



# Introduction to Java and Eclipse



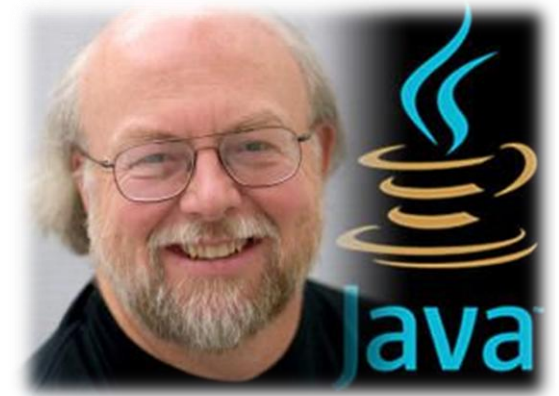
# CONTENTS



- **Objectives**
  - To introduce Java Technologies and the Java language
  - Take a look around Eclipse
- **Contents**
  - The Java story
  - Basic code construction
  - Your first application
- **Hands on Labs**
  - Create and build a simple program

# What is Java?

- **Originally named 'Oak' (1991)**
  - Sun (*MicroSystems*) project lead by *James Gosling*
- **Created for enabling devices with different CPUs to share s/w**
- **Java was used for web pages with multi-media components**



- **So, what is Java?**

- A programming language
- A development environment

**Java Development Kit (JDK)**

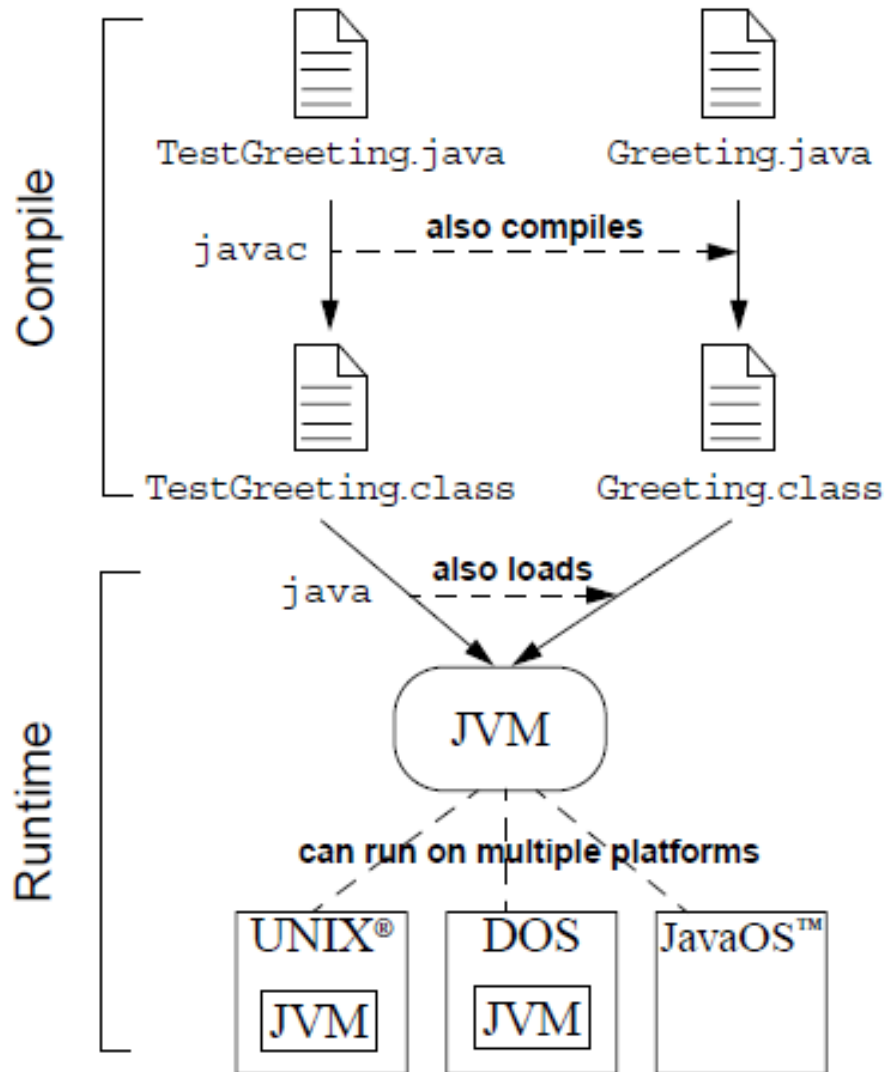
- An application environment

**Java runtime Environment (JRE)**

- A deployment environment

Java SDK (Software Development Kit)  
Java's **F**ramework **C**lass **L**ibrary for all apps

# Compiling and Running a Java App



```
public class Greeting {  
    public static void main(String[ ] args) {  
        ...  
        ...  
    } // end of main method  
}
```

Greeting.class  
**Byte code**

# Java Packages

## Used to group types and avoid naming conflicts

- Affects location of the compiled code

```
package qa.apprentice; ← One of these at top of every file

public class Program {
    public static void main(String[] args ) {
        . . .
    } // end of method Main
}    // end of class Program
```

```
package qa.hr;

public class Timetable {
    // code
}
```

```
package qa.apprentice;

public class Timetable {
    // code
}
```

# Java Packages and import statements

```
package qa.apprentice;

import java.io.*;

public class Program {
    public static void main(String[ ] args)
    {
        TimeTable qaaTimeTable;

        FileReader fr;

        ... using 'fr' and qaaTimeTable ...
    }
}
```


Review



- **Java**
- **Basic code construction in Java**
  - packages
- **How programs are compiled and run**

# HANDS ON LABS

- **In this lab you will learn:**
  - How to create and build and run a program
  - How to use an IDE to create an application
  - Compile code in Command line
  - Naming convention
  - The role of the `main()` method
  - The role of packages



This lab forms the foundation for all the other labs.  
Please make sure you complete this lab and understand each step



