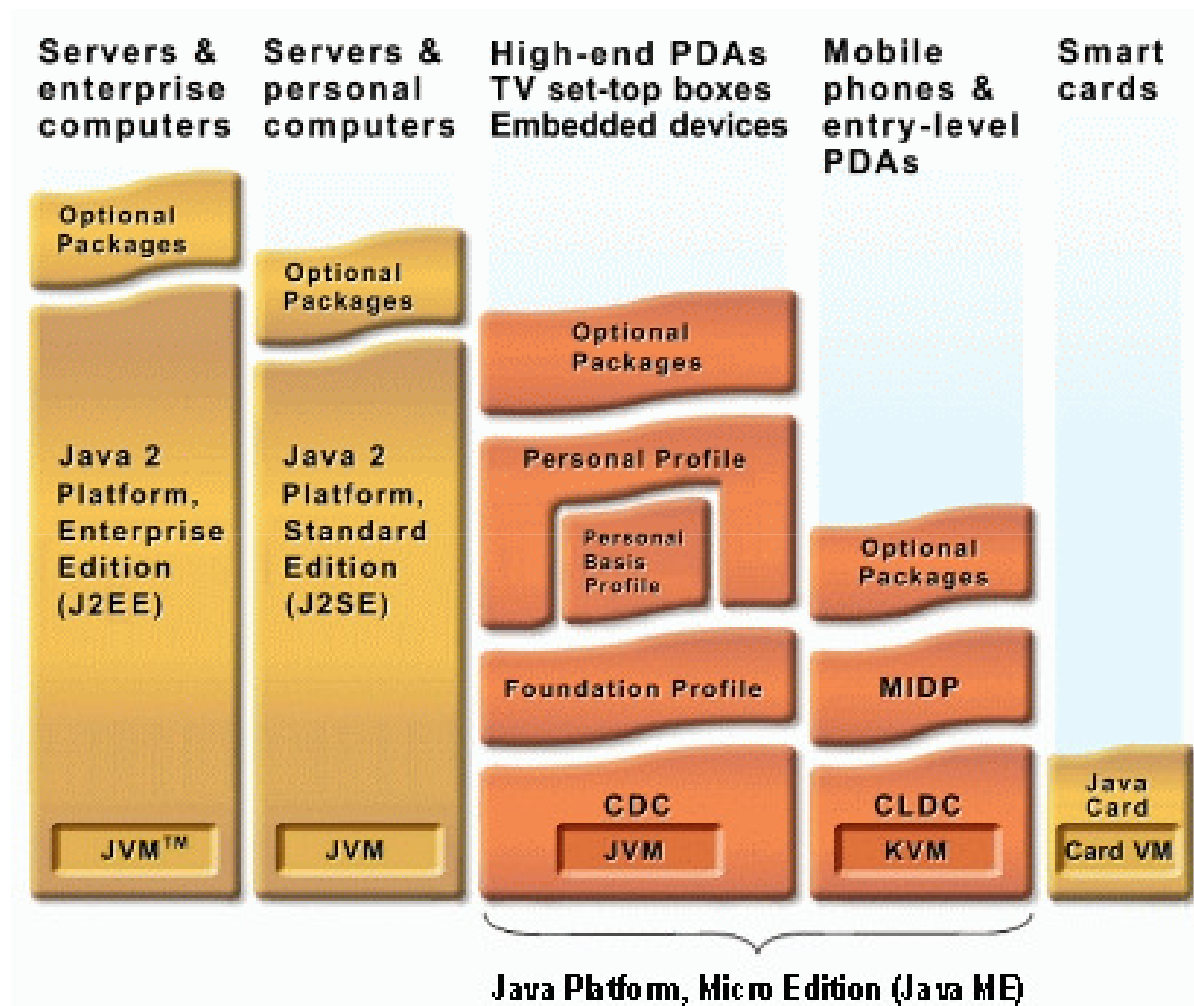


## 2. Desarrollo en Java.



## 2. Desarrollo en Java.

EI JDK.

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### Getting Started?

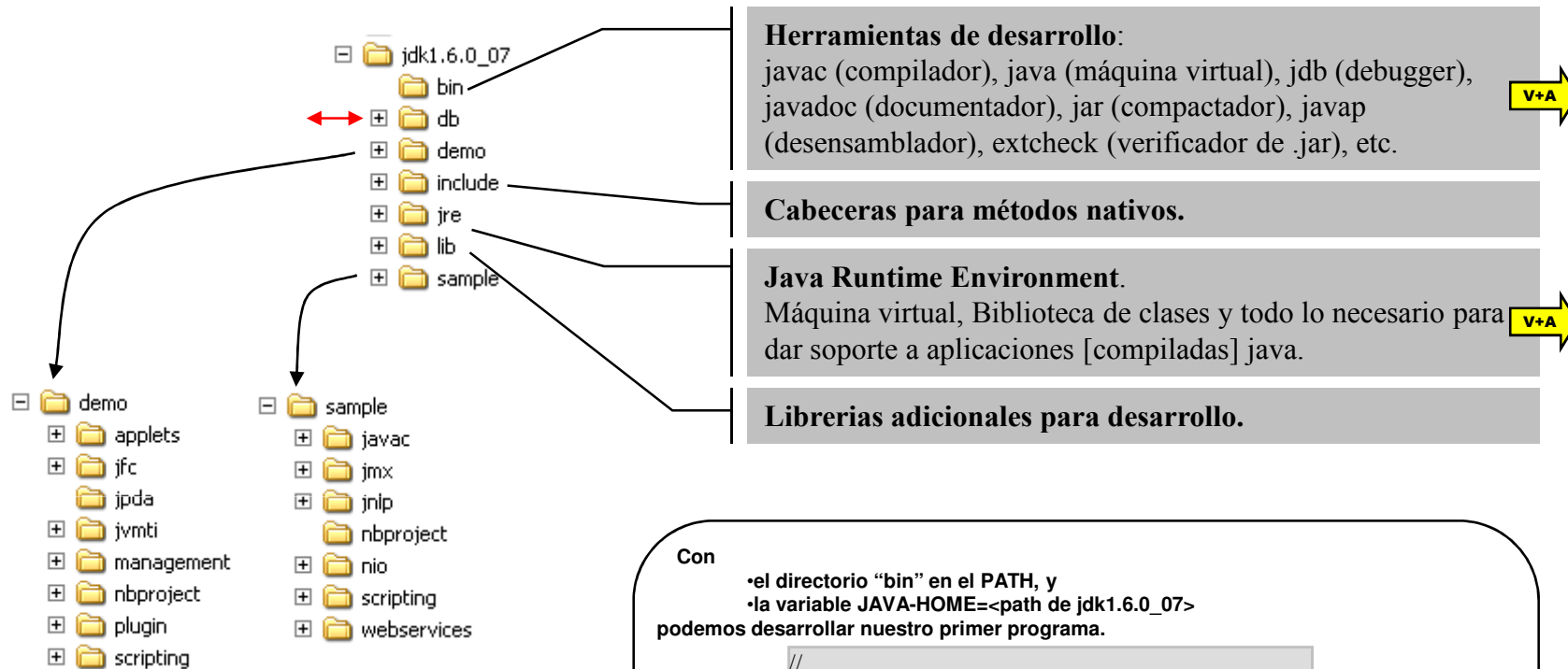
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## 2. Desarrollo en Java.

