References

Object-Oriented Design Heuristics, Riel, Addison Wesley, 1996
Course Web Site

http://www.eli.sdsu.edu/index.html

on-line courses

CS 635 Spring 07

Lecture Notes
Lecture Notes with Ink
Assignments
Wiki
Mailing List
Syllabus
Reading Assignments
What this course is about

Writing quality OO code
Design Patterns
Coupling & Cohesion

Unit Testing
Refactoring
Scale Changes Everything
Review
Define

Object
Class
What are the Benefits of OO
Issues?

public class A {
    public int x;
    public int y;
    public int z;
}

class Stack
  def initialize
    @elements = Array.new
  end
  def empty?
    return @elements.empty?
  end
  def push(element)
    @elements.push(element)
  end
  def pop
    @elements.pop
    return elements
  end
end
A verses B

```java
public class A {
    public int x;
    public int y;
    public int z;
}

public class B {
    private int x;
    private int y;
    private int z;

    public int getX() { return x;}
    public int getY() { return y;}
    public int getZ() { return z;}
    public void setX(int value) { x = value; }
    public void setY(int value) { y = value; }
    public void setZ(int value) { z = value; }
}
```
Heuristics

Keep related data and behavior in one place

A class should capture one and only one key abstraction
Heuristics

Beware of classes that have many accessor methods defined in their public interface

Do not create god classes/objects in your system

Beware of classes that have too much noncommunicating behavior