

# Class Notes

Friday, April 24, 2015 3:21 PM

## Understanding Portfolio:

- ✱ Used to assess your level of fluency
  - Technology Topics
  - UML Diagrams
  - Examples of Professionalism
- ✱ You Provide Direct Evidence to me

## Hibernate:

1. The Singleton Pattern
2. The Proxy Pattern
3. The Factory Pattern
4. HQL
5. Many To Many definition
6. Many To Many example and diagrams
7. Full Hibernate annotations declaration and description
8. Many-To-One and One-To-Many Relationships
9. Bi-directional One-ToMany Relationships

UML

- Class
- Sequence
- State
- Use case

## How to use git:

- git add

- `git commit -m "This is my first commit"`
- `git push`

hashmaps map keys to values

# Weekly Journal

Saturday, April 25, 2015 4:55 PM

April 25, 2015

The week has been kind of weird. I broke my arm, and I have been behind in all my work this week due to sleeping a lot from the pain meds. I am not even sure exactly what I am supposed to be doing on this class, but I am sure I will get into the rhythm this week. I am not going to type much this week considering I have only one hand to type at the moment. I think I have everything done that I need to get done this week. I hope my semester in this class is a great one. I hope to end my final semester in college on the best note that I can.

May 2, 2015

This week I simply did what was required on iLearn. This is my first full week back after breaking my finger, and I can seriously see a LOT of the limitations that comes from typing with only 1 finger on one hand. Its really hard! Besides that, I have worked on really nothing else this week because of that. I just simple got to know a little bit more about my class.

May 9, 2015

This week we actually got to meet our team. I was excited to see that our team was all on campus. We met together and just spent some time quickly studying UML Diagraming so that we could present on it. I did activity diagrams, only to learn that I did not need to do that.

May 16, 2015

This week we meet again, but I did not really do anything new. I read up on some Java Collections. I didn't really do anything else that week.

May 23, 2015

This week I think is my breaking point! I haven't had time to do anything in this class, and time is going to get even more tight. I need to find time to at least get to a B in this class.

May 30, 2015

This week I feel like got a while lot done. I got most of the UML Diagramming finished as well as MVC and Hibernate. I was grateful to see that our group was willing to all work together to get at least a B in the class.

# Team Meetings

Wednesday, May 6, 2015 10:11 PM

May 6, 2015

Using GitHub for the first.

GUI

- drag file
- open GUI
- commit
- sync

PWR

git pull  
git push

What will I be learning this week?

- Java Collections - ~~just~~ L the series

Other Items

- what you did today?  
yesterday?  
tomorrow?

# Elevator Pitch - Project Idea

Wednesday, April 29, 2015 12:12 PM

## Wall Paper switcher

### How will it switch?

- Based on location
- Based on time of day
- Based on battery Percentage

### How many wall papers can we switch?

- 5 Wall papers

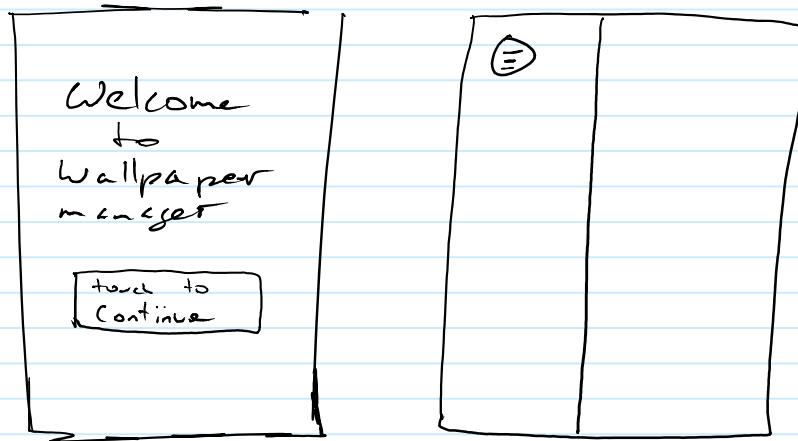
### Why?

- For design
- Saving battery
- Can't decide what wall paper you like

### Other Items:

- App will be process that runs in the background
- Process that runs in the background
  - Make sure that it runs smoothly in the background
  - If Battery option is selected, then process should shut itself off so it doesn't continue to run the background.

