

# Core Java – Getting Started (Java-basic)

Fresher Learning Program  
January, 2013

People matter, results count.



# Objectives of Java-basic

## ■ Purpose:

- Basic understanding of Java as a programming language and JVM
- To understand benefit of Java

## ■ Product:

- To be able to write a java program
- Understand java source file, how to compile and run java program
- Starting point of a java program
- How to comment in Java
- How to pass run time arguments

## ■ Process:

- Theory Sessions followed by couple of assignments
- A review at the end of the session and a Quiz.

# Topics of Java-basic

- Introduction To Java
  - All About Java
  - History
  - What is Virtual Machine?
  - About the JVM
  - Java Class Libraries
- Java Class
- JVM
- About the Java Program
- Advantages
- Recap

# All about Java

## All About Java

- **What is Java?**
  - Programming language based off of C and C++
  - Designed to be written once and run anywhere
  - Runs on a virtual machine
  - Very similar to C#
  - Object Oriented
  - Statically Typed
- **It is a platform**

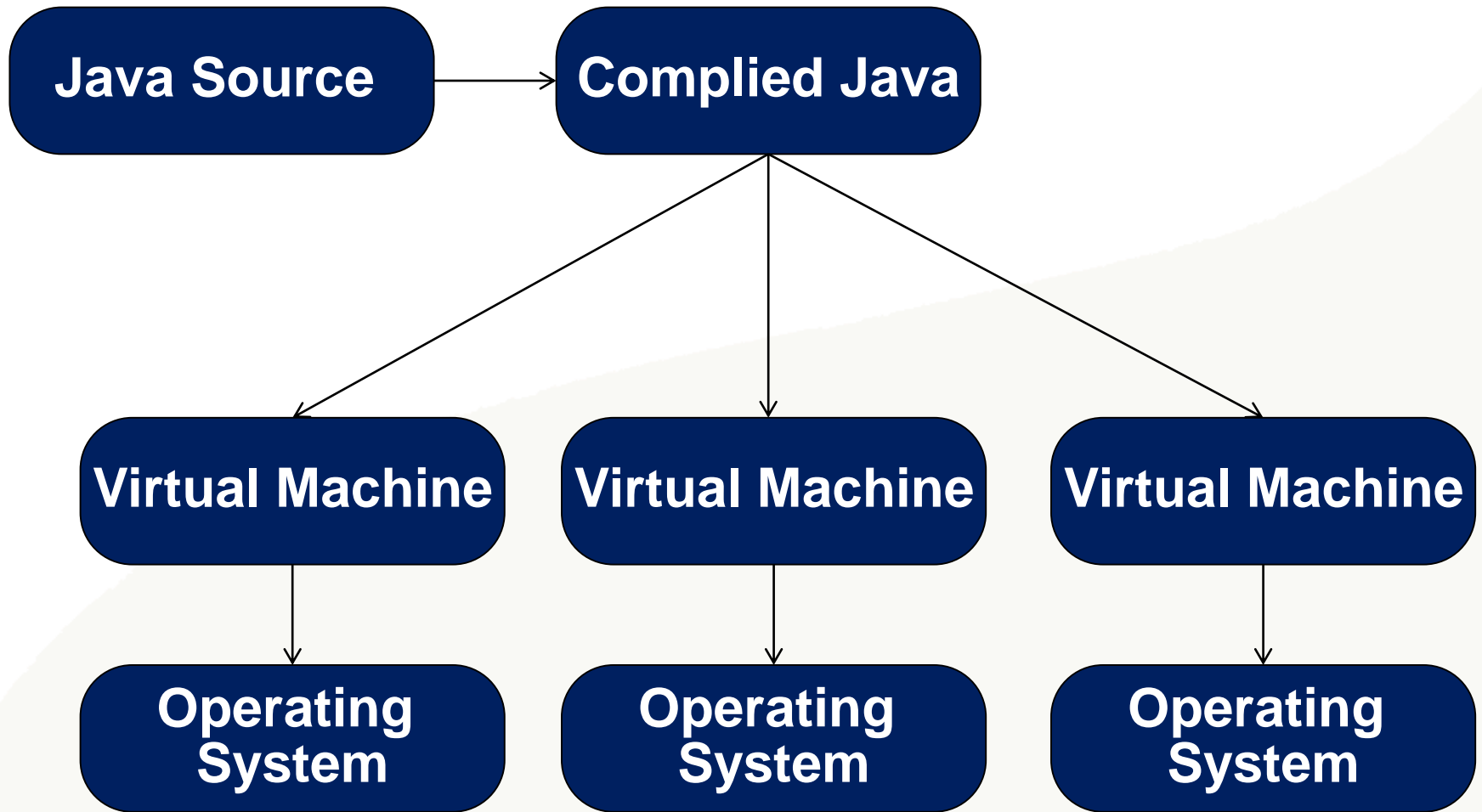


## History

- Developed by James Gosling at Sun Microsystems
- Released in 1995
- Many releases since then
  - JDK 1.0 (January 23, 1996)
  - JDK 1.1 (February 19, 1997)
  - J2SE 1.2 (December 8, 1998)
  - J2SE 1.3 (May 8, 2000)
  - J2SE 1.4 (February 6, 2002)
  - J2SE 5.0 (September 30, 2004) - *Big language changes*
  - Java SE 6 (December 11, 2006)
  - Java SE 7 (July 28, 2011)
- Oracle acquired Sun in 2010



