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Java Foundations

1-2
Java: A Brief History

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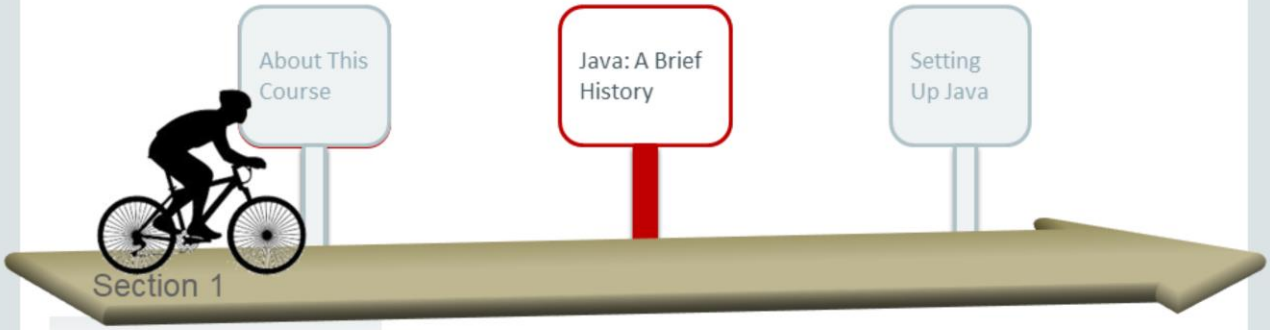
Objectives

This lesson covers the following objectives:

- Show examples of how people interact with Java in their daily lives
- Summarize the history of Java
- Understand Java technology product groups

Topics

- Brief Description of Java
- Brief History of Java
- Java Technology Product Groups



20 Years of Java

2015 marks 20 years since the first version of Java was released for public use.

Java Technology

- Java is the global standard for developing and delivering embedded and mobile applications, games, web-based content, and enterprise software.
- Java enables you to efficiently develop, deploy, and use exciting applications and services.
- From laptops to data centers, game consoles to scientific supercomputers, cell phones to the Internet, **Java is everywhere!**

Java's Place in the World

- Java is the single most widely used development language in the world today.
- Over **9 million** developers say they spend at least some of their time developing in Java, according to a recent Evans Data study.
- That's out of a world population of about **14 million** developers.

Evans Data, 2009, The 2009 Global Developer Population and Demographics Survey

Java's Place in the World

9 Million
Java Developers

7 Billion
Devices

#Java20

Java Desktops

- 1.1 billion desktops running Java (Nielsen Online, Gartner 2010)
- 930 million Java Runtime Environment (JRE) downloads per year (August 2009–2010)
- 9.5 million Java Development Kit (JDK) downloads per year (August 2009–2010)

The JDK and JRE are explained in the next lesson. But in short, the JRE is for users and the JDK is for developers.

Java Mobile Phones

3 billion mobile phones run Java.

Java TV and Card

100% of Blu-ray players run Java.

71.2 million people connect to the web on Java-powered devices (InStat 2010).

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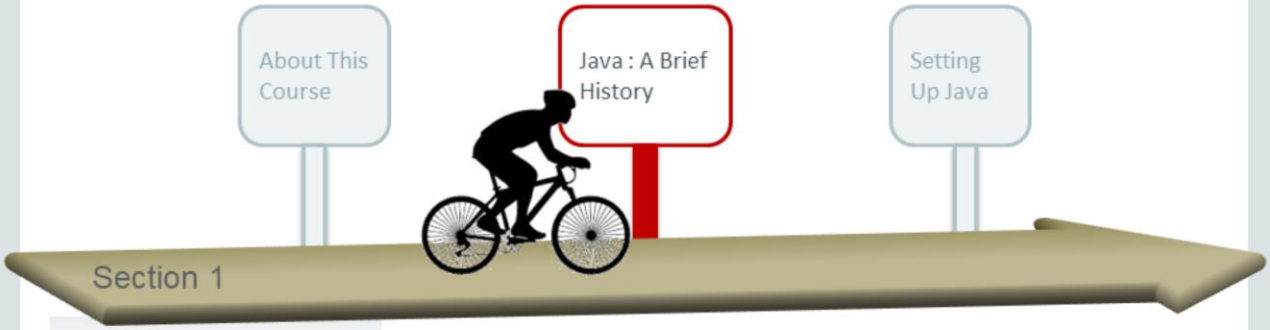


