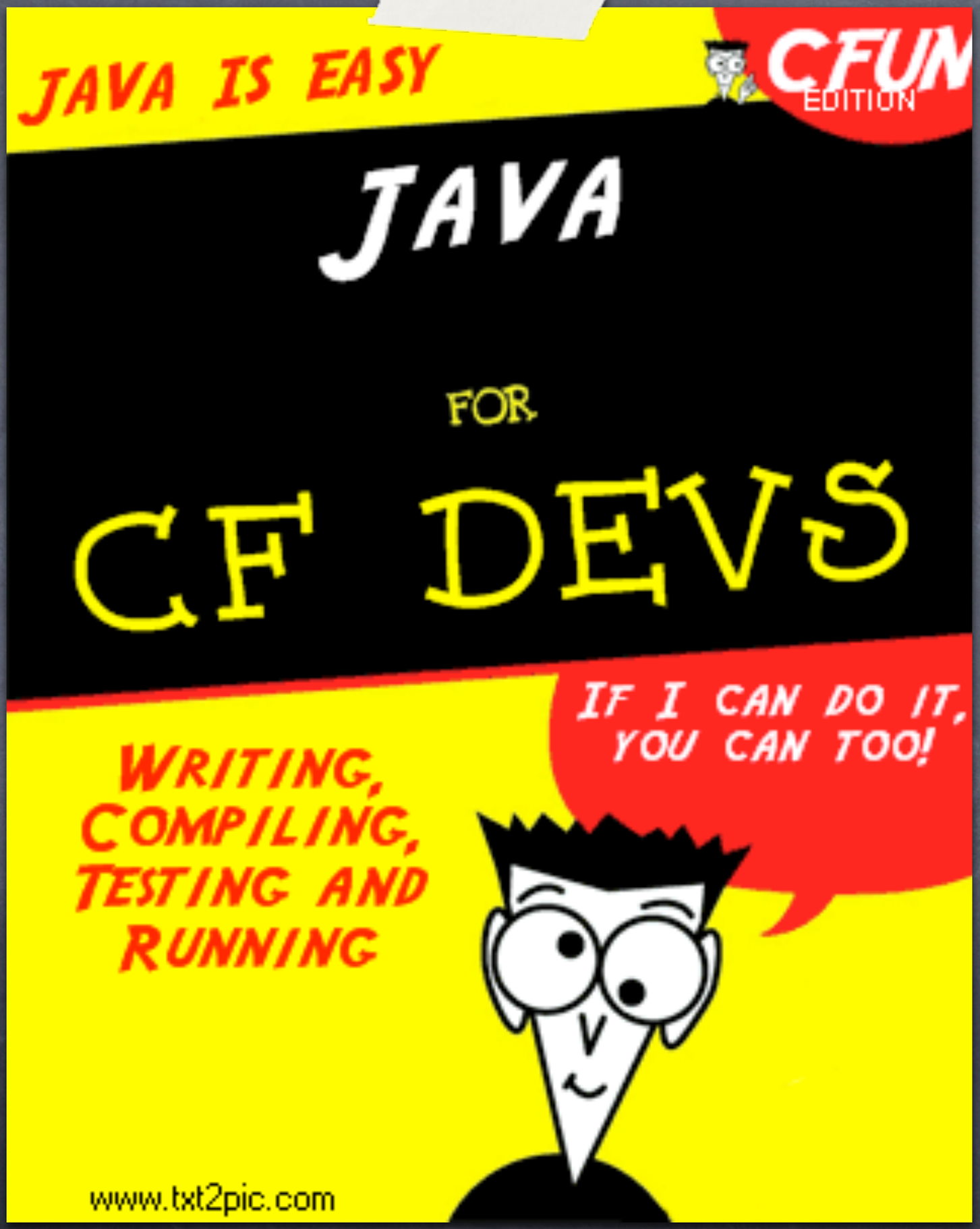
Busy Programers Guide to Java

Part 1

Java Concepts & IDE

Who Am I?

