CLASS 8: FEB 18
OUTLINE

• Debrief Homework 2
  • demo
• Recap linked lists (theory and code)
• Using linked lists: sorting
  • Insertion sort
  • Bubble sort
• Runtime analysis
• Preview Lab 4 and Homework 4
DEBRIEF HOMEWORK 2
WHAT SHOULD BE A FIELD?

```java
private int height;
private int width;
private Color mapArray;  // corrected
private Color color;
```

over half had fields that looked something like this in MapGrid
WHAT SHOULD BE A FIELD?

private int height;
private int width;
private Color mapArray[][];
private Color color;

over half had fields that looked something like this in MapGrid

public void makeRectangle(int x, int y, int w, int h, Color color) {
    for(int i = x; i < x+w; i++) {
        for(int j = y; j < y+h; j++) {
            grid[i][j] = this.color;
        }
    }
}
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```
HOMEWORK 2/3

Demo!
RECAP LINKED LISTS
USING LISTS: SORTING
SORTING

• **Data structure: linked lists**
  • Implement in Lab 4

• **Programming with data structure: sorting**
  • Implement in Homework 4 and 5

• **Very fundamental application**
  • Sorting algorithms illustrate fundamentals of data structure methods and runtime analysis
  • Sorted lists make it easier to search
  • Sorting can assist in list processing applications and data visualization
PREVIEW LAB 4 AND HW 4
LAB/HOMEWORK 4

- Pair programming (can begin during Lab 4)
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- No graphics and no “import” statements (all from scratch)
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- Very fundamental topic that all CS students should know how to do
LAB/HOMEWORK 4

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• No graphics and no “import” statements (all from scratch)

• Very fundamental topic that all CS students should know how to do

• Useful for coding interviews!