Instalando el JDK.



### Herramientas de desarrollo:

javac (compilador), java (máquina virtual), jdb (debugger), javadoc (documentador), jar (compactador), javap (desensamblador), extcheck (verificador de .jar), etc.



### Cabeceras para métodos nativos.

### Java Runtime Environment.

Máquina virtual, Biblioteca de clases y todo lo necesario para dar soporte a aplicaciones [compiladas] java.



### Librerías adicionales para desarrollo.

Con

- el directorio "bin" en el PATH, y
- la variable `JAVA-HOME=<path de jdk1.6.0_07>`

podemos desarrollar nuestro primer programa.

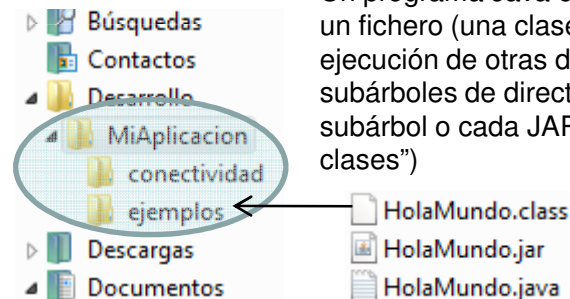
```
//  
// Aplicación ejemplo "HolaMundo"  
//  
public class HolaMundo {  
    public static void main(String[] args) {  
        System.out.println("Hola, mundo");  
    }  
}
```

```
Prompt> javac HolaMundo.java  
Prompt> java HolaMundo  
Hola, Mundo  
Prompt>
```

## 2. Desarrollo en Java.

Compilar y ejecutar

```
C:\Documents and Settings\german>javac
Usage: javac <options> <source files>
where possible options include:
-g Generate all debugging info
-g:none Generate no debugging info
-g:<lines,vars,source> Generate only some debugging info
-nowarn Generate no warnings
-verbose Output messages about what the compiler is doing
-deprecation Output source locations where deprecated APIs are used
-classpath <path> Specify where to find user class files and annotation processors
-cp <path> Specify where to find user class files and annotation processors
-sourcepath <path> Specify where to find input source files
-bootclasspath <path> Override location of bootstrap class files
-extdirs <dirs> Override location of installed extensions
-endorseddirs <dirs> Override location of endorsed standards path
-processor <class1>[,<class2>,<class3>]... Names of the annotation processors to use
-processorpath <path> Specify where to find annotation processors
-d <directory> Specify where to place generated class files
-s <directory> Specify where to place generated source files
-implicit:<none,class> Specify whether or not to generate class files for implicit dependencies
-encoding <encoding> Specify character encoding used by source files
-source <release> Provide source compatibility with specified release
-target <release> Generate class files for specific VM version
-version Version information
-help Print a synopsis of standard options
-Akey=value Options to pass to annotation processors
-X Print a synopsis of nonstandard options
-J<flag> Pass <flag> directly to the runtime system
```



Un programa Java comienza por la ejecución de un fichero (una clase) que puede ir invocando la ejecución de otras dentro de uno o varios subárboles de directorios o ficheros JAR (cada subárbol o cada JAR es una “biblioteca de clases”)

### Compilar y ejecutar estando en “MiAplicacion”

```
>javac ejemplos/HolaMundo.java
>java ejemplos.HolaMundo
```

### Compilar y ejecutar estando en otro directorio

```
>javac -cp c:/Desarrollo/MiAplicacion ejemplos/HolaMundo.java
>java -cp c:/Desarrollo/MiAplicacion ejemplos.HolaMundo
```

### Ejecutar mediante un JAR

```
>java -cp c:/Desarrollo/MiAplicacion/ejemplos/HolaMundo.jar HolaMundo
>java -jar c:/Desarrollo/MiAplicacion/ejemplos/HolaMundo.jar
```

