Java Programming AP Edition
U1C1 Introduction to Computer, Programs and Java

JAVA101
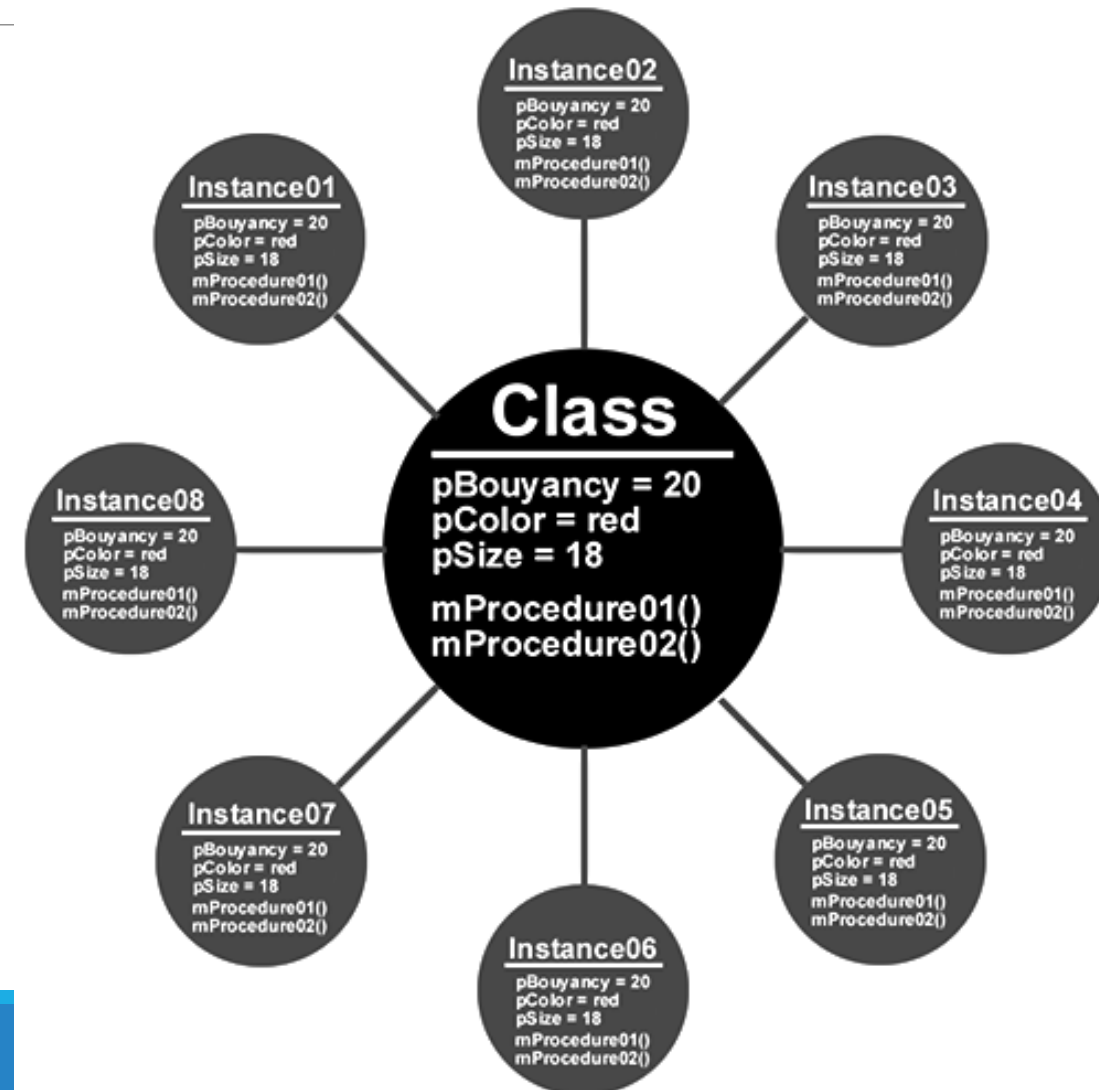
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Programming Language

JAVA Programming Language:

Object-oriented programming is at the core of Java. In fact, **all Java programs are object-oriented**, this isn't an option the way that it is in C++, for example. OOP is so integral to Java that you must understand its basic principles before you can write even simple Java programs. Therefore, this chapter begins with a discussion of the theoretical aspects of OOP.

