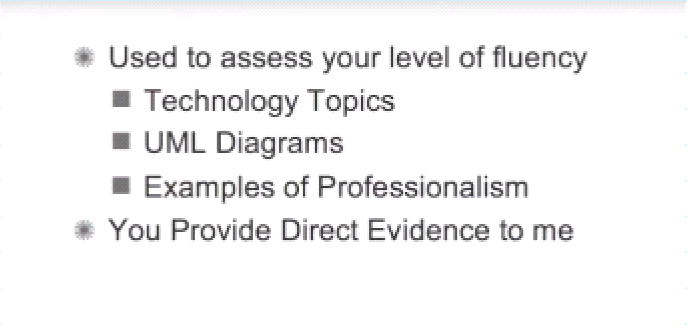
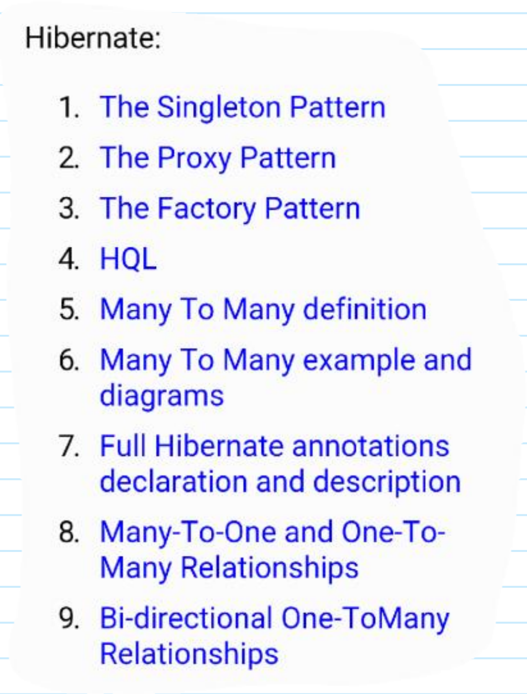
Class Notes

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 tovalues

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 studding 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	PWR
- drag file	git pull
- open GUI	git push
- commit	
- Sync	

What will I be learning this week?

- Java Collections - Just to the basics

Other Items

- what you did today?
  yesterday?
  Tommorow?

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

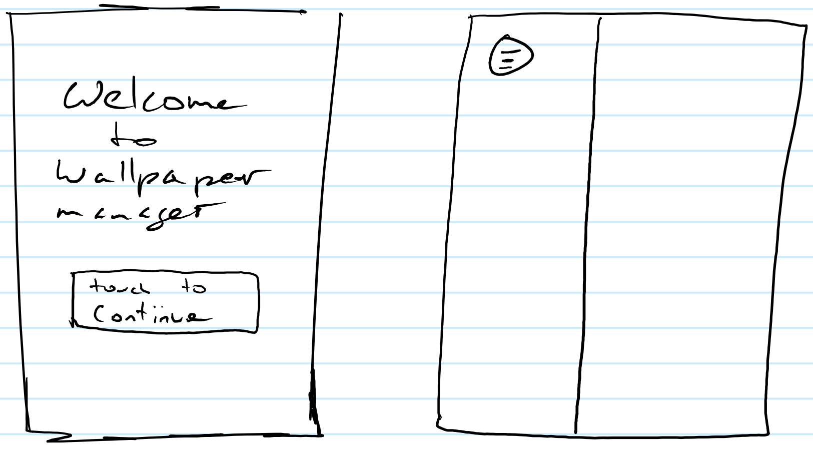
Why?

