public Number Mystery ( Number[] lotsOfValues ) {

Prof. Susan Rodger
Announcements

• Final exam
  – Friday, Dec 16, 9am-12 in LSRC D106

• Checkoffs must be done by
  – Monday, Dec 12, 5pm!
  – There are office hours every day til then
  – Prof Rodger will have extended hours on Monday, from 3-5pm

• See get help page for office hours for next week, Prof. Rodger is available everyday
Grades

- From the Course Web page:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>classwork</td>
<td>20%</td>
</tr>
<tr>
<td>reading quizzes</td>
<td>5%</td>
</tr>
<tr>
<td>assignments/homework</td>
<td>20%</td>
</tr>
<tr>
<td>two exams</td>
<td>30%</td>
</tr>
<tr>
<td>final exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

- Reading Quizzes – 175 points total
  - 150 and above will be 100% (drop 25 points)

- Classwork – no drops, you can still turn in until Monday, Dec 12, 5pm.
Chap. 11 – What’s Next? Java

• Java – object-oriented programming language
  – Classes, objects, inheritance
  – Control structures (if, while)
  – Functions, methods
  – Data types (integers, doubles, strings, arrays, lists)

• Sound familiar?
Java vs Alice

• Syntax (rules for writing statements) is different

• Call a method to assign a value
  – Java
    
    \[a \cdot \text{set}(\text{value}, 0)\]

  – Alice
    
    \[a \text{ set value to 0}\]
Java vs Alice

- Method and function signature is different
  - Java
    
    ```java
    public Number Mystery ( Number[] lotsOfValues ) {
    ```
  
  - Alice
    
    ```plaintext
    world.Mystery[123] lotsOfValues
    ```
  
  - What are the parts?
Java Function Signature

• public – accessible by all other methods
• Number – type of value returned
• Mystery – name of function
• Number [] lotsOfValues
  – Array of numbers
What does this Java function do?

```java
public Number Mystery ( Number[] lotsOfValues ) {
    Number a = 0;
    a.setValue(0);
    for (int index = 0; index < lotsOfValues.length; index += 1) {
        if (lotsOfValues[index] > a) {
            a.setValue(lotsOfValues[index]);
        }
    }
    Do Nothing
    return a;
}
```
Same function in Alice

![Diagram of a function with a loop, setting a value to 0, checking items from a list, and returning a value.]

- **Loop**: from 0 up to (not including) the size of `lotsOfValues`, incrementing by 1.
  - **If**: item index from `lotsOfValues` > a, then set a to that item.
  - **Else**: Do Nothing.

Return a.
Alice code in java

- Select Edit Preferences

- Must restart Alice
Final Exam

- Covers Chapters 1-2, 4-7, 8.1, 9-11
- HTML is not on the final exam
- Mix of MC, short answer, write code
  - Similar format to tests 1 and 2
- Closed books, closed notes
- Will give list of properties, methods, functions for an object
How to Study

• Reading Quizzes – will put on Blackboard
• Classwork – review, try to write code on paper
• Assignments – review (especially Asg. 6)
• Research Study survey – has test questions
  – Will be emailed to you this week
  – See Camelia in LSRC D230 if still want to join
• Practice writing code – if, loop, array, list, etc.