The Story of Java

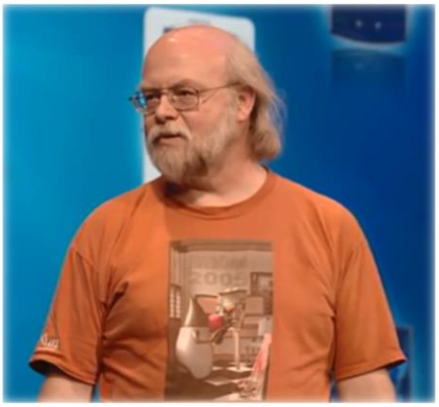
Once upon a time …

The Story of Java

- In 1990, Sun Microsystems began a research project to extend the power of network computing to consumer devices, such as video cassette recorders (VCRs) and televisions.
- The belief was that the next wave in computing was the union of digital consumer devices and computers.
- There were also frustrations with the use of the C/C++ language at Sun.

The Story of Java

- The Green Team, a team of highly skilled software developers at Sun under the leadership of **James Gosling,** developed Java (originally called Oak) as their solution.
- Devices with different central processing units (CPUs) could be connected and share the same software enhancements through a single programming language.



James Gosling is considered the "Father of Java."

The Story of Java

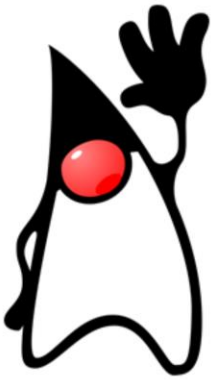
- This initial concept was ahead of its time, as several deals with consumer device companies were unsuccessful.
- The Green Team was forced to find another market for their new programming language.
- Fortunately, the World Wide Web was becoming popular and the Green Team recognized that the Oak language was perfect for developing web multimedia components to enhance webpages.

The Story of Java

- Initially, the Oak language was used for small applications, called **applets**, and programmers using the Internet adopted what eventually became the Java programming language.
- The turning point for Java came in 1995, when Netscape incorporated Java into its browser.
- Oracle acquired Sun Microsystems in 2010.

Duke, the Java Mascot

- Duke is Java's official mascot.
- The original Duke was created by the Green Team's graphic artist, Joe Palrang.



Java Version History

Java Version	Year
JDK Alpha and Beta	1995
JDK 1.0	1996
JDK 1.1	1997
JDK 1.2	1998
JDK 1.4	2000
JDK 5	2004
JDK 6	2006
JDK 7	2011
JDK 8	2014
JDK 9	2017
JDK 10, JDK 11, JDK 12	2018-2019