Other languages shall be covered in the next lecture. Right here, we focused on Java Language.
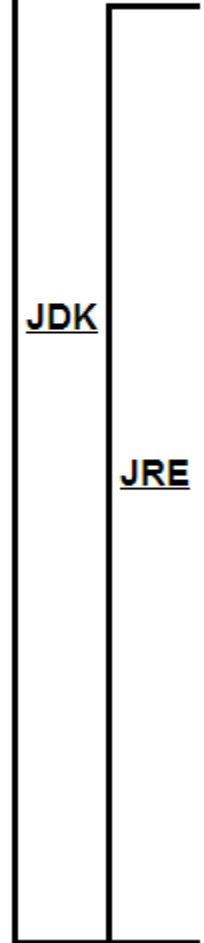
Java JDK JRE/API

Java Language	Java Language					
Tools & Tool APIs	java	javac	javadoc	jar	javap	JPDA
	JConsole	Java VisualVM	JMC	JFR	Java DB	Int'l	JVM TI
	IDL	Deploy	Security	Troubleshoot	Scripting	Web Services	RMI
Deployment	Java Web Start			Applet / Java Plug-in		
	JavaFX					
User Interface Toolkits	Swing		Java 2D		AWT	Accessibility
	Drag and Drop		Input Methods		Image I/O	Print Service	Sound
Integration Libraries	IDL	JDBC		JNDI	RMI	RMI-IIOP	Scripting
Other Base Libraries	Beans	Int'l Support		Input/Output		JMX
	JNI	Math		Networking		Override Mechanism
	Security	Serialization		Extension Mechanism		XML JAXP
lang and util Base Libraries	lang and util		Collections		Concurrency Utilities	JAR
	Logging		Management		Preferences API	Ref Objects
	Reflection		Regular Expressions		Versioning	Zip	Instrumentation
Java Virtual Machine	Java HotSpot VM					

JDK

JRE

Java SE API

JAVA API for iPhone and Android

API for Java 8
more packages for developers!

Carrier 📶	2:21 PM	▬
‹ Back	Packages-java.*	
java.applet		ⓘ
java.awt		ⓘ
java.awt.color		ⓘ
java.beans		ⓘ
java.io		ⓘ
java.lang		ⓘ
java.math		ⓘ
java.net		ⓘ
java.nio		ⓘ
java.rmi		ⓘ
java.security		ⓘ
java.sql		ⓘ
java.text		ⓘ

Android and Java

Android Java =
Java SE –
AWT/Swing +
Android API

ANDROID SHUNS JAVA

Java Source Code → Java Compiler → Java Byte Code → Java Byte Code / Java VM

Java Source Code → Java Compiler → Java Byte Code → Dex Compiler → Dalvik Byte Code → Dalvik Executable / Dalvik VM
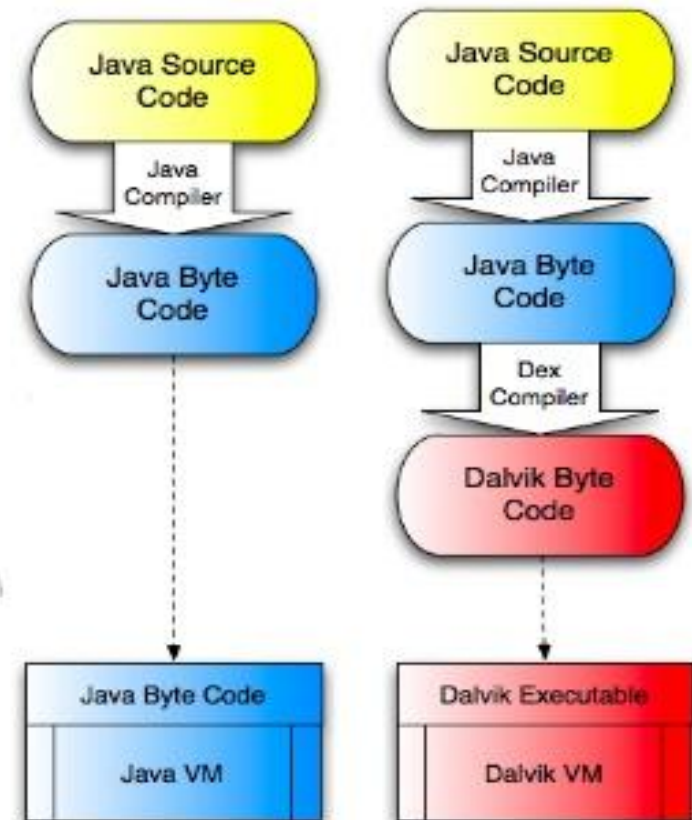
Structure of the Java API