- Adam Haskell
- Software Architect at The Kroger Co.
- Corporate Champion for Adobe ColdFusion
- Trainer & Consultant



Demo Java simple Class....
Light Introduction to Java
Writing
Compiling
Testing
Concepts
Java Docs

Everything Is an Object

Primitives: int, char, boolean
Strictly Typed
Object is 1 Object for its lifetime

Writing Java

- Class Declaration
- Properties
- Constructor
- General Methods

```
public class Simple{
    private String property1;
    private String property2;
    public Simple(){
      property1 = "Simple";
    }
    public String getProperty1(){
      return property1;
    }
}
```


Mentions:
Name of File == Name of Class
Everything is an Object

JavaC, ANT, Maven , Exporting in Eclipse
Executable Jar - public static void main(String[] args)
Classpath - where Java hunts for class files.

Dependency On other classes
Paths to Resource that Java will search
Can be multiple paths
typically in a Web App WEB-INF/lib is the classpath
-classpath from the command line

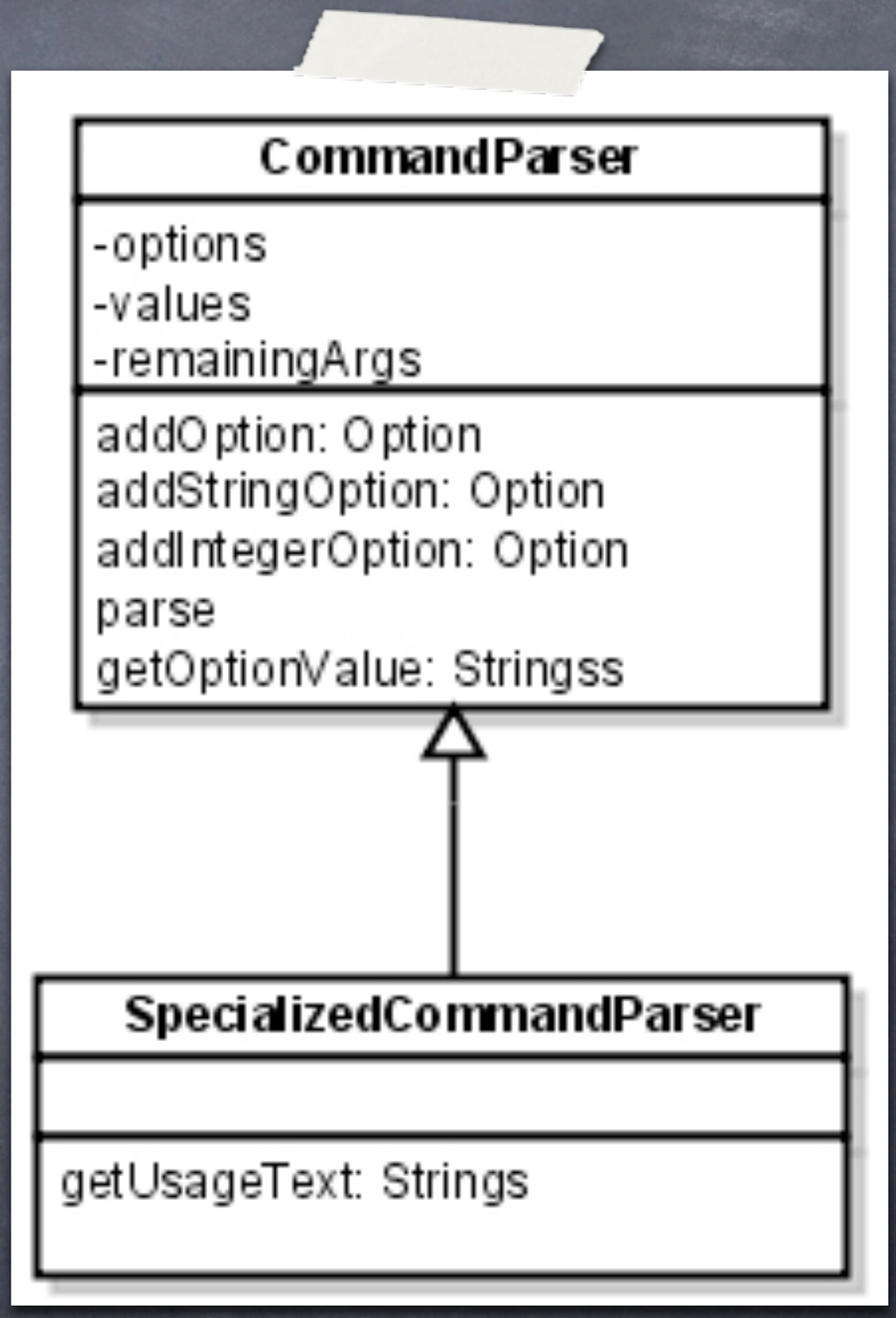
Tests!

