Arrays

2-17-2010
Opening Discussion

• Do you have any questions about the quiz?
• Minute Essay comments
  - Fun – 13
  - HTML – 6
  - Spreadsheet – 3
  - Optimization – 3
  - Science – 1
  - Tracing code that involves a loop.
Midterm

• The midterm is a week from today. We are going to have some review sessions. The extra credit is going to be a set of problems.
Objectives

• We have some new objectives for this week. The main objective is to get our city scenario working as a valid game.
  – Have the Alligator move on straight lines all the time. Turn when key is hit.
  – Have people not return to the same house and do random walks without diagonals when there isn't a house to go to.
  – Scoring is how many people the Alligator can eat in certain number of calls to update.
Arrays

- Lists are not the only way of storing multiple values. Arrays are often simpler.
- Arrays have a different syntax and can't change size.
- Square brackets indicate an array type.
  - `int[]` numbers;
  - `String[]` words;
Making Arrays

- Use new to make an array or “shortcut” syntax.
  - `int[] numbers=new int[50]`;
  - `int[] fewNumbers={34,19,22,21,20,18};`

- If the array hold primitives the values are 0 or false to start with.

- If the array holds objects the values are null to start with.
Using Arrays

- Instead of calling get, use square brackets.
- The following prints the values in an array.
  - for(int i=0; i<numbers.length; i++) {
    - System.out.println(numbers[i]);
  - }
Direction Moves as Arrays

- Instead of a bunch of if statements, we can use arrays to keep the move information in two arrays.
  - int[] xoff={0,1,0,-1};
  - int[] yoff={-1,0,1,0};
Code

- We want to use this technique for movement in both the Person.
- Once we have that we can put in the code so people don't return to the same house.
Minute Essay

- What questions do you have about our topics today?