Package   **Class**   **Methods**

| java.io |

| java.lang |

| java.applet |

| Integer |

| Math |

| String |

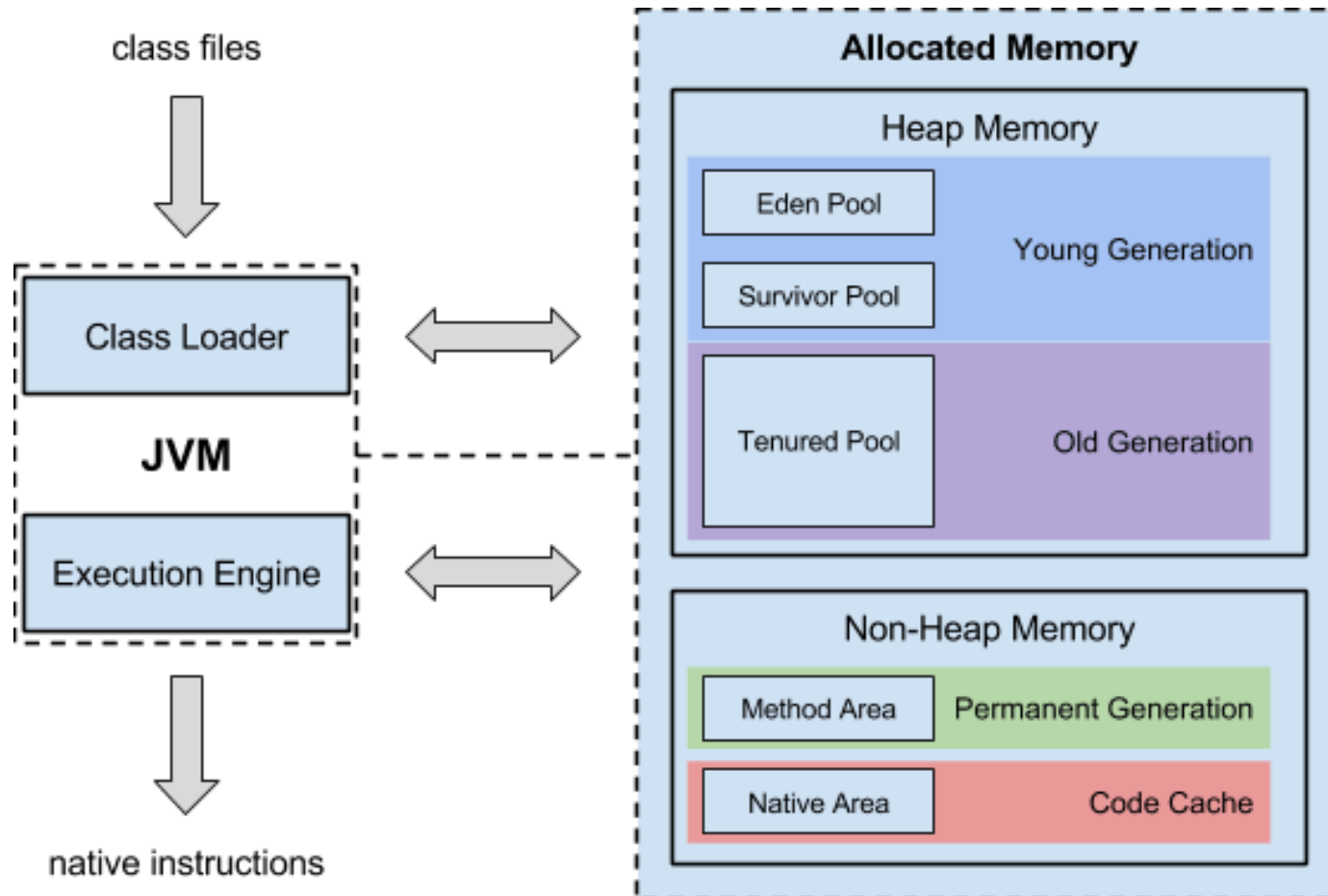| static double sin(double a) |

| static int round(float a) |