- Eclipse Plugin
- Annotation
- Static Imports

Point: Command line requires main()
Test Can be executed entirely inside eclipse.
Add functionality points to Java methods/Class (Think Custom Attributes in CFML)
Static Import provide just a Method to be executed to the calling class. (Mixin's but not executed in the state of the current class)
DEMO!!!

Concepts Inheritance

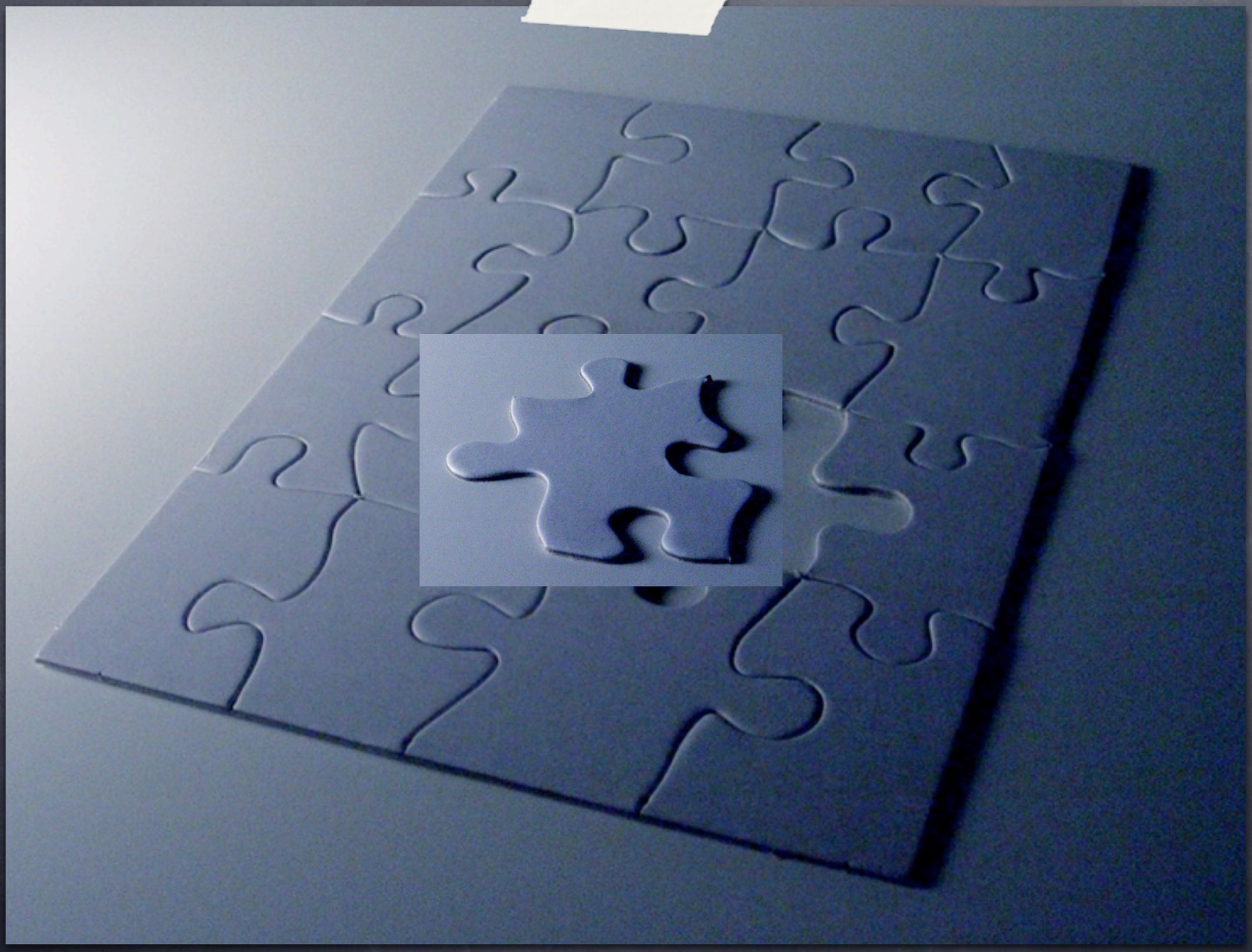
- Extends Keyword
- Java Limitations
- OO Side note: Favor Composition
- If you think what you've done with inheritance is "cute" delete it.