- 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

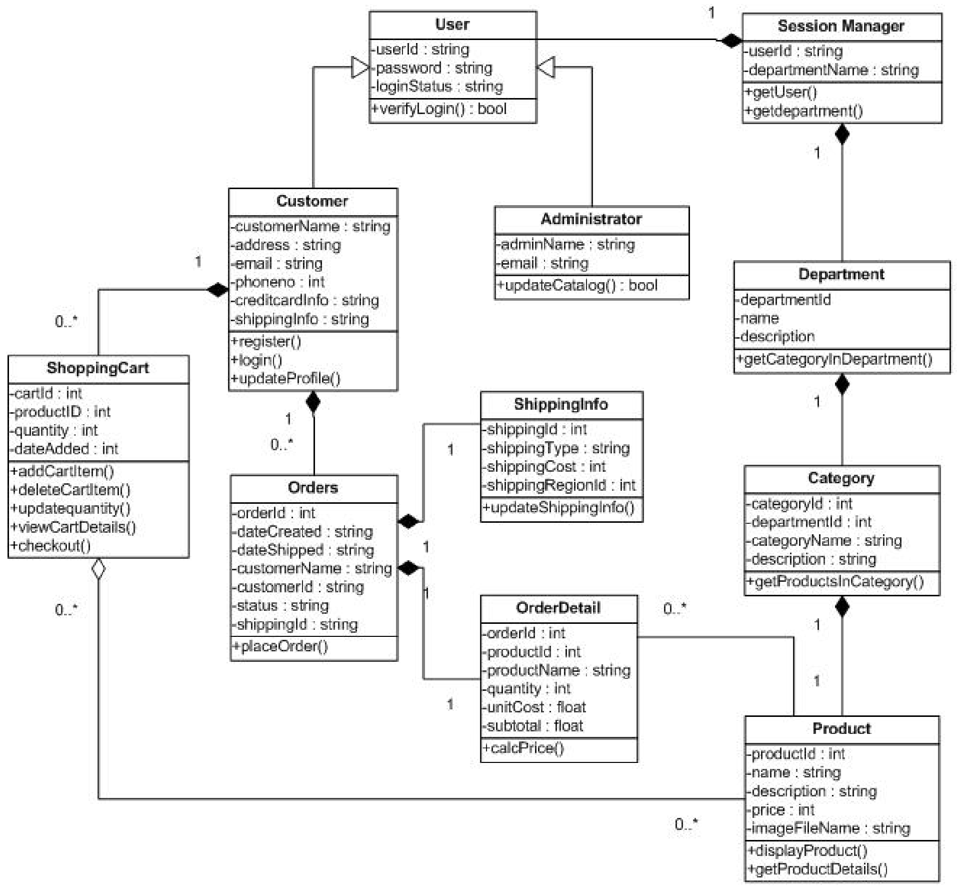
- Purpose of a use case diagram is to capture the dynamic aspect of a system.
- Use case diagrams are used are used to gather the requirements of a system including internal and external influences.

Class Diagram:

Useful Links:

- http://people.cis.ksu.edu/~reshma/798_ClassDiagram.htm

General Notes:



JAVA Collections

Wednesday, May 13, 2015 1:05 PM

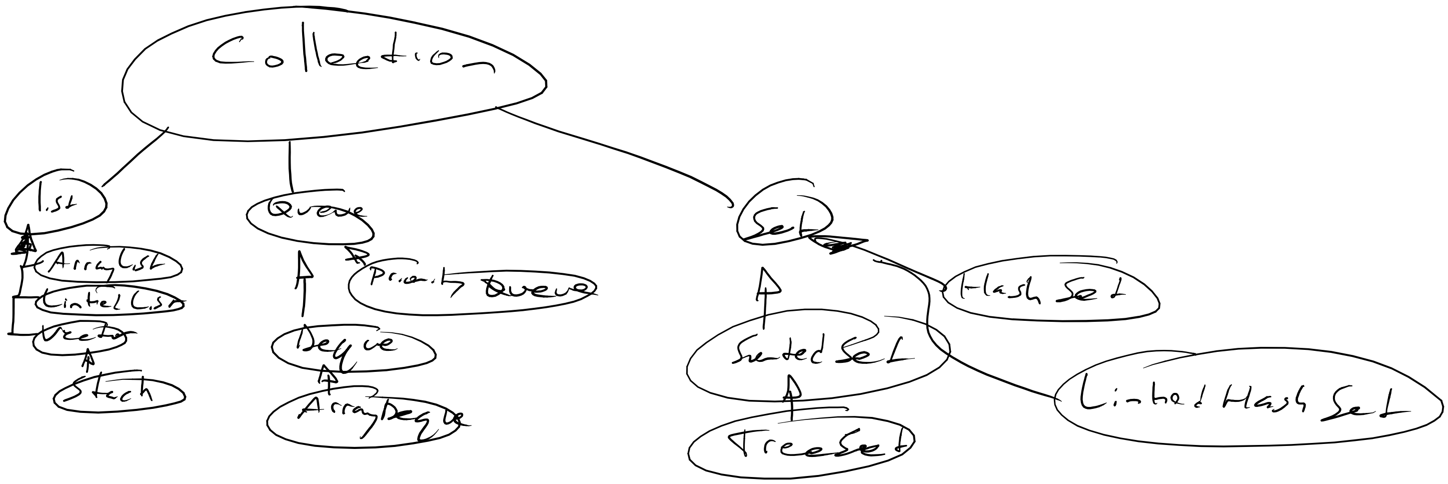
From https://docs.oracle.com/javase/tutorial/collections/intro/index.html