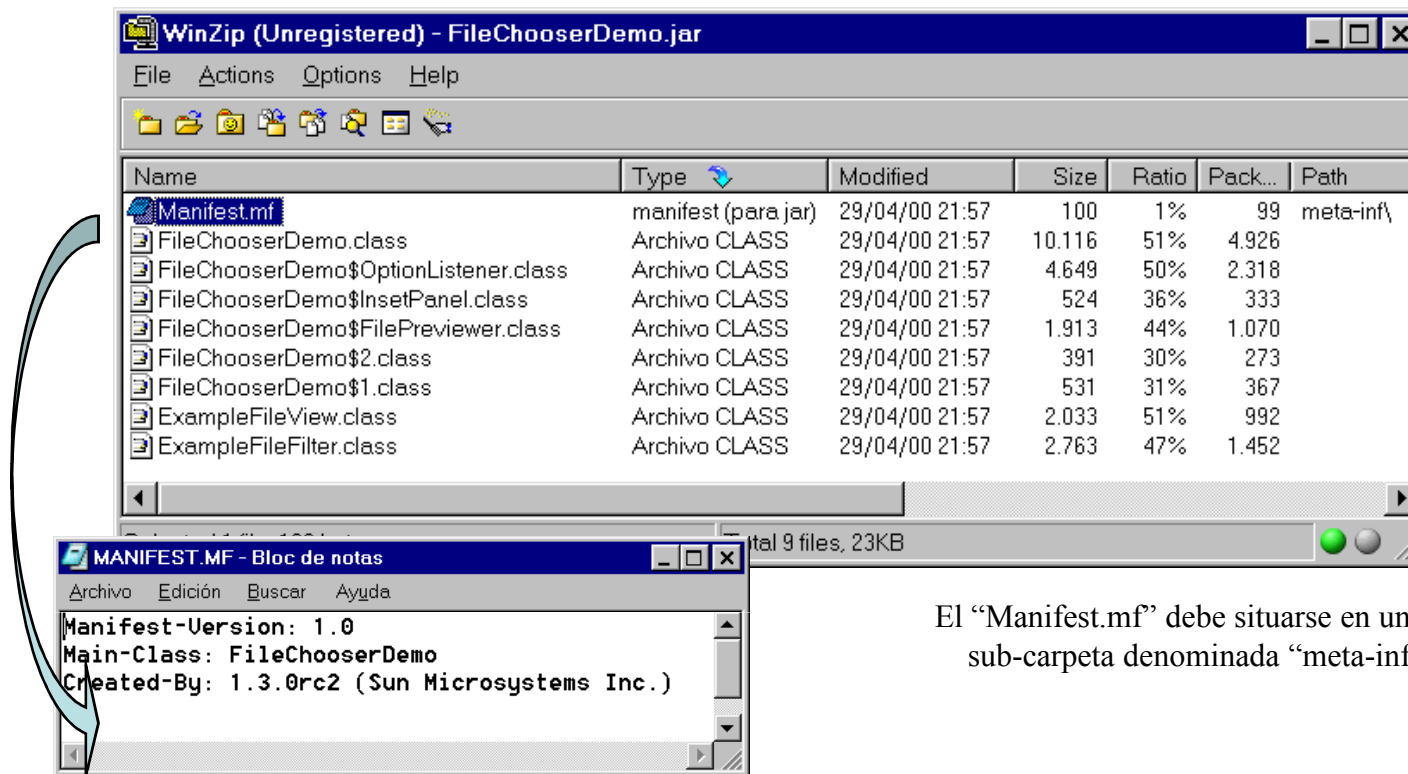
```
C:\Documents and Settings\german>java
Usage: java [-options] class [args...]
           or java [-options] jarfile [args...]
           (to execute a jar file)
where options include:
-client to select the "client" VM
-server to select the "server" VM
-hotspot is a synonym for the "client" VM (deprecated)
        The default VM is client.

-cp <class search path of directories and zip/jar files>
-classpath <class search path of directories and zip/jar files>
        A ; separated list of directories, JAR archives,
        and ZIP archives to search for class files.
-D<name>=<value>
        set a system property
-verbose[:class[:gc]:jni]
        enable verbose output
-version
        print product version and exit
-version:<value>
        require the specified version to run
-showversion
        print product version and continue
-jre-restrict-search | -jre-no-restrict-search
        include/exclude user private JREs in the version search
-? -help
        print this help message
-X
        print help on non-standard options
-ea[:<packagename>...![:<classname>]]
        enable assertions
-da[:<packagename>...![:<classname>]]
        disable assertions
-disableassertions[:<packagename>...![:<classname>]]
        disable assertions
-esa | -enablesystemassertions
        enable system assertions
-dsa | -disablesystemassertions
        disable system assertions
-agentlib:<libname>[=<options>]
        load native agent library <libname>, e.g. -agentlib:hprof
        see also, -agentlib:jdwp=help and -agentlib:hprof=help
-agentpath:<pathname>[=<options>]
        load native agent library by full pathname
-javaagent:<jarpath>[=<options>]
        load Java programming language agent, see java.lang.instrument
-plash:<imagepath>
        show splash screen with specified image
```

← OJO: para hacer esta prueba hay que incluir la línea **package ejemplos;** en el código fuente de HolaMundo.java

## 2. Desarrollo en Java.

Uso de ficheros "Jar"



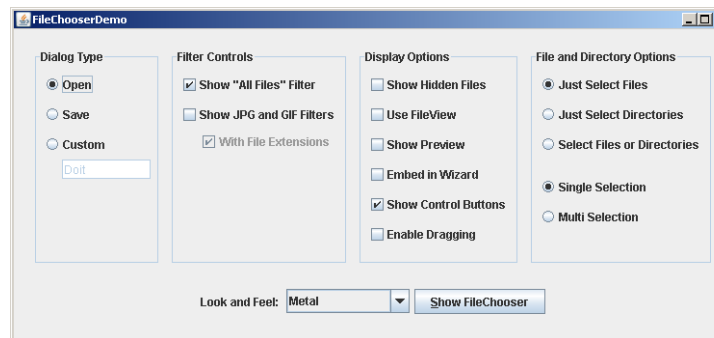
Name	Type	Modified	Size	Ratio	Pack...	Path
Manifest.mf	manifest (para jar)	29/04/00 21:57	100	1%	99	meta-inf\
FileChooserDemo.class	Archivo CLASS	29/04/00 21:57	10.116	51%	4.926	
FileChooserDemo\$OptionListener.class	Archivo CLASS	29/04/00 21:57	4.649	50%	2.318	
FileChooserDemo\$InsetPanel.class	Archivo CLASS	29/04/00 21:57	524	36%	333	
FileChooserDemo\$FilePreviewer.class	Archivo CLASS	29/04/00 21:57	1.913	44%	1.070	
FileChooserDemo\$2.class	Archivo CLASS	29/04/00 21:57	391	30%	273	
FileChooserDemo\$1.class	Archivo CLASS	29/04/00 21:57	531	31%	367	
ExampleFileView.class	Archivo CLASS	29/04/00 21:57	2.033	51%	992	
ExampleFileFilter.class	Archivo CLASS	29/04/00 21:57	2.763	47%	1.452	

MANIFEST.MF - Bloc de notas

```
Manifest-Version: 1.0  
Main-Class: FileChooserDemo  
Created-By: 1.3.0rc2 (Sun Microsystems Inc.)
```