# What is Virtual Machine?



# About the JVM

## About the JVM

- **Abstraction layer between operating system and programming language / environment**
- **Runs Java Bytecode**
  - Assembly language for JVM
  - More than just Java
- **Garbage collection**
- **Safety**



# Java Class Libraries

- I/O
- Networking
- Math
- Collections
- Regular Expressions
- Logging
- Graphics and UI
- Text Formatting
- XML
- Remote Method Invocation
- Security
- Databases
- Reflection
- More...



# Introduction

- Java is a simple and yet powerful object oriented programming language and it is in many respects similar to C++.
- Java originated at Sun Microsystems, Inc. in 1991.
- It was conceived by James Gosling at Sun Microsystems, Inc.
- It was developed to provide a platform-independent programming language.



# Java Class

```
/** The HelloWorldApp class implements an application that  
 * simply displays "Hello World!" to the standard output.  
 */
```

multi-line  
comment

class

```
class HelloWorldApp {  
    reserved word
```

method

```
    public static void main(String[] args) {
```

identifier

```
        String hello = "Hello World!";
```

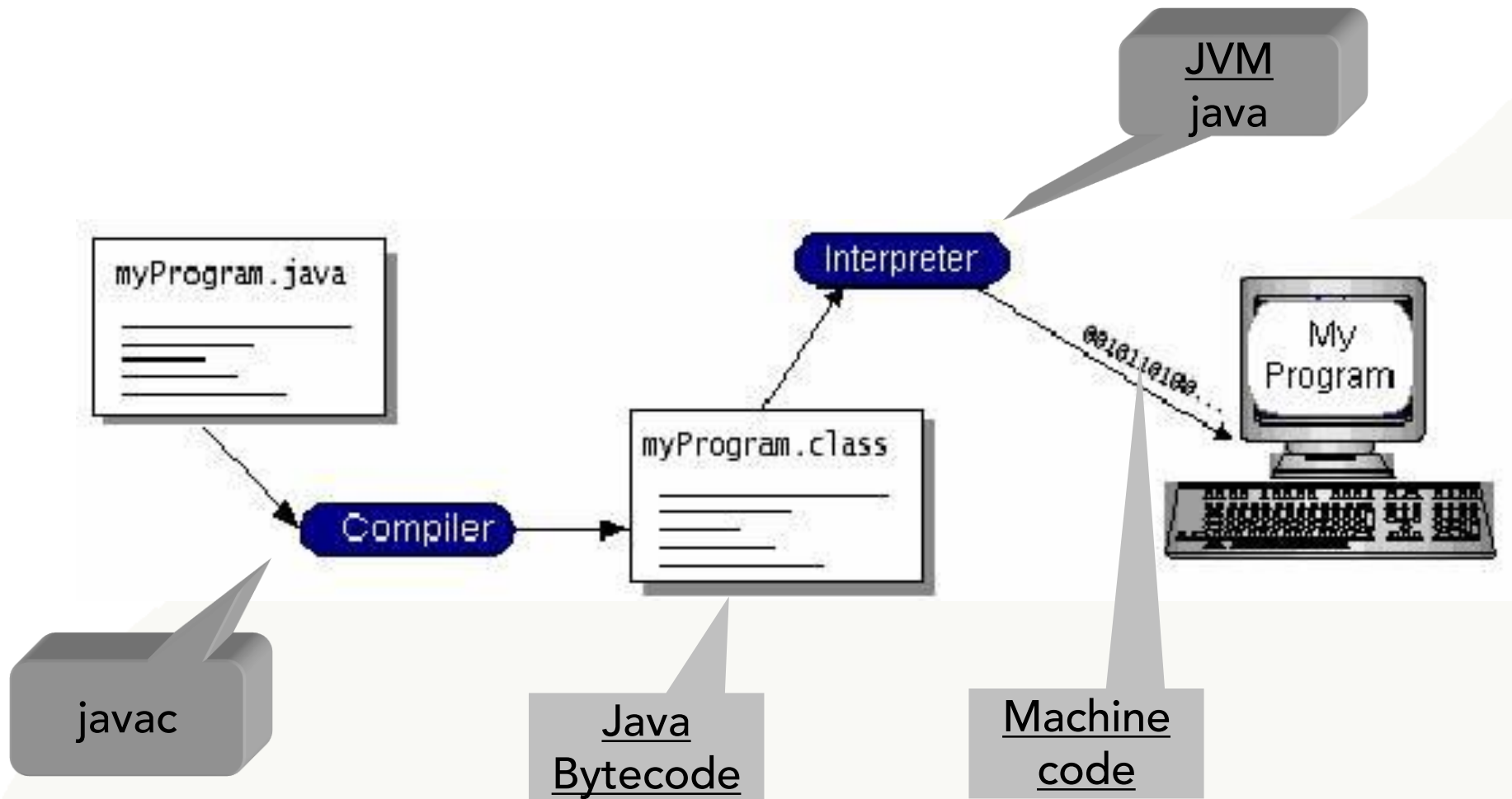
Single line  
comment

```
        System.out.println( hello ); //Display the string.  
    }
```

