

Welcome to Java!!!

- To become successful with Java, you must think of everything as *Objects*!!!
- The challenge before you is to find objects in your everyday life and try to describe their attributes and behavior:
 - A car
 - What does a car consist of (Doors, Windshield, etc)
 - You can tell the car to speed up/down
 - You can tell the car to roll the windows up/down

Welcome to Java!!! (cont)

- A car engine
 - Give it more/less gas
 - Ask it how long it has been since the oil has been changed
- A person
 - Gender, Height, Weight
 - Ask it to walk forward
- An event that has occurred in a Graphical User Interface (GUI) (for example, a mouse click)
 - Ask it where the click occurred
 - How long the mouse button was held down

Welcome to Java!!! (cont)

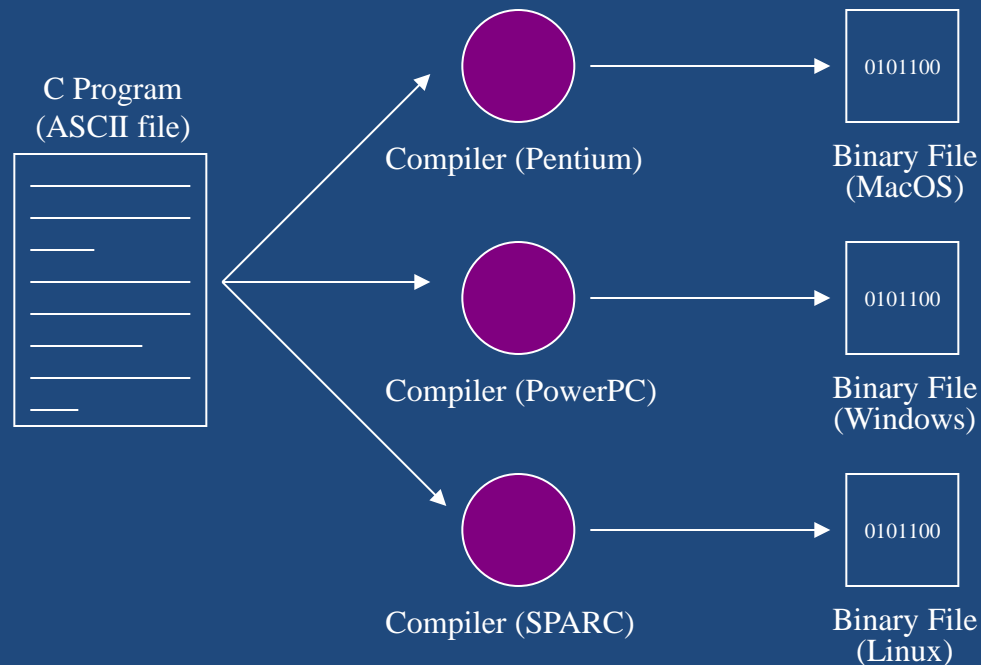
- From this point forward, think of everything as an object that can
 - Be queried (of information contained in the object)
 - Told to do something
 - Be combined with other objects to collectively perform some tasks

What is Java?

- Object Oriented Programming Language
- Robust and Secure
- Architecture-neutral and portable
- High Performance
- Interpreted Language
- Multi-Threaded

What is Java? (cont)

- Platform independent (cont)
 - Traditional compiled programs (i.e. C program)

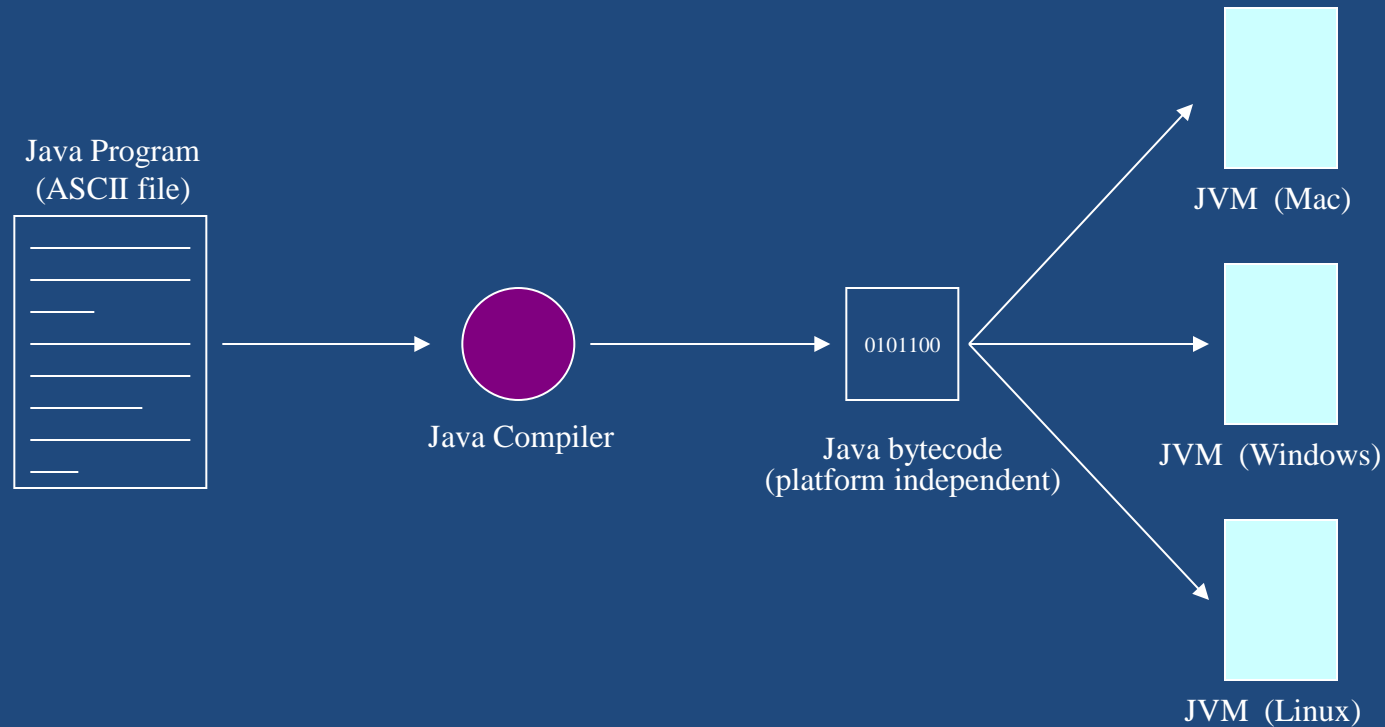


What is Java? (cont)

- Platform independent (cont)
 - Java compiles to bytecode which is then executed on a virtual machine (referred to as the Java Virtual Machine - JVM)
NOTE: The JVM is also referred to as the Java interpreter or Java runtime
 - A JVM is created for each type of computer and operating system and can be used to execute Java application programs and Java applets within a browser context (more on this later)

What is Java? (cont)

- Platform independent (cont)



What is Java? (cont)

- Java is Object Oriented
 - Java borrows many concepts from C++
 - Everything in Java is based on objects!!!
 - Many people say that Java is what C++ should have been since
 - Java emphasizes simplicity
 - Removes the most error prone, complex and troublesome aspects of C++

Java Compared to C++

C++	Java
Compatible with C	Not compatible with previous languages
Compiled to native machine language	Compiled to bytecode
Write once, compile anywhere	Write once, run anywhere
Exposes low level system functions	Runs in protected virtual machine (JVM)
Explicit memory management and pointers	Managed memory access
Multiple Inheritance	Limited to single inheritance