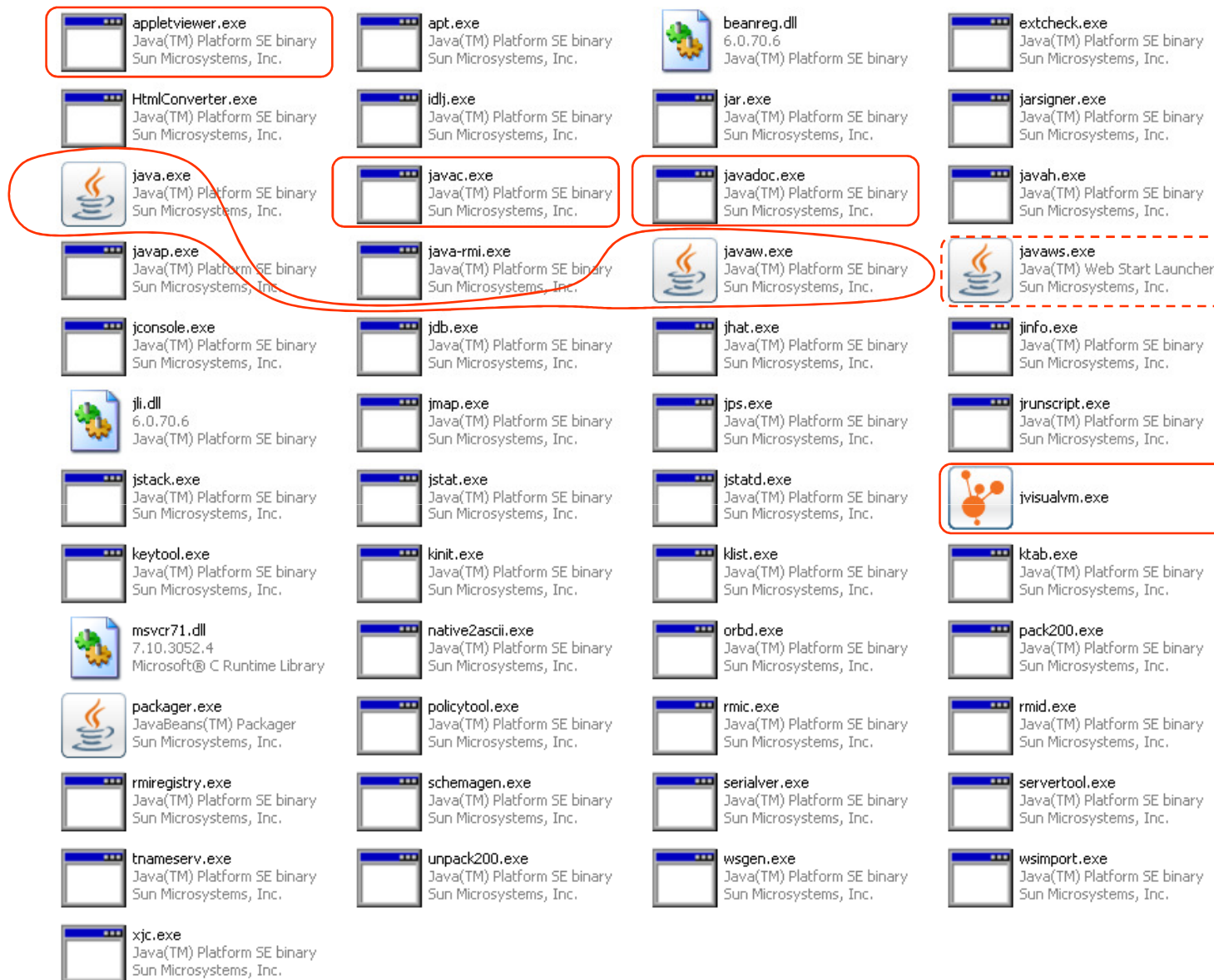
El "Manifest.mf" debe situarse en una sub-carpeta denominada "meta-inf"

```
C:\Archivos de programa\Java\jdk1.6.0_07\demo\jfc\FileChooserDemo>java -cp FileChooserDemo.jar FileChooserDemo  
C:\Archivos de programa\Java\jdk1.6.0_07\demo\jfc\FileChooserDemo>java -jar FileChooserDemo.jar
```



## 2. Desarrollo en Java.

El "bin"



## 2. Desarrollo en Java.

bin:Javadoc

```
C:\Documents and Settings\german>javadoc
javadoc: error - No packages or classes specified.
usage: javadoc [options] [packagenames] [sourcefiles] [files]
-overview <file>           Read overview documentation from HTML file
-public                    Show only public classes and members
-protected                Show protected/public classes and members (default)
-package                  Show package/protected/public classes and members
-private                  Show all classes and members
-help                     Display command line options and exit
-doclet <class>           Generate output via alternate doclet
-docletpath <path>        Specify where to find doclet class files
-sourcepath <pathlist>    Specify where to find source files
-classpath <pathlist>     Specify where to find user class files
-exclude <pkglist>       Specify a list of packages to exclude
-subpackages <subpkglist> Specify subpackages to recursively load
-breakiterator            Compute 1st sentence with BreakIterator
-bootclasspath <pathlist> Override location of class files loaded
                        by the bootstrap class loader
-source <release>         Provide source compatibility with specified release
-extdirs <dirlist>       Override location of installed extensions
-verbose                  Output messages about what Javadoc is doing
-locale <name>           Locale to be used, e.g. en_US or en_US_WIN
-encoding <name>         Source file encoding name
-quiet                    Do not display status messages
-J<flag>                  Pass <flag> directly to the runtime system
```

```
Provided by Standard doclet:
-d <directory>           Destination directory for output files
-use                      Create class and package usage pages
-version                  Include @version paragraphs
-author                   Include @author paragraphs
-docfilessubdirs          Recursively copy doc-file subdirectories
-splitindex               Split index into one file per letter
-windowtitle <text>      Browser window title for the documentation
-doctitle <html-code>    Include title for the overview page
-header <html-code>      Include header text for each page
-footer <html-code>      Include footer text for each page
-top <html-code>         Include top text for each page
-bottom <html-code>      Include bottom text for each page
-link <url>               Create links to javadoc output at <url>
-linkoffline <url> <url2> Link to docs at <url> using package list at <url2>
-excludedocfilessubdir <name1>:.. Exclude any doc-files subdirectories with given name.
-group <name> <p1>:<p2>.. Group specified packages together in overview page
-nocomment                Suppress description and tags, generate only declarati
-nodeprecated             Do not include @deprecated information
-noqualifier <name1>:<name2>:... Exclude the list of qualifiers from the output.
-nosince                  Do not include @since information
-notimestamp              Do not include hidden time stamp
-nodeprecatedlist         Do not generate deprecated list
-notree                   Do not generate class hierarchy
-noindex                  Do not generate index
-nohelp                   Do not generate help link
-nonavbar                 Do not generate navigation bar
-serialwarn               Generate warning about @serial tag
-tag <name>:<locations>:<header> Specify single argument custom tags
-taglet                   The fully qualified name of Taglet to register
-tagletpath               The path to Taglets
-charset <charset>        Charset for cross-platform viewing of generated docum
-helpfile <file>          Include file that help link links to
-linksource               Generate source in HTML
-sourcetag <tab length>  Specify the number of spaces each tab takes up in the
-keywords                 Include HTML meta tags with package, class and member
-stylesheetfile <path>   File to change style of the generated documentation
-docencoding <name>      Output encoding name
```

La documentación del código desarrollado esta ligada al mismo y se genera automáticamente mediante javadoc

```
import java.util.*;
/**
 * Esta clase es de utilidad puntual para análisis de una evaluación manual de sis
 * de traducción. Cada objeto será una frase origen y una serie de traducciones.
 * Las traducciones tendrán el formato "n:frase" donde n es un número 1,2 ó 3.
 * Una de las traducciones no lo será en realidad, sino que se tratará de una copi
 * original y actúa como marca para la ordenación posterior
 */
public class AN1 extends Object {
private String origen;
private int ntrad;
private Vector traducciones= new Vector();
private static final String validCodes="123";

/** Crea un nuevo objeto aceptando la cadena origen.
@param s Cadena origen
@param n número de traducciones correcto (sin contar la repetición que actua c
public AN1(String s, int n) {origen=s; ntrad=n;}

/** Acepta una traducción */
public void add(String s) {traducciones.addElement(s);}

/** d
El fo
ES LE
```

Package	Class	Tree	Deprecated	Index	Help
PREV CLASS	NEXT CLASS				
SUMMARY: NESTED   FIELD	CONSTR   METHOD				
			FRAMES	NO FRAMES	All Classes
			DETAIL: FIELD	CONSTR	METHOD

