Java class loaders, class java.lang.Class

Class loaders

- BootStrap class loader

- Extension class loader

- System classpath class loader

- java.lang.Class

BootStrap class loader

<JAVA_HOME>/jre/lib

When a JVM starts up, a special chunk of machine code runs that loads the system classloader. This machine code is known as the Bootstrap / Primordial (or sometimes - Null) classloader.

It is not a Java class at all, as are all other classloaders. The bootstrap classloader is platform specific machine instructions that kick off the whole classloading process.

All classloaders, with the exception of the bootstrap classloader, are implemented as Java classes.
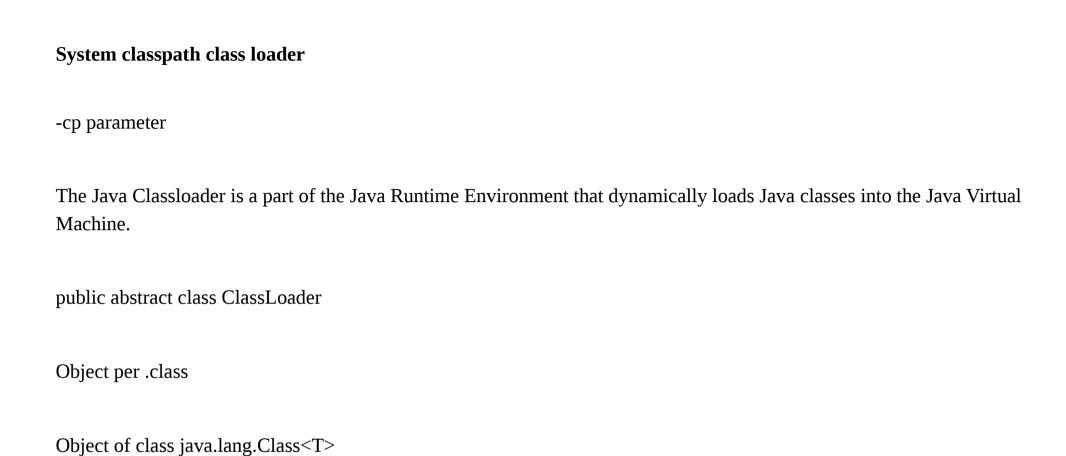
Extension class loader

<JAVA_HOME>/jre/lib/ext

The Extension Mechanism

Optional packages are packages of classes (and any associated native code) that application developers can use to extend the functionality of the core platform.

The extension mechanism allows the Java virtual machine (VM) to use the classes of the optional extension.

System classpath class loader

-cp parameter

The Java Classloader is a part of the Java Runtime Environment that dynamically loads Java classes into the Java Virtual Machine.

public abstract class ClassLoader

Object per .class

Object of class java.lang.Class<T>

java.lang.Class<T>

static Class<T> forName(String className)

String getCanonicalName()

Fields[] getField(String name)

Class[] getInterfaces()

Method[] getMethods()

Constructor[] getConstructors()

T newInstance()

(new Object()).getClass();

Object.class

int.class

(new int[1]).getClass();

int[].class