## The Application



# Use Case Document

Monday, May 25, 2015

9:45 PM

# UML

Saturday, May 23, 2015 4:12 PM

## Class Diagrams

- A class is basically a template for which objects are created.
- Classes define attributes, information that are relevant to their instances, operations, and functionality that the objects support. Some of the more important guidelines

## Use Case Diagram

### Useful Links:

- <http://www.agilemodeling.com/artifacts/useCaseDiagram.htm>

## General Notes

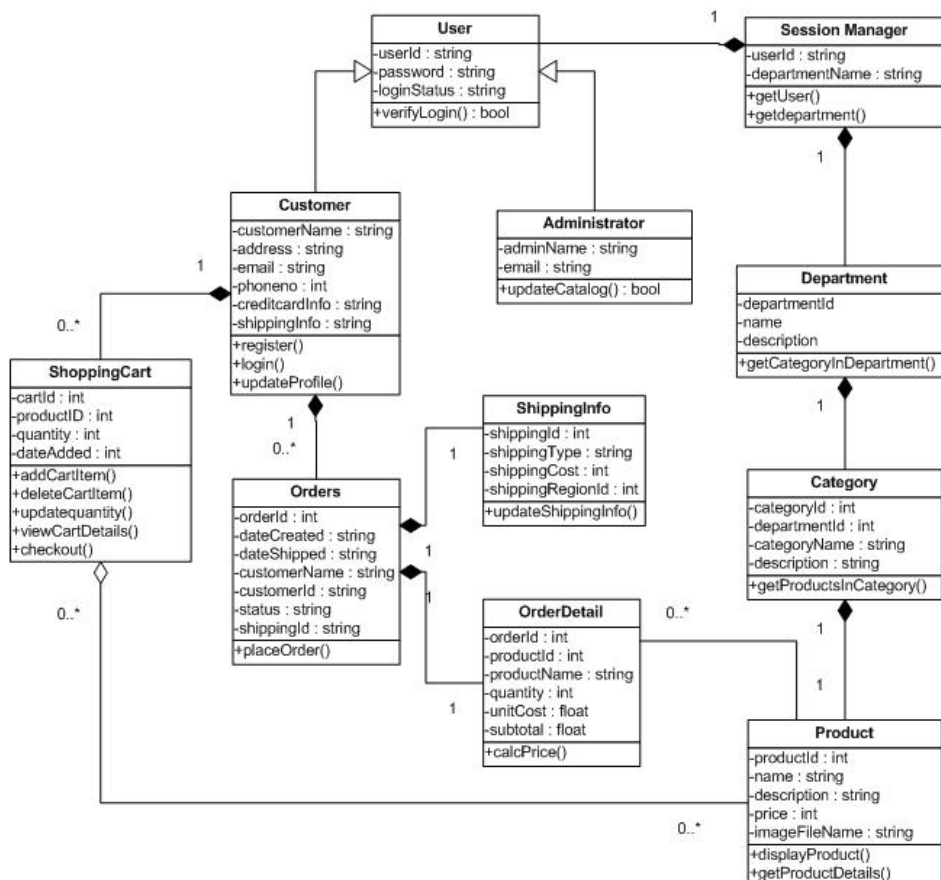
- Purpose of a use case diagram is to capture the dynamic aspect of a system.
- Use case diagrams are used to gather the requirements of a system including internal and external influences.

## Class Diagram:

### Useful Links:

- [http://people.cis.ksu.edu/~reshma/798\\_ClassDiagram.htm](http://people.cis.ksu.edu/~reshma/798_ClassDiagram.htm)