| static double sqrt(double a) |
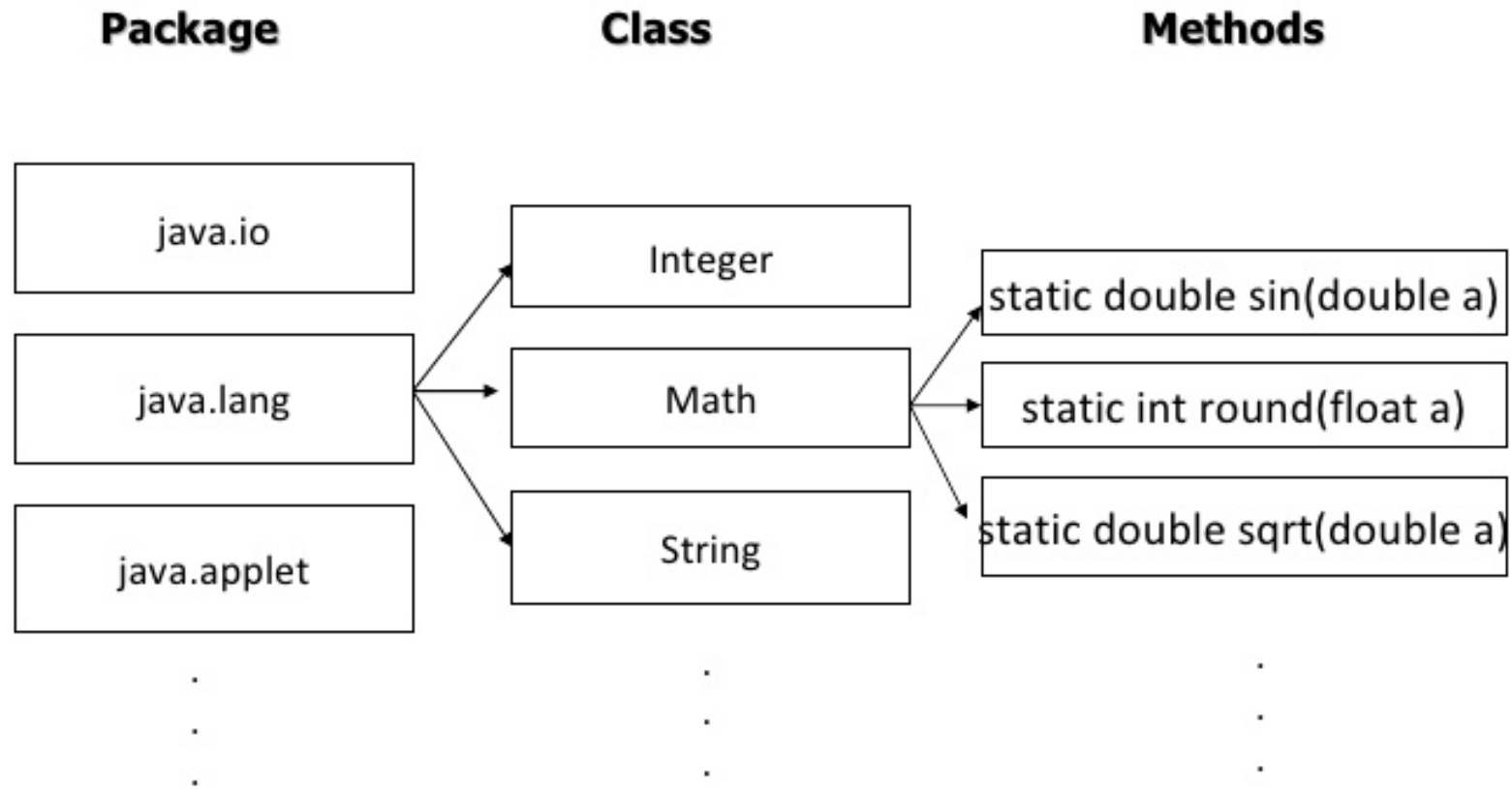
Java Virtual Machine (JVM)

Java IDE
(Text Editor + Project/Package Management + Compiler Access + Documentation Generation + Debugger/Tester)