- 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://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 any thing

ex// employee

Hibernate

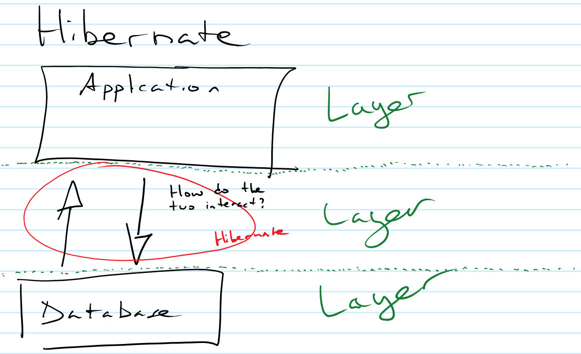
Tuesday, May 19, 2015 10:47 PM

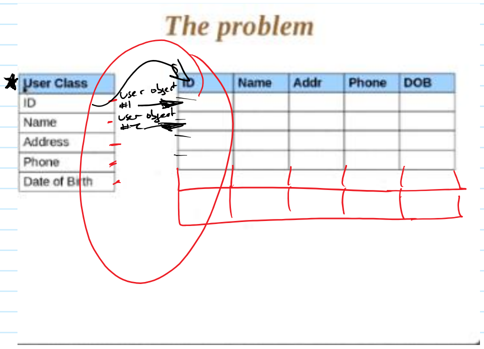
Useful Links:

- 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/
- https://www.youtube.com/watch?v=66XbyTM7tM4
- 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.
- Impliments JPA - Java Persistance API - Persistance impliment
  - 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



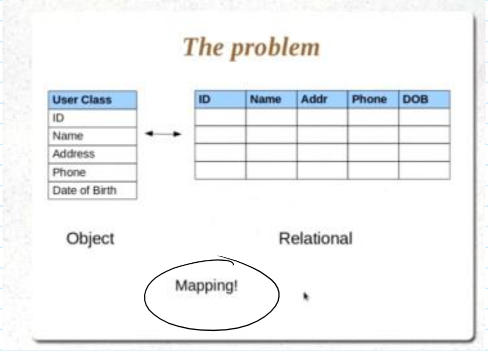


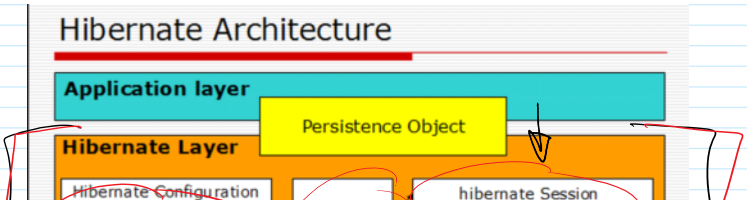
ex// - User object #1 is saved as row #1

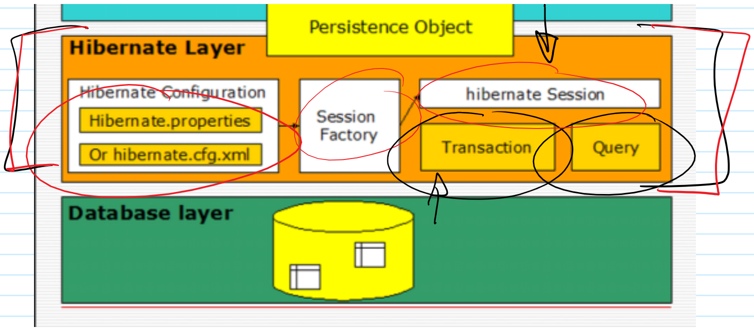
- A class corresponds to a table, an object corresponds to a row in that table

