CMSC 206 Data Structures

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Announcements:

Review Processing

Start reading Appendix A from K&W, Chapter 1 from K&W.

Assignment#1 is posted (Due 9/8)

1. See course web page & how to get to it.

2. Review web page: This will serve as our syllabus; students should read web page for Thursday to discuss the syllabus.

3. Prior Knowledge required:

a. Processing

b. Data Types
   i. Primitive: int, float, Boolean, etc.
   ii. Complex: arrays, array lists

c. Control Structures:
   i. Assignment
   ii. If- and switch- statements
   iii. Loops: while-, for-, and do-while-

d. Functions: parameters, return values

e. Object-oriented programming
   i. Classes
   ii. Inheritance

f. Pass out processing review quiz

4. **Course Introduction.** Read and parse the following:

   a. Course Title:
      What is Data?
      What is a Data Structure?
      What is abstraction?
      Algorithms & Complexity

5. Data Structures

   a. Atomic: int, float, etc.

   b. Aggregate
      i. Linear: strings, sequences, arrays, array lists, lists, stacks, queues
      ii. Hierarchical: Trees
      iii. Network: Graphs

6. Processing Review

   a. Give Processing Handout

   b. What is Processing

   c. What is Java

7. Example processing Sketch:

```
void setup() {
   size(500, 500);
   smooth();
   background(255);
}

void draw() {
   stroke(0);
   strokeWeight(5);
   if (mousePressed) {
      line(pMouseX, pMouseY, mouseX, mouseY);
   }
}
```

8. **Example 2:** Plotting USPS Data (converting from web table to a csv file was too tricky in the time available)

   Download & run USPS code from class web page

9. **Announce Assignment#1**