Demo
Show Debugging to Fix the Error
Call outs: For loop, command + click,
re-enforce: control + space, command + shift + o, command + click

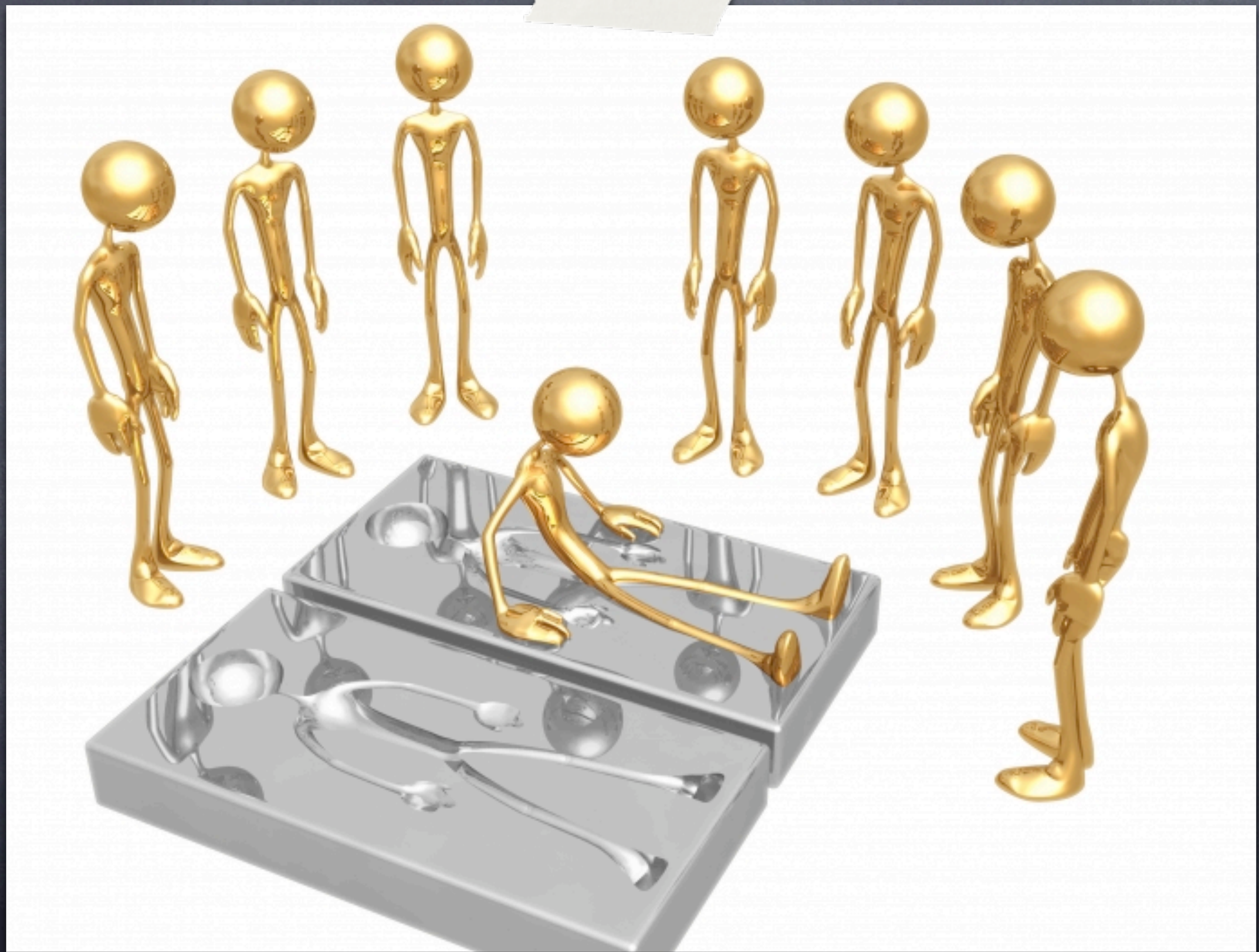
Now That You Know Debugging...