↳ problem is objects in java there is no objects in database

*Mapping is what is a pain






Persistence Object
Hibernate Layer
Hibernate Configuration
Hibernate.properties
Or hibernate.cfg.xml
Session Factory
hibernate Session
Transaction
Query
Database layer

JSON

Monday, May 25, 2015 12:28 PM

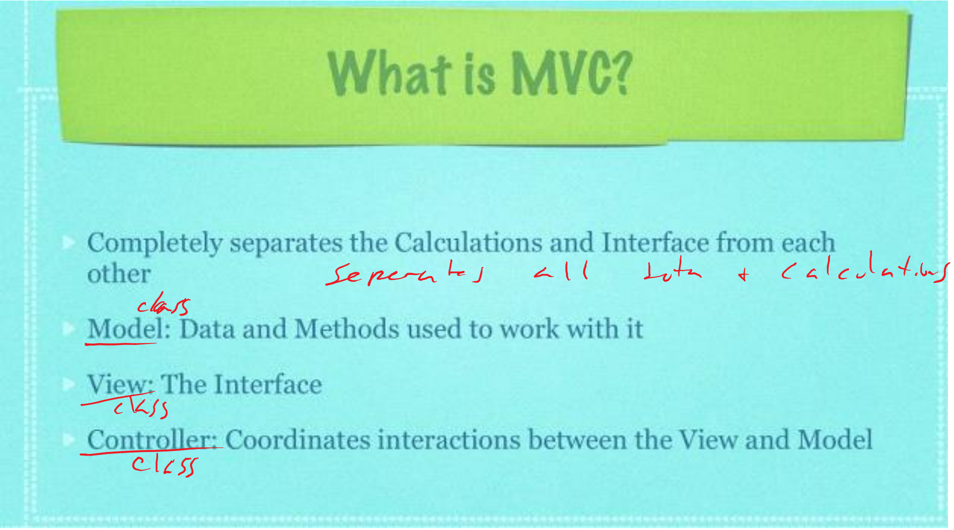
JavaScript Object Notation

MVC (Model View Controller)

Monday, May 25, 2015 4:17 PM

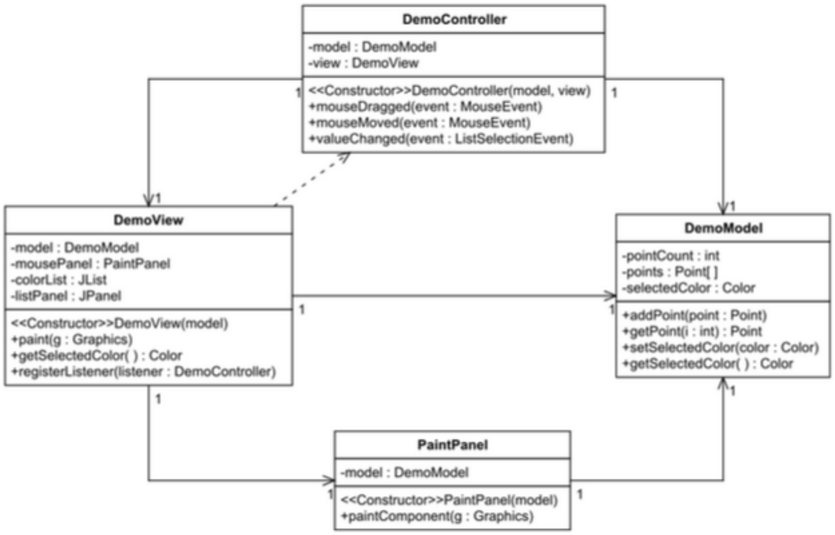
Useful Links:
http://www.newthinktank.com/2013/02/mvc-java-tutorial/
http://www.cs.utsa.edu/~cs3443/mvc-example.html
http://www.codeproject.com/Articles/25057/Simple-Example-of-MVC-Model-View-Controller-Design

General Notes



What is MVC?