### Class AN1

java.lang.Object  
|  
+--AN1

public class AN1  
extends java.lang.Object

Esta clase es de utilidad puntual para análisis de una evaluación manual de sistemas de traducción. Cada objeto será una frase origen y una serie de traducciones. Las traducciones tendrán el formato "n:frase" donde n es un número 1,2 ó 3. Una de las traducciones no lo será en realidad, sino que se tratará de una copia del original y actúa como marca para la ordenación posterior

### Constructor Summary

**AN1**(java.lang.String s, int n)  
Crea un nuevo objeto aceptando la cadena origen.

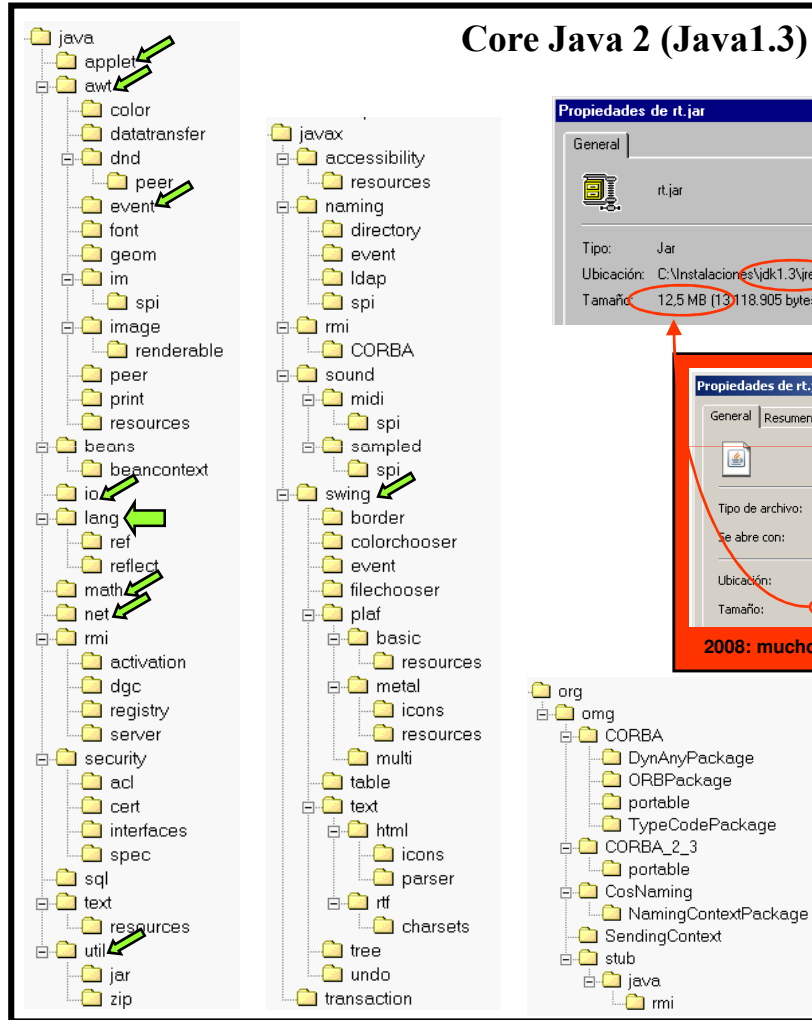
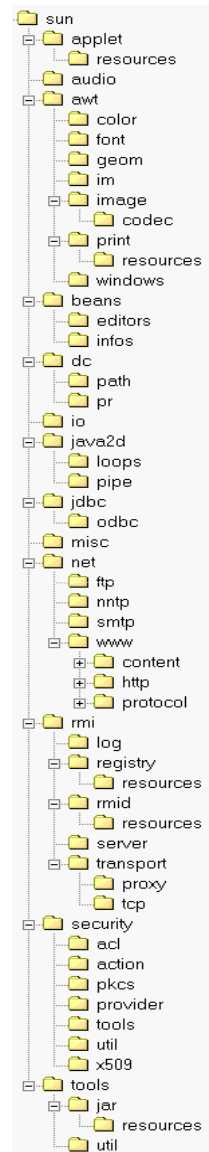
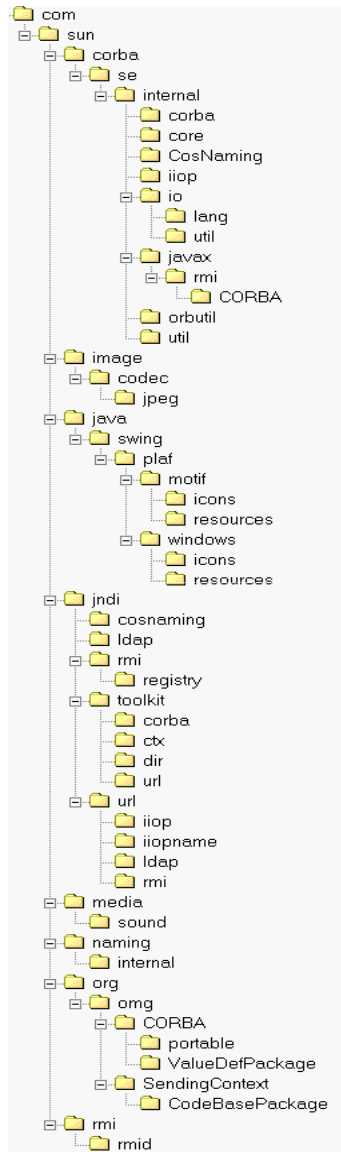
### Method Summary

void	add	(java.lang.String s)
		Acepta una traducción

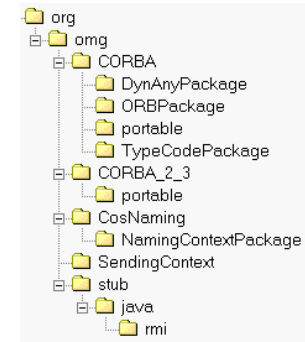
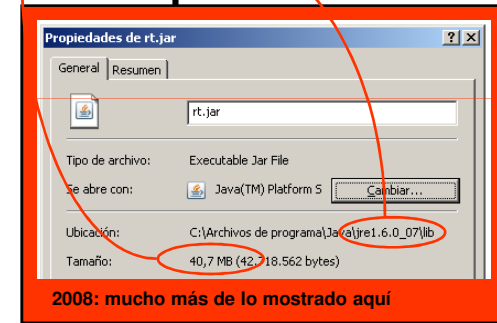
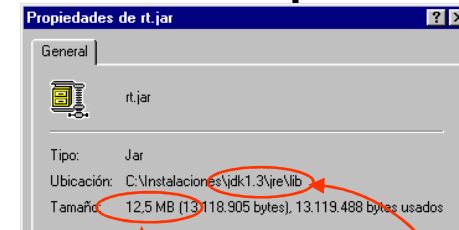


## 2. Desarrollo en Java

jre/lib - biblioteca "rt"



Contenido de C:\...\jdk1.3\jre\lib\rt.jar





## 2. Desarrollo en Java.

Overview (Java Platform SE 6) - Mozilla Firefox

Archivo Editar Ver Historial Marcadores Herramientas Ayuda

http://java.sun.com/javase/6/docs/api/

Overview Package Class Use Tree Deprecated Index Help

PREV NEXT FRAMES NO FRAMES

### Java™ Platform, Standard Edition 6 API Specification

This document is the API specification for version 6 of the Java™ Platform, Standard Edition.