## General Notes:



# JAVA Collections

Wednesday, May 13, 2015 1:05 PM

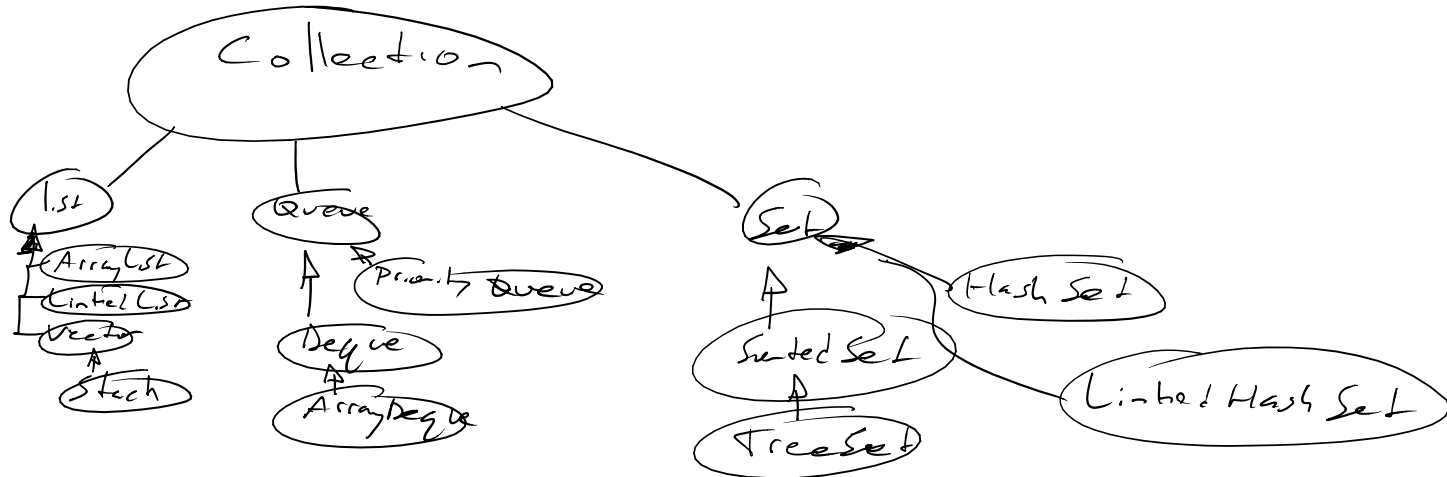
From <https://docs.oracle.com/javase/tutorial/collections/intro/index.html>

- Java Collections can sometimes be called a container. It is simply an object that groups multiple elements into a single unit.

Other resources

- <https://docs.oracle.com/javase/tutorial/collections/>
- <http://www.java2novice.com/java-collections-and-util/>
- [http://www.tutorialspoint.com/javaexamples/java\\_collections.htm](http://www.tutorialspoint.com/javaexamples/java_collections.htm)
- <http://math.hws.edu/javanotes/c10/s4.html>
- <https://www.youtube.com/watch?v=mkCTxtLe7XU>
- <http://docs.oracle.com/javase/7/docs/api/java/util/Collections.html>
- <http://docs.oracle.com/javase/7/docs/api/java/util/Collections.html>

Collections provide a set of classes to store and manipulate objects or groups of objects



— What is a collection??

- Similar stuff
- ↳ collection of anything

ex/ employee



## Hibernate

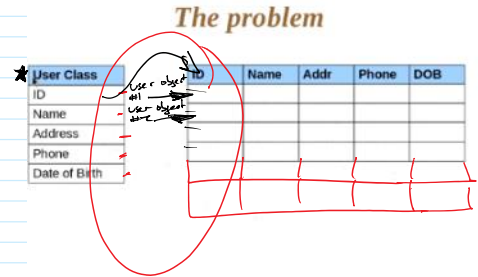
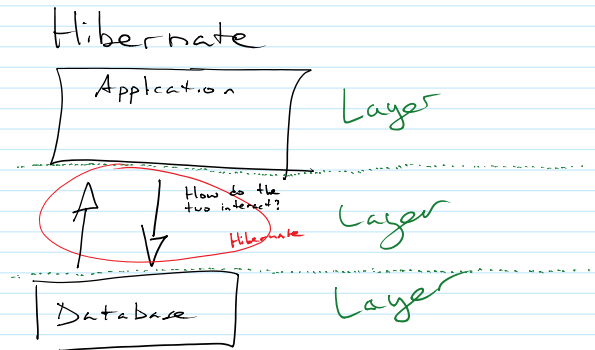
Tuesday, May 19, 2015 10:47 PM