- Completely separates the Calculations and Interface from each other separates all data + calculations into the model class
- Model: Data and Methods used to work with it class
- View: The Interface class
- Controller: Coordinates interactions between the View and Model class



DemoController
-model : DemoModel
-view : DemoView
<<Constructor>>DemoController(model, view)
+mouseDragged(event : MouseEvent)
+mouseMoved(event : MouseEvent)
+valueChanged(event : ListSelectionEvent)
DemoView
-model : DemoModel
-mousePanel : PaintPanel
-colorList : JList
-listPanel : JPanel
<<Constructor>>DemoView(model)
+paint(g : Graphics)
+getSelectedColor( ) : Color
+registerListener(listener : DemoController)
DemoModel
-pointCount : int
-points : Point[ ]
-selectedColor : Color
+addPoint(point : Point)
+getPoint(i : int) : Point
+setSelectedColor(color : Color)
+getSelectedColor( ) : Color
PaintPanel
-model : DemoModel
<<Constructor>>PaintPanel(model)
+paintComponent(g : Graphics)
1
1
1
1
1
1
1
1
1
1

- Can think of this a data interface coordinator
- Software developmet 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 turtorial 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 return assertTrue()
- 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

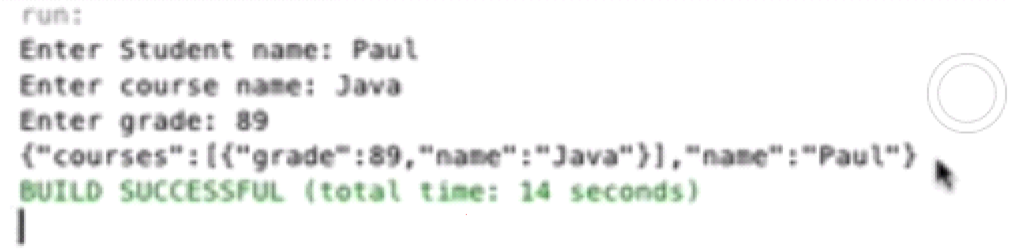
Useful Links:

- http://json.org/
- https://www.youtube.com/watch?v=GF8yRG04-60
- https://www.youtube.com/watch?v=LDzA17uruAo
- Jsonlint.com

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:

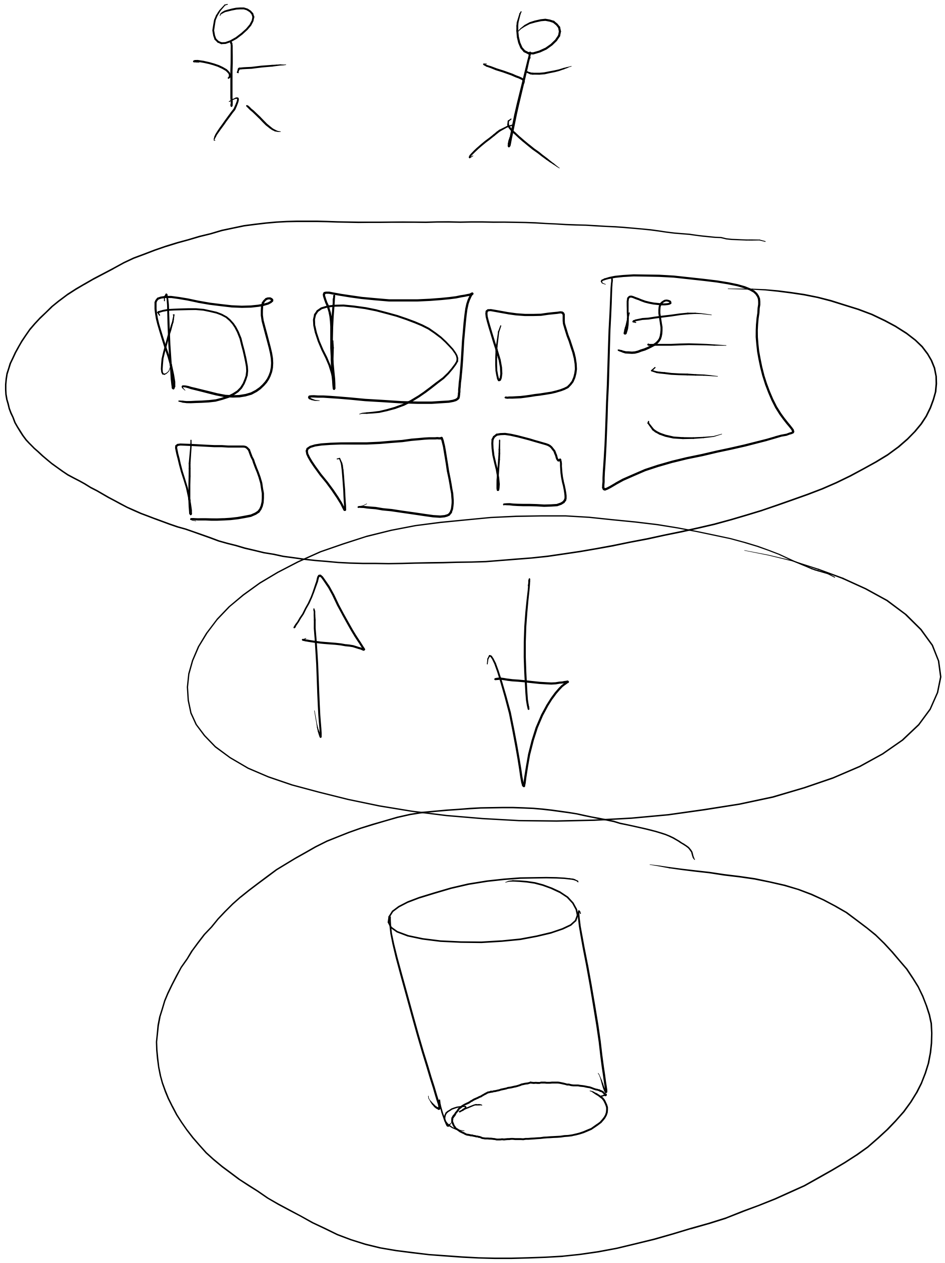
- https://www.youtube.com/watch?v=pr02nyPqLBU

General Notes

- What is a stream? Whenever you connect to someone else's computer through networking using Java. The way we communicate is through steams; two main streams: the output stream and the input steam. The output stream is what flows away from the computer and to your friends computer
  - Output goes way 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



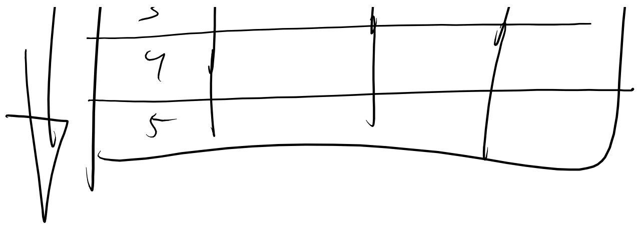
Class

Empolyee

- ID
- Name
- mobile
- Email

ID	Name	Mobile	Email
1			
2			
3			
4			

- Name
- mobile
- Email


3
4
5

Threads, Executors, Runnables, Android Handlers

Tuesday, June 16, 2015 10:43 PM

Useful Links:

- http://stackoverflow.com/questions/21194762/what-is-the-different-between-handler-runnable-and-threads
- https://developer.android.com/training/multiple-threads/run-code.html
- http://developer.android.com/reference/java/util/concurrent/ThreadPoolExecutor.html

Notes

- Runnable separates code that needs to run asynchronously, from how the code is run. You code is kept flexible this way. Asychronous code for example ina runnable can run on a threadpool, or a dedicated thread.
- Threads
    - They occupy a lot of memory
    - A threadpoolexecutor takes a task from the queue and runs it on the thread.
- A handler
    - Allows to post runnables to execute on a specific thread. Behind the scenes, runOnUi Thread queues the runnable up with Andriod's UI handler so that the runnable can execute safely on the UI thread.
- Executor
    - Is an object that executes submitted runnable tasks. The interface provides a way of decoupling task submission from the mechanics of how each task will be run, including details of thread use.