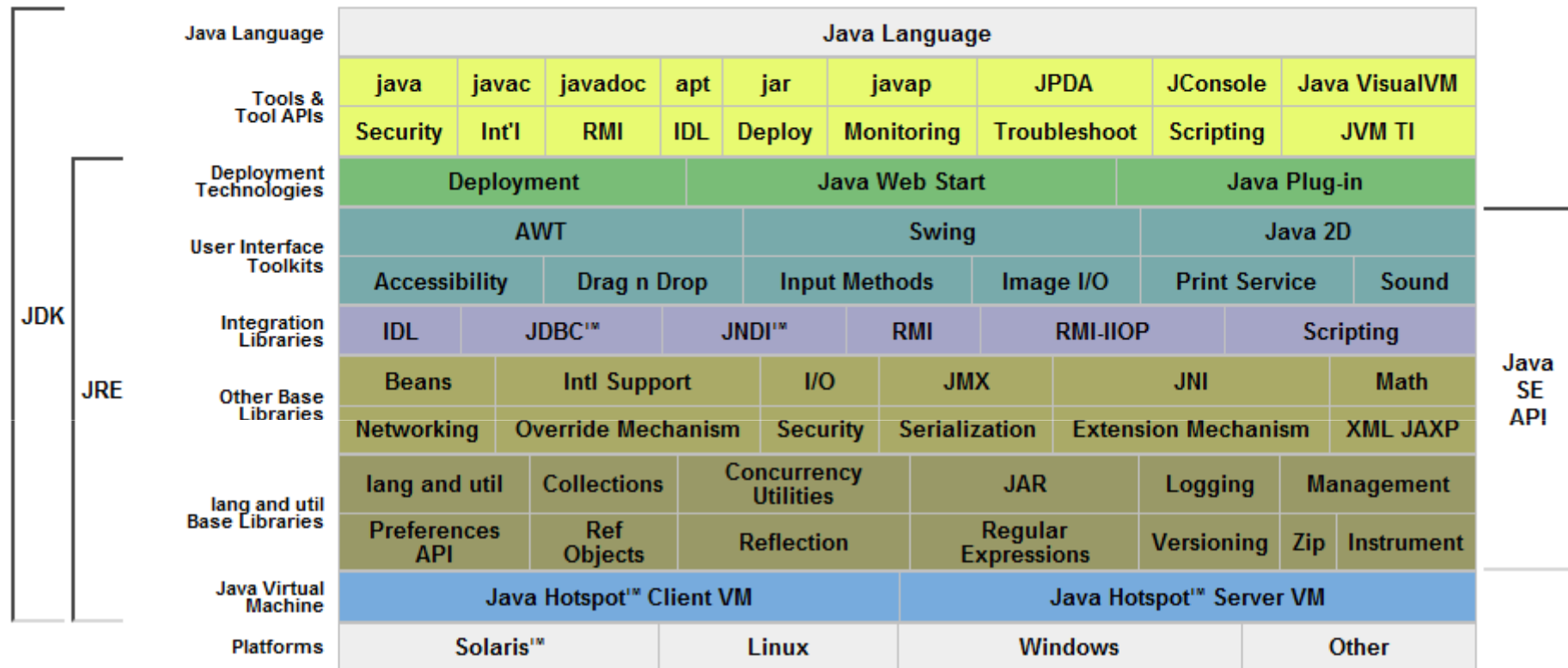
See: [Description](#)

Packages	
<a href="#">java.applet</a>	Provides the classes necessary to create an applet and the classes an applet uses to communicate with its applet context.
<a href="#">java.awt</a>	Contains all of the classes for creating user interfaces and for painting graphics and images.
<a href="#">java.awt.color</a>	Provides classes for color spaces.
<a href="#">java.awt.datatransfer</a>	Provides interfaces and classes for transferring data between and within applications.
<a href="#">java.awt.dnd</a>	Drag and Drop is a direct manipulation gesture found in many Graphical User Interface systems that provides a mechanism to transfer information between two entities logically associated with presentation elements in the GUI.
<a href="#">java.awt.event</a>	Provides interfaces and classes for dealing with different types of events fired by AWT components.
<a href="#">java.awt.font</a>	Provides classes and interface relating to fonts.
<a href="#">java.awt.geom</a>	Provides the Java 2D classes for defining and performing operations on objects related to two-dimensional geometry.
<a href="#">java.awt.im</a>	Provides classes and interfaces for the input method framework.
<a href="#">java.awt.im.spi</a>	Provides interfaces that enable the development of input methods that can be used with any Java runtime environment.
<a href="#">java.awt.image</a>	Provides classes for creating and modifying images.
<a href="#">java.awt.image.renderable</a>	Provides classes and interfaces for producing rendering-independent images.
<a href="#">java.awt.print</a>	Provides classes and interfaces for a general printing API.
<a href="#">java.beans</a>	Contains classes related to developing <i>beans</i> -- components based on the JavaBeans™ architecture.
<a href="#">java.beans.beancontext</a>	Provides classes and interfaces relating to bean context.
<a href="#">java.io</a>	Provides for system input and output through data streams, serialization and the file system.
<a href="#">java.lang</a>	Provides classes that are fundamental to the design of the Java programming language.

Terminado

## 2. Desarrollo en Java.

Imagen global del marco de trabajo Java



(VER SAUTRELA)