### Useful Links:

- [http://en.wikipedia.org/wiki/Hibernate\\_%28Java%29](http://en.wikipedia.org/wiki/Hibernate_%28Java%29)
- Used in the data layer of applications
- [http://www.theregister.co.uk/2005/12/06/hibernate\\_object\\_relational\\_mapping\\_2/](http://www.theregister.co.uk/2005/12/06/hibernate_object_relational_mapping_2/)
- <https://www.youtube.com/watch?v=66XbvTM7M14>
- <https://www.youtube.com/watch?v=wNT-EZsaC98>
- <http://www.vnrgroups.com/articles/java-hibernate-tutorial-part-1/>
- <http://www.vnrgroups.com/articles/java-hibernate-tutorial-part-2/>

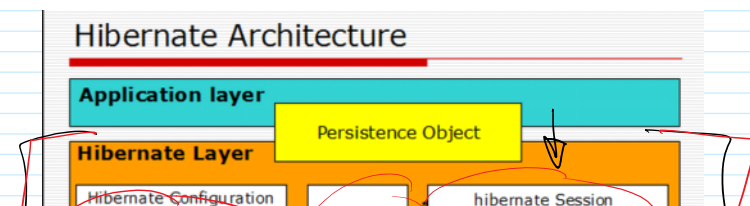
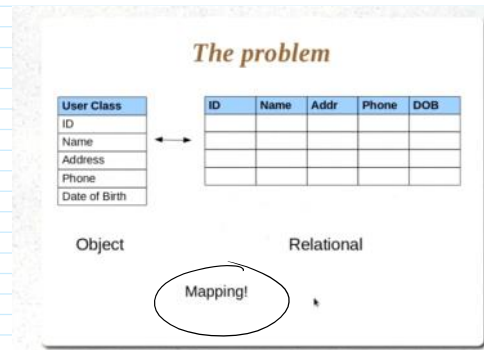
## General Notes

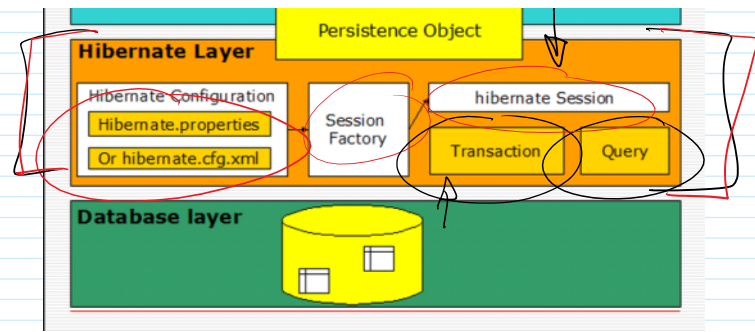
- An object relational mapping framework for the Java language, providing a framework for mapping
- an object-oriented domain model to a traditional relational database
- It is an ORM tool
- Used in the data layer of applications, meaning the layer in which the applications interact with the data.
- Implements JPA - Java Persistence API - Persistence implement
  - More portable if not wanting to use hibernate
- The problem they are trying to solve
  - Saving data in a relational Database
  - Each of these objects data would have data for a particular user
- Need to use hibernate configuration in xml file



EX1 - user object #1 is saved  
as row #1

- A class corresponds to a table, an object corresponds to a row in that table
- ↳ problem: objects there are java, no objects in database
- \* Mapping is what is a pair





# JSON

Monday, May 25, 2015 12:28 PM

JavaScript Object Notation

# MVC (Model View Controller)

Monday, May 25, 2015 4:17 PM

## Useful Links:

<http://www.newthinktank.com/2013/02/mvc-java-tutorial/>

<http://www.cs.utsa.edu/~cs3443/mvc-example.html>

<http://www.codeproject.com/Articles/25057/Simple-Example-of-MVC-Model-View-Controller-Design>

