In-Class Exercise

COMP 110
Summer II 2012

Peter Lincoln
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In-Class Exercise

- Work on the problems
  - Work alone
  - You may use the book and lecture notes

- If you finish early
  - Work on pending Labs or Programs
    - Lab 5 and Program 2 are due tomorrow
    - Program 3 is now available

- Will start reviewing solutions at 11:00a
Q1: What is an Array in Java?

- A collection or list of items of the same type
Q2 & Q3: 2D Array

- `int[][] table = new int[4][5];`

- `for (int row = 0; row < table.length; row++)`
  `{`
    `for (int col = 0; col < table[row].length; col++)`
    `{`
      `if (col != 0)`
      `System.out.print(" ");`
      `System.out.print(table[row][col]);`
    }
  }
  `System.out.println();`
### Q4: Sorting

<table>
<thead>
<tr>
<th>Bubble Sort</th>
<th>Selection Sort</th>
</tr>
</thead>
<tbody>
<tr>
<td>0. 13, 9, 15, 2</td>
<td>0. 13, 9, 15, 2</td>
</tr>
<tr>
<td>1. 9, 13, 2, 15</td>
<td>1. 2, 9, 15, 13</td>
</tr>
<tr>
<td>2. 9, 2, 13, 15</td>
<td>2. 2, 9, 15, 13</td>
</tr>
<tr>
<td>3. 2, 9, 13, 15</td>
<td>3. 2, 9, 13, 15</td>
</tr>
<tr>
<td></td>
<td>4. 2, 9, 13, 15</td>
</tr>
</tbody>
</table>
### Q5: Bank Account UML

<table>
<thead>
<tr>
<th>BankAccount</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ownerName: String</td>
</tr>
<tr>
<td>- amount: double</td>
</tr>
<tr>
<td>- accountId: long</td>
</tr>
<tr>
<td>+ getName() : String</td>
</tr>
<tr>
<td>+ setName(String name) : String</td>
</tr>
<tr>
<td>+ getAccountIId() : long</td>
</tr>
<tr>
<td>+ setAccountId(long id) : void</td>
</tr>
<tr>
<td>+ deposit(double depositAmount) : void</td>
</tr>
<tr>
<td>+ withdraw(double withdrawAmount) : void</td>
</tr>
<tr>
<td>+ earnInterest(double rate) : void</td>
</tr>
<tr>
<td>+ getAmount() : double</td>
</tr>
</tbody>
</table>
public class BankAccount
{
    private String ownerName;
    private double amount;
    private long accountId;

    public String getName()
    {
        return ownerName;
    }

    public void setName(String name)
    {
        ownerName = name;
    }

    public long getAccountId()
    {
        return accountId;
    }

    public void setAccountId(long id)
    {
        accountId = id;
    }

    public void deposit(double depositAmount)
    {
        amount += depositAmount;
    }

    public void withdraw(double withdrawlAmount)
    {
        if (amount >= withdrawlAmount)
        {
            amount -= withdrawlAmount;
        }
        else
        {
            System.out.println("Insufficient Funds!");
            System.exit(1);
        }
    }

    public void earnInterest(double rate)
    {
        amount *= 1.0 + rate;
    }

    public double getAmount()
    {
        return amount;
    }
}
Questions?
Logistics

- Tomorrow:
  - Midterm Review
  - Look at the Sample Midterm
  - Bring any questions you may have

- Monday:
  - Midterm

- Assignments
  - Lab 5 is due tomorrow
  - Program 2 is due tomorrow
  - Program 3 is now available and is due next Friday
Logistics

- Class Registration
  - If you intend to be registered for this course to earn credit, double check that you are registered
    - I have some people present on Sakai with submitted homeworks that are not on my official class roster

- Converse
  - I have people on my official class roster whom have not submitted recent closed homeworks