## 2. Desarrollo en Java.

Desensamblado y decompilación

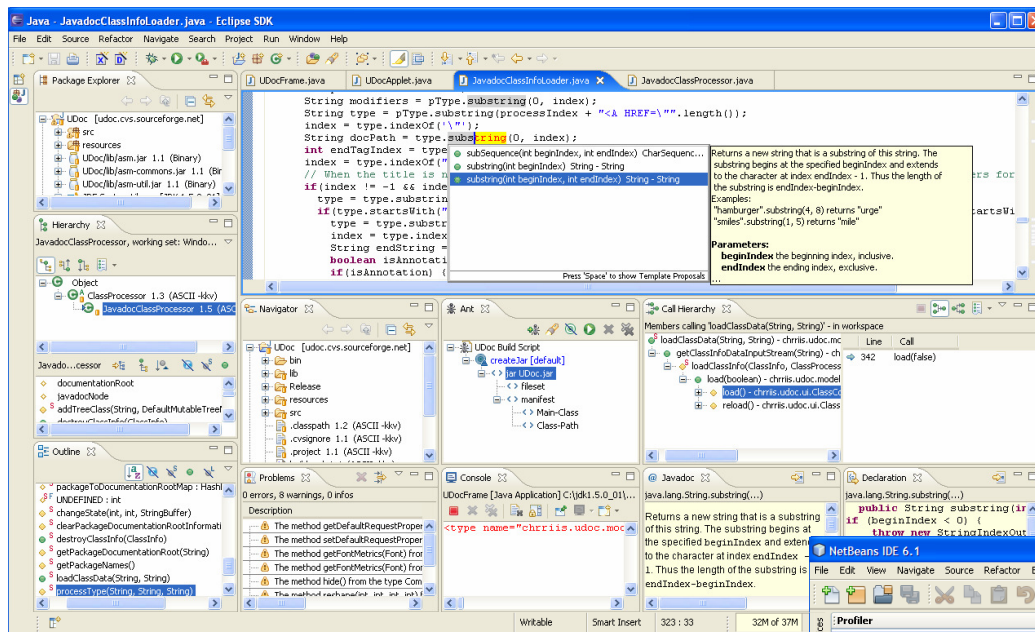
```
C:>javap -c HolaMundo
Compiled from "HolaMundo.java"
public class HolaMundo extends java.lang.Object{
public HolaMundo();
  Code:
    0:   aload_0
    1:   invokespecial   #1; //Method java/lang/Object."<init>":()V
    4:   return

public static void main(java.lang.String[]);
  Code:
    0:   getstatic       #2; //Field java/lang/System.out:Ljava/io/PrintStream;
    3:   ldc            #3; //String Hola, mundo
    5:   invokevirtual  #4; //Method java/io/PrintStream.println:(Ljava/lang/String;)V
    8:   return
}
```

(Decompilación: probar con Jode y SAUTRELA)

“Ofuscacion”

## 2. Desarrollo en Java.



ECLIPSE (.org)

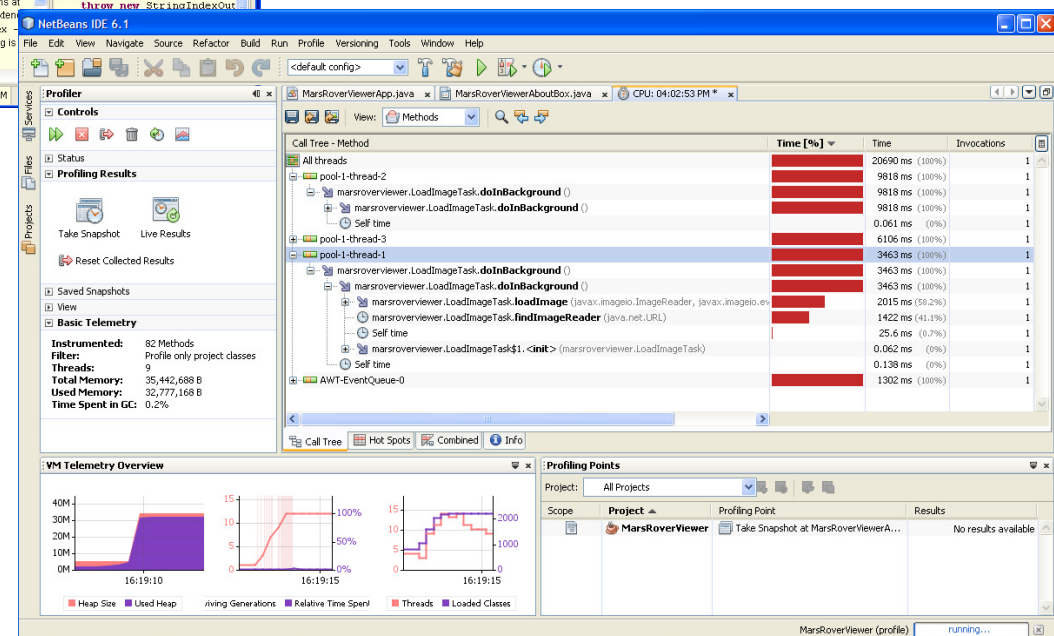
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## 2. Desarrollo en Java.

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**Plugin Spotlight:**  
[NetBeans 6.1 Support for Drupal 6.x](#)

Owner: [nairsuit](#) Rated by 1 users. ★★★★★

Drupal is an open-sourced Content Management System (CMS) that can be used to host a web-site with pluggable components like blogs, forums, posts, feeds, editorials, triggers, etc. NetBeans is an open-sourced IDE for primarily developing Java based desktop/mobile/web applications. Apart from these, it also provides support for a variety of other programming languages like C, C++, Ruby, etc. In an effort to combine both and extract the richness, we are providing support for Drupal 6.0 in NetBeans 6.1 IDE. As a part of this, for the first phase, we have documented the steps to be followed to host a Drupal based website through NetBeans. This would include downloading the Drupal CVS (PHP files) through NetBeans CVS plugin, creating a new PHP project, configuring the project with Apache WebServer and uploading and running the website through the IDE. In the second phase of the project, we have developed a Wizard plugin for assisting the development of a Drupal Module. The plugin provides a wizard to create a 'New Drupal Module' and on entering the details in the form, the necessary files with the template code would get generated automatically.  
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IDEs de ayuda al desarrollo  
evangelización

Una defensa de Netbeans frente al resto.  
(desde el desconocimiento del resto)

- El slogan de **Netbeans 6** es "The only IDE you need!", y probablemente no sea sólo un slogan sino una verdad absoluta.

- El competidor más importante es **Eclipse**, aunque también están en el juego **Jbuilder** (Borland) y **Java Studio (Creator/ Enterprise)**.

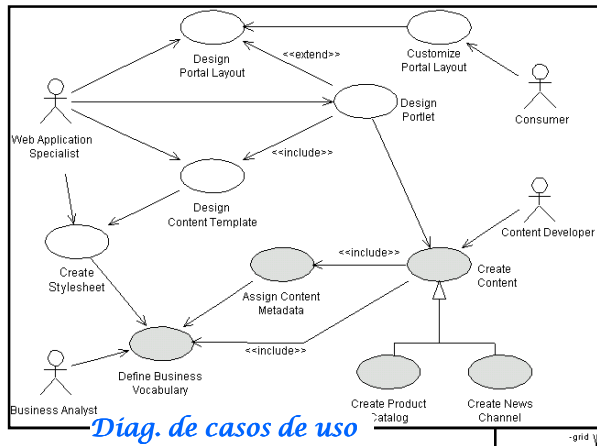
- **Jbuilder** fue importante hasta hace un par de años al destacar en varios aspectos (p.ej. integración de UML), pero los esquemas de desarrollo en comunidad de **Netbeans** y **Eclipse** lo han superado (sin dejar de ser un buen entorno)

- **Java Studio** es el IDE de SUN. Los padres de la tecnología Java han luchado siempre por liderar la oferta de entornos de desarrollo para Java con interesantes iniciativas y con dedicación de medios, pero su éxito ha sido más bien escaso. Su propia consciencia de este hecho les ha llevado, desde hace varios años, a apoyar **Netbeans** "oficialmente" (es el IDE descargable como "bundle" con el kit de desarrollo de la web de SUN) sin que hayan renunciado a su propio sistema (¿?)