## General Notes

### What is MVC?

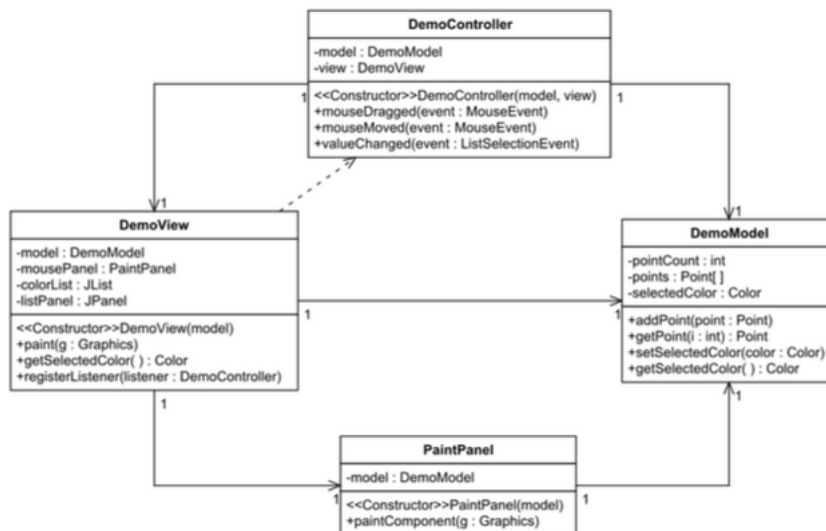
- ▶ Completely separates the Calculations and Interface from each other
- ▶ Model: Data and Methods used to work with it
- ▶ View: The Interface
- ▶ Controller: Coordinates interactions between the View and Model

*Separates all data + calculations into the model class*

*class*

*class*

*class*



- Can think of this a data interface coordinator
- Software development method that keeps it when not in use, helps all developers in the world figure out what is wrong with apokication

# JUnit

Wednesday, May 27, 2015 2:35 PM

## Useful Links:

- <https://netbeans.org/kb/docs/java/junit-intro.html> - a tutorial that goes through all of this
- <http://junit.org/>
- <http://hamcrest.org/JavaHamcrest/javadoc/1.3/org/hamcrest/Matchers.html>
- <http://www.vogella.com/tutorials/JUnit/article.html>
- <http://junit.sourceforge.net/doc/testinfected/testing.htm>

## General Notes

- To test if the return value equals a specific value use `assertEquals()`
- Start by making our tests with `@test`
- JUnit defines how to structure your test case and provides the tools to run them.

# JSON

Friday, June 5, 2015 8:11 PM

## Useful Links:


- <http://json.org/>
- <https://www.youtube.com/watch?v=GF8yRG04-60>
- <https://www.youtube.com/watch?v=LDzA17uruAo>
- [Jsonlint.com](http://Jsonlint.com)

## General Notes:

- JSON (JavaScript Object Notation) - a lightweight data interchange format.
- Is a syntax for storing and exchanging data
- Easier to use alternative to XML
- Lightweight data change format.
- Easy for humans to read and write. Easy for machines to parse and generate.
- Based on a subset of JavaScript
- Storing JSON data creates an object, that we can access using a variable.

## Results of Example Code:

```
run:
Enter Student name: Paul
Enter course name: Java
Enter grade: 89
{"courses":[{"grade":89,"name":"Java"}],"name":"Paul"}
BUILD SUCCESSFUL (total time: 14 seconds)
```



# Client and Server Sockets and their I/O streams

Wednesday, May 27, 2015 7:00 PM

Useful links:

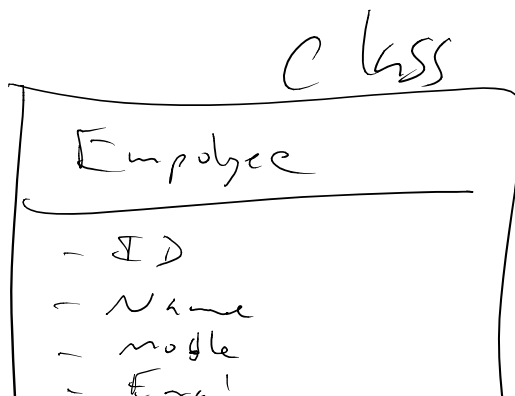
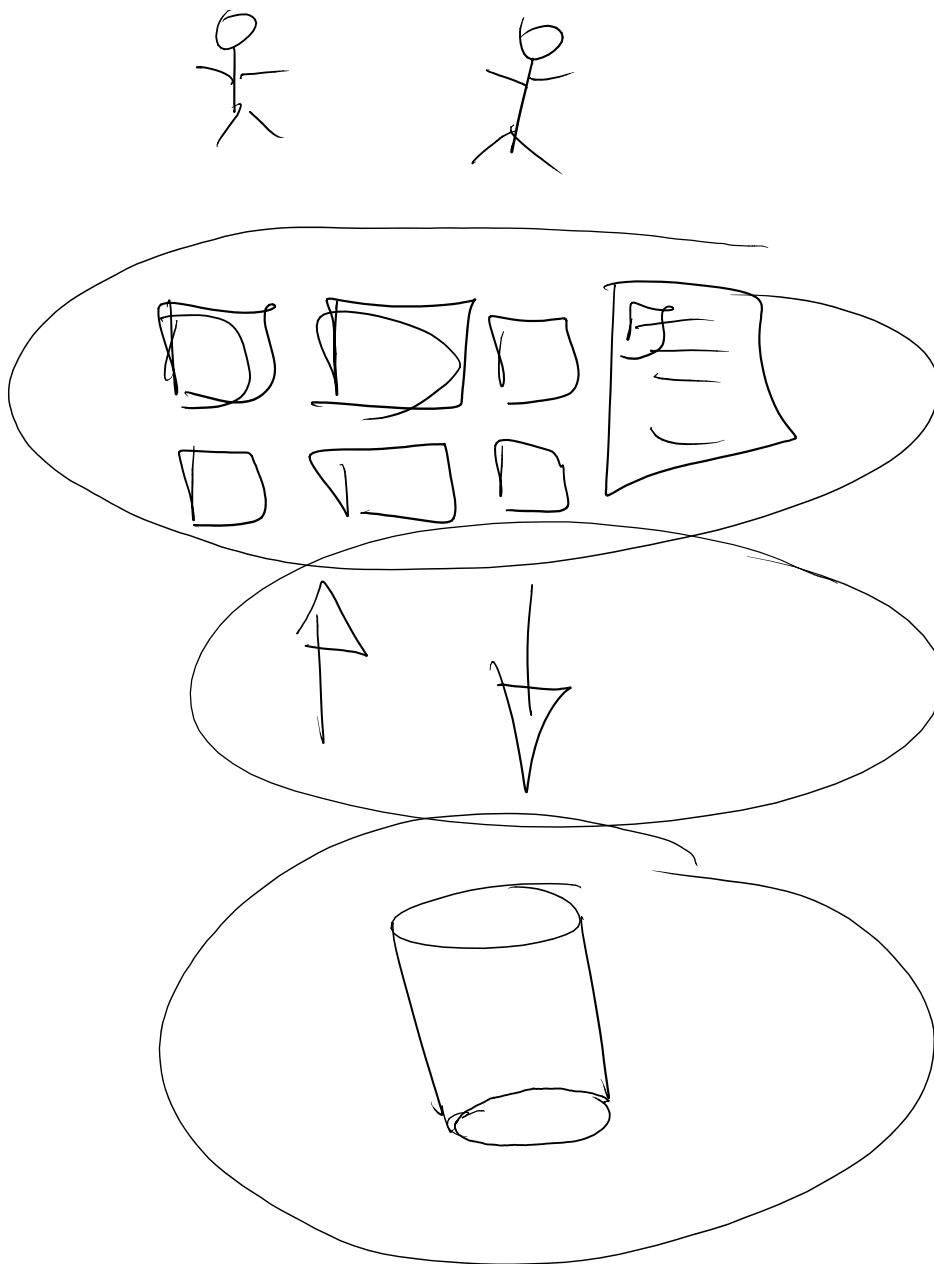
- <https://www.youtube.com/watch?v=pr02nyPqLBU>

General Notes

- What is a stream? Whenever you connect to someone else's computer through networking using Java. The way we communicate is through streams; two main streams: the output stream and the input stream. The output stream is what flows away from the computer and to your friends computer
  - Output goes away from you in put goes to you
  - Whenever we type text and press enter, that text is packed up and sent out and put into someone's computer.
  - Whenever some friend puts text and presses enter to send you message, that text is put into a 'package' and sent to my computer in a text stream.

# Presentation Notes

Monday, May 25, 2015 5:12 PM



ID	Name	mobile	Email
1			
2			
3			
4			



- name  
- mogle  
- Email

