continuation of the 1st homework assignment with the addition of the three other characters to complete the formation. When the user right-clicks on the plane, it should create a player-sized obstacle that characters cannot path through. When the user left-clicks on the plane, the formation should use a modified kinematic arrive method to move to the spot of the click. Characters should avoid the obstacles (without using pathfinding) while maintaining their position in the formation (see two-level formations).

Built-in graphics and game objects will suffice (although you must be able to tell the orientation of the character). Programs not done in Unity will not be graded.

Check the rubric below for specific grading points

|  |  |
| --- | --- |
| Program is well commented | 10 |
| Characters use a finger-four formation | 10 |
| Character movement is initiated from a left click on the plane | 10 |
| Unpathable obstacles are placed when the user right clicks | 10 |
| Formation successfully moves and stops at the destination without wiggling | 20 |
| Individual characters avoid obstacles while attempting to maintain the formation | 20 |
| Character’s orientation is smoothed over several frames (not automatically set to face the destination) and characters move in the direction they’re facing | 10 |
| Program uses the Kinematic Arrive algorithm as described in the book/class (and below) including using a radius of satisfaction and range of speed. | 10 |
| Total | 100 |