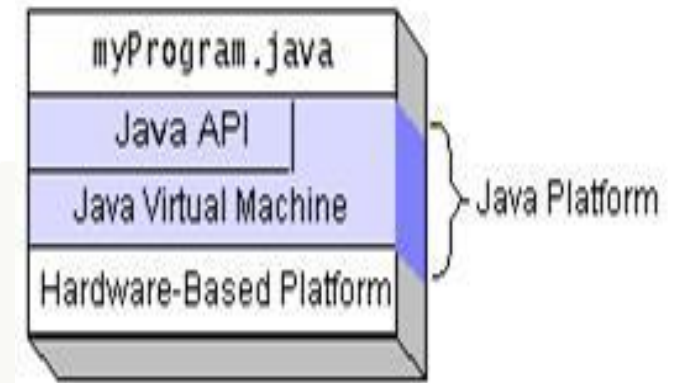
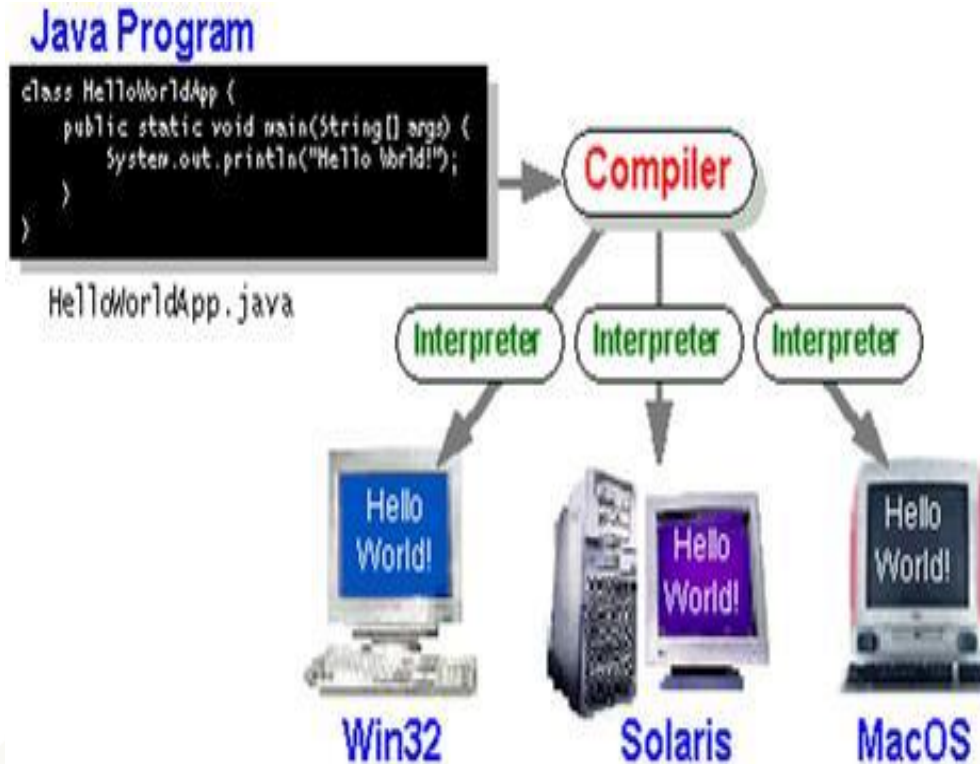
```
}
```

(General discussion)

# JVM Introduction



# JVM Introduction....contn...



# About the Java Program

- public- main(..) is the first method called by java environment when a program is executed so it has to be accessible from java environment. Hence the access specifier has to be public.
- static: Java environment should be able to call this method without creating an instance of the class , so this method must be declared as static.
- void: main does not return anything so the return type must be void
- The argument String indicates the argument type which is given at the command line and arg is an array for string given during command line.

# Java features

- **The following are some of them:-**

Simple

Reusable

Portable (Platform Independent)

Distributed

Robust

Secure

High Performance

# Recap (Keywords)

Starting point

Java class

RUN a java program

Platform independence

JVM

How to compile

Run time argument

Thank You For Your Time



People matter, results count.