Abstract vs. Concrete



Options Specialization
Like Inheritance but a Piece is missing, often vital.
Abstracts can not be instantiated
Must Find a concrete implementation
Show: Code By Intent (Red X theory)

Interface



No functionality.
Mechanism to be many things
New Keyword: implements
CFML Tangent: Interfaces appease the compiler they can be helpful for documentation purposes but have no real place in CFML.

Java Docs

Java™ Platform Standard Ed. 6

All Classes

Packages
java.applet
java.awt
java.awt.color
java.awt.datatransfer
java.awt.dnd
java.awt.event

ArrayBlockingQueue
ArrayDeque
ArrayIndexOutOfBoundsException
ArrayList
Arrays
ArrayStoreException
ArrayType
ArrayType
AssertionError
AsyncBoxView
AsyncHandler
AsynchronousCloseException
AtomicBoolean
AtomicInteger
AtomicIntegerArray
AtomicIntegerFieldUpdater
AtomicLong
AtomicLongArray
AtomicLongFieldUpdater
AtomicMarkableReference
AtomicReference
AtomicReferenceArray
AtomicReferenceFieldUpdater
AtomicStampedReference
AttachmentMarshaller
AttachmentPart
AttachmentUnmarshaller
Attr
Attribute
Attribute

Field Summary

Fields inherited from class java.util.AbstractList

`modCount`

Constructor Summary

`ArrayList``()`
Constructs an empty list with an initial capacity of ten.

`ArrayList``(Collection<? extends E> c)`
Constructs a list containing the elements of the specified collection, in the order they are returned by the collection's iterator.

`ArrayList``(int initialCapacity)`
Constructs an empty list with the specified initial capacity.

Method Summary

boolean	**`add`**`(E e)` Appends the specified element to the end of this list.
void	**`add`**`(int index, E element)` Inserts the specified element at the specified position in this list.
boolean	**`addAll`**`(Collection<? extends E> c)` Appends all of the elements in the specified collection to the end of this list, in the order that they are returned by the specified collection's Iterator.
boolean	**`addAll`**`(int index, Collection<? extends E> c)` Inserts all of the elements in the specified collection into this list, starting at the specified position.
void	**`clear`**`()` Removes all of the elements from this list.
Object	**`clone`**`()` Returns a shallow copy of this `ArrayList` instance.
boolean	**`contains`**`(Object o)` Returns `true` if this list contains the specified element.
void	**`ensureCapacity`**`(int minCapacity)` Increases the capacity of this `ArrayList` instance, if necessary, to ensure that it can hold at least the number of elements specified by the minimum capacity argument.

http://java.sun.com/javase/6/docs/api/index.html?java/util/ArrayList.html

API, Inheritance, Everything we covered today is in the Java doc.

Keep Track of Me

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- CFConversations!!!