- **Eclipse** puede ser comparable a **Netbeans** (¿superior?), pero su modelo de desarrollo es comercial, por lo que nos podemos encontrar con que una determinada capacidad que nos resulte interesante sea de pago (Actualmente no se exige el "ánimo" comercial y se sigue un esquema mixto)

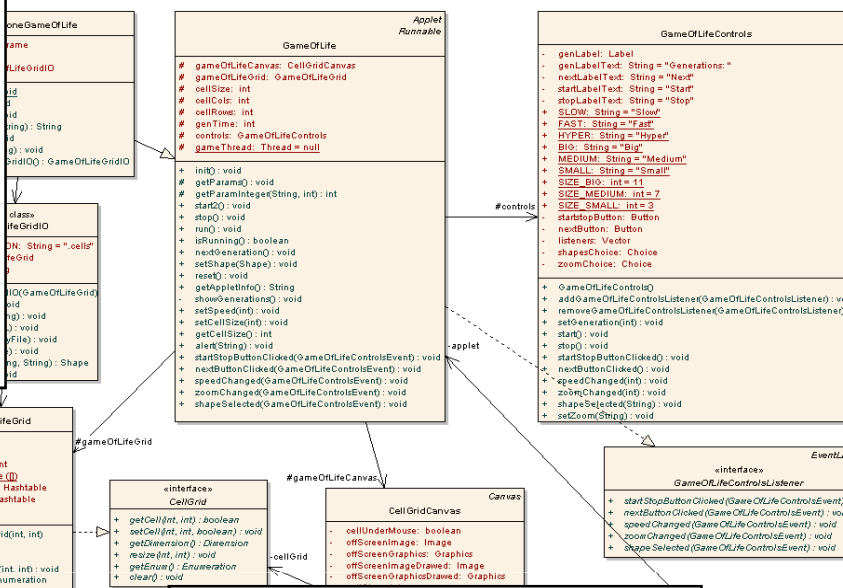
-La comparación de netbeans.org frente a eclipse.org muestra netamente una mejor atención en la primera, así como la aplicación de las últimas técnicas web (Web 3.0)

# 2. Desarrollo en Java

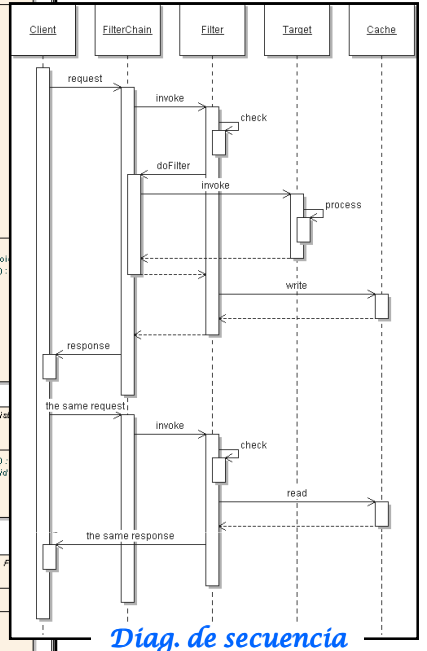


Diag. de casos de uso

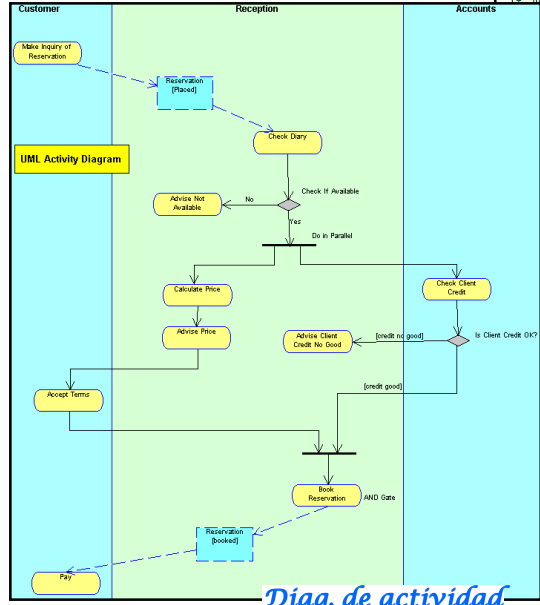
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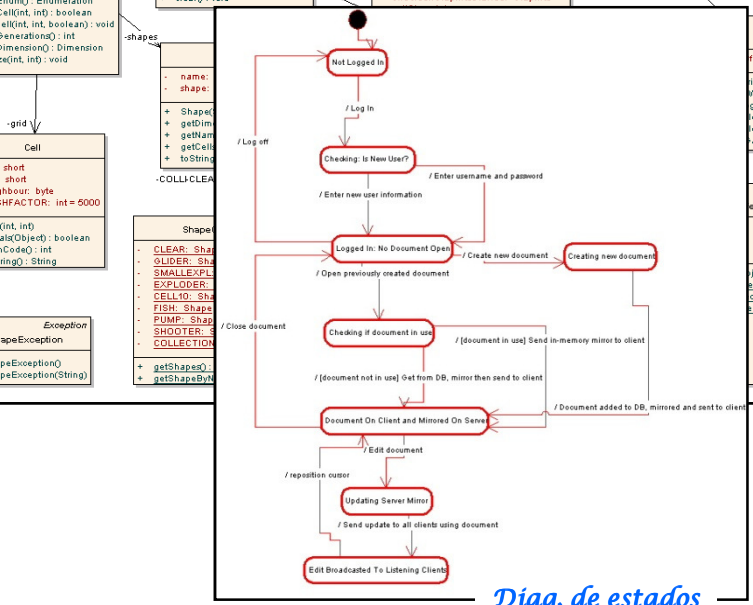
Desarrollo mediante modelado: UML



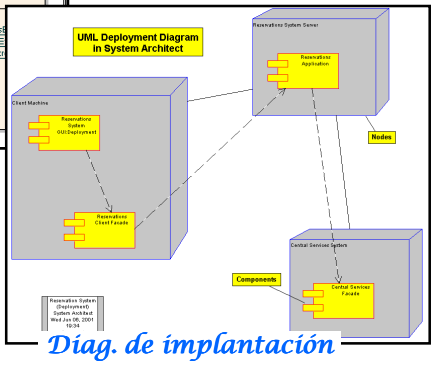
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