

# ICS 168 Requirements Draft

## Members

Kathy Chiang	55935182
Victor Hsiao	82542906
William Yang	83111331

## Game Choice

Two-player Snake

## Gameplay

- Two players each control one Snake object.
- One point is received with each Food object consumed by a Snake.
- Snakes must avoid Boundary objects (walls, their own tails, or the other Snake) or die.
- The objective is to get the most points and avoid dying.
  - Dying incapacitates the Snake for a few seconds.
  - This allows the enemy Snake to gain points with no competition.
- The game ends when one Snake reaches the target score (for example, first to 25).

### *Future/Optional Plans*

- Some Food objects may have power-up effects.
  - This will make them more valuable than normal Food and highly contested.
  - Examples: Increase Snake speed, decrease tail length, slow the opponent
- There may be a separate game mode where, instead of a target score, the game lasts for a set amount of seconds (for example, a 30-second death match).

## Game Objects

Snakes, Food, and Boundaries are the main objects of this game.

### **Snakes**

Snakes start with one head piece that gains one tail piece for each Food object consumed by the head. Food objects are consumed when the head collides with the Food object.

When a Snake dies, a Ghost Snake remains. The Ghost Snake will not be considered a Boundary and cannot move (it just marks the place where the Snake died). After a set amount of seconds (2-3), the Snake respawns and continues moving..

Snakes can be controlled to move North, South, East, and West (WASD or Arrow Keys).

### **Food**

Static Food objects will spawn at random locations on the screen. When a Snake eats a Food object, the Food object will disappear and the Snake will gain one tail piece and one point to the player's score.

### **Boundaries**

The game Boundaries (walls) are set by static horizontal and vertical lines which determine the width and height of the available space for Snakes to move. Snakes are also considered Boundary objects. A Snake dies when it runs into any Boundary.

## **Multi-user Features**

The game will support two players randomly matched in order of log-in.

Users will need to log in through a web interface to play the game.

The local version will have separate control schemes for each Snake (WASD and Arrow Keys).

The networked version will have one control scheme (WASD) and each player controls their own Snake.

Adding a Snake to the classic game creates a new dynamic where players need to dodge more objects, and there is more emphasis on the efficiency of acquiring Food.

In a one-player Snake game, the game will end when the Snake dies by colliding into a Boundary. In a multiuser Snake game, however, the game must continue. Therefore, our version rewards Snakes that avoid death since they will be able to acquire more points than an incapacitated Snake.