Setting up a Java Development Environment – Sander Mak

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-Java Complier (javac) compiles the source code into Java Byte Code (.class files)

Native: it is designed to run on a particular platform (usually an OS)

-Java byte code is not natively executable on OS

-Byte code in Hello.class is system independent (can run on Mac or Windows)

Need Jave SE and JVM to run Byte Code

-We use the System Class which we did not write (part of Java SE API)

-JVM runs our Hello.class file, knows how to read bytecode

JDK

-combination of JVM and Java SE, java/javac

-must need to develop java app

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Java Enterprise Edition

-Libraries are geared towards web app, enterprise app integration, db access

-Not part of JDK

-Oracle has stopped Java EE but has donated all the APIs to Eclipse foundation (Jakarta EE)

JAVA\_HOME

-should point to the installation directory of the JDK

PATH

-update the OS’s PATH variable to include the directory of the JDK that contains tools look the javac and runtime so we can use that from the command prompt anywhere

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System Env variables

-for all users

-don’t forget to put bin for PATH, its where all the JDK executable tools live (javac and runtime)

Now can use these tools from the command line directly

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-Typically Extract there but alternative is using a package manager (Homebrew)

Hello.class

-contains the bytecode we can now run using JVM

-java Hello //no .class JVM will automatically look for hello.class in the current directory

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Using IntelliJ for Java Development

Pros

-Syntax Highlighting



Package

-a namespace

-Going to take two classes and put them inside of a Java Package and it will tell you what package it is in

Packaging Java Apps

A close-up of a computer screen

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-Java apps are packaged into JAR files (a zip file containing your apps classes)

-We want to distribute executable code, so inside of a JAR file, you will find compiled classes containing the platform independent bytecode generated by Javac (java compiler)

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-jar helps us to create Jar files

-If we want to start this JAR file by invoking JVM, we use the java -jar command

-Error means it doesn’t know which class contains the main method, add it to the metadata

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-Also build the project first

-Packaging Jar files is not a manual activity, part of larger automated build process

A screenshot of a software application

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