

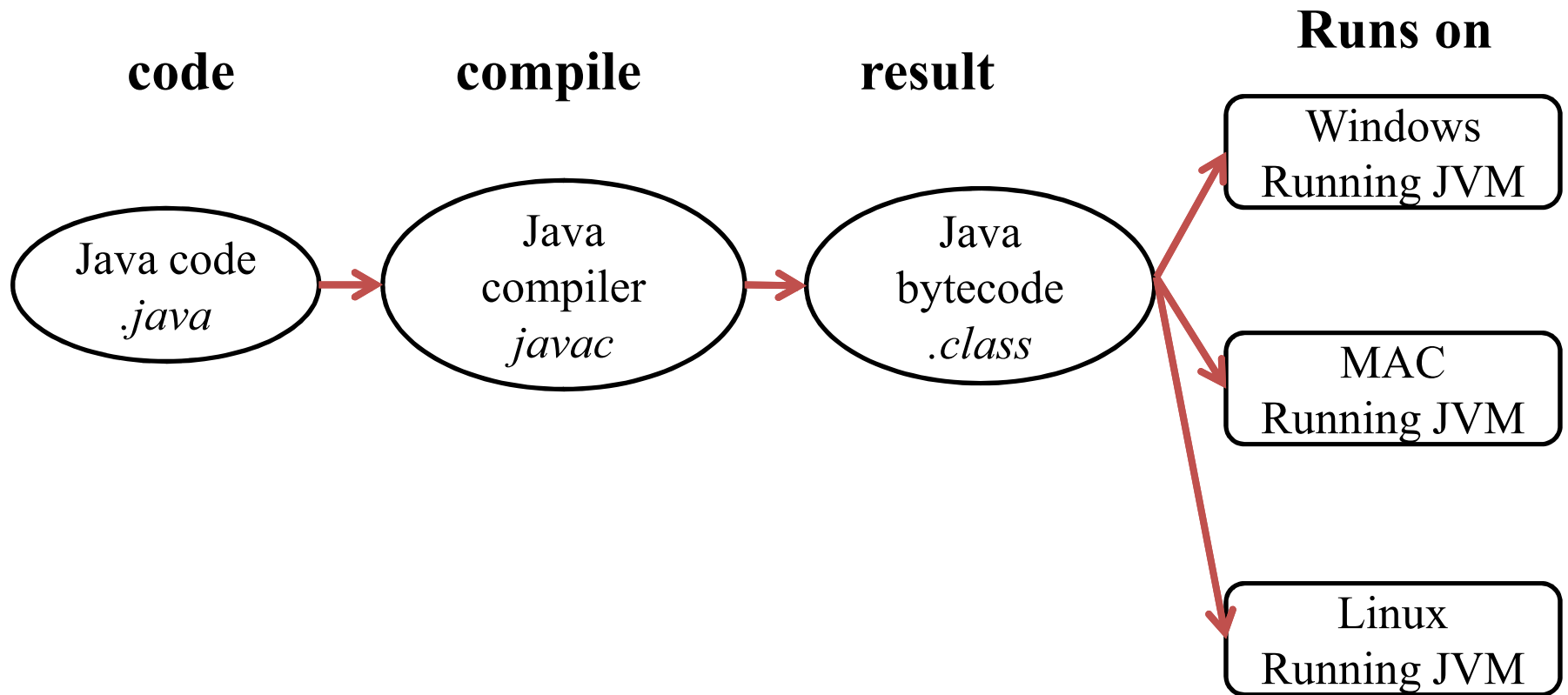
# Introduction to JAVA

# JAVA Basics

# Introduction

- Developed by James Gosling at Sun Microsystems.
- It was introduced in 1995.
- Is one the fastest growing programming technologies of all time.

# The java environment



# The Java programming environment

- Java programming language specification
  - Syntax of Java programs
  - Defines different constructs and their semantics
- *Java byte code*: Intermediate representation for Java programs
- *Java compiler*: Transform Java programs into Java byte code
- *Java interpreter*: Read programs written in Java byte code and execute them
- *Java virtual machine*: Runtime system that provides various services to running programs
- *Java programming environment*: Set of libraries that provide services such as GUI, data structures, etc.
- *Java enabled browsers*: Browsers that include a JVM + ability to load programs from remote hosts

# Bytecode

- Java programs are translated into an intermediate language called **bytecode**.
- Bytecode is the same no matter which computer platform it is run on.
- Bytecode is translated into native code that the
- computer can execute on a program called **Java Virtual Machine (JVM)**.
- The Bytecode can be executed on any computer that has the JVM. Hence Java's slogan, "Write once, run anywhere".

# Important things to know

- Java is CASE SENSITIVE!!
- Whitespace is ignored by compiler
- File name has to be the same as class name in file
- Need to import necessary class definition

# How to install JAVA

- The Java Development Kit (JDK) is a collection of software available at no charge from Sun Microsystems, Inc. The v1.3 download is available at [java.sun.com](http://java.sun.com).