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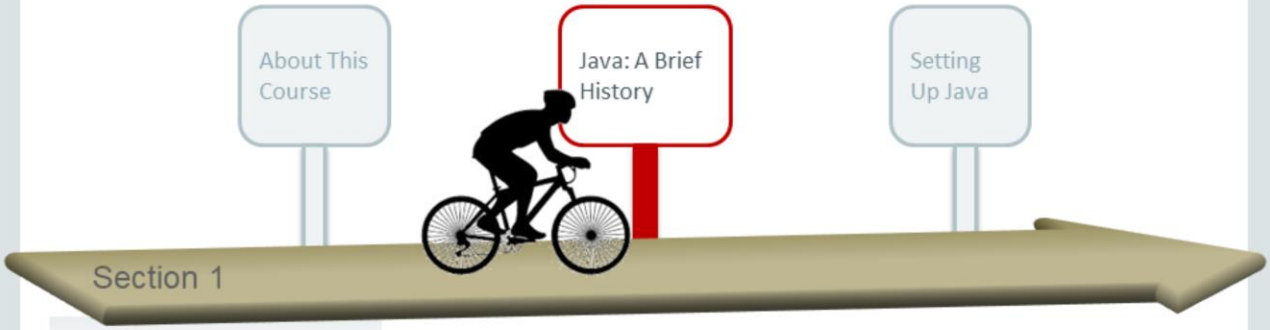
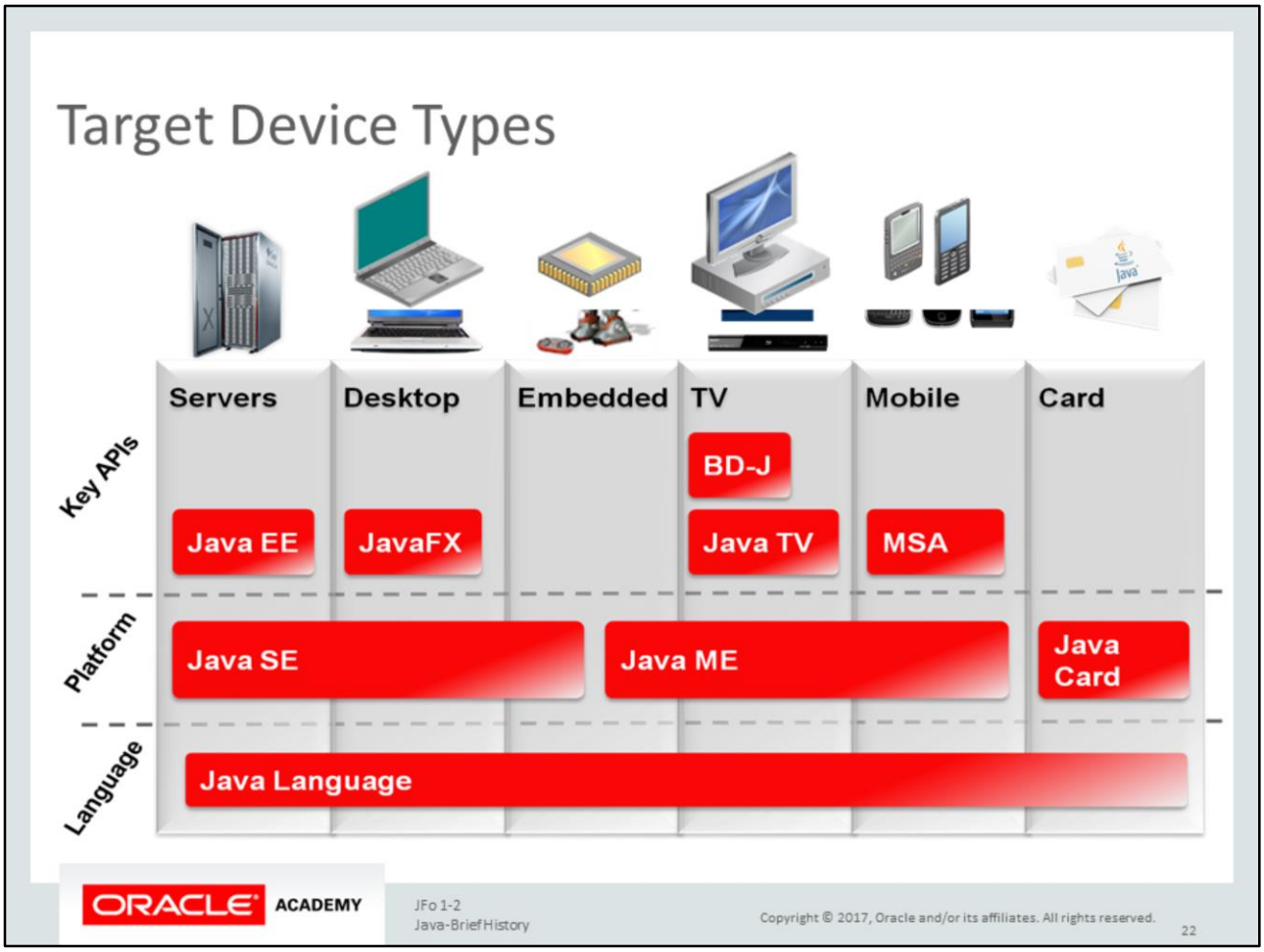


Java Technology Product Groups

There are four Java technology product groups and their target device types:

1. Java Platform, Standard Edition (Java SE)
2. Java Platform, Enterprise Edition (Java EE)
3. Java Platform, Micro Edition (Java ME)
4. Java Card



The figure illustrates the Java technology product groups and their target device types.

Terms:

- Application Programming Interface (API)
- Blu-ray Disc Java. (BD-J)
- Mobile Service Architecture (MSA)

Java SE

Is used to develop applications that run on desktop computers.

Java EE

Is used to create large enterprise, server-side, and client-side distributed applications.

Java EE is used to create large enterprise, server-side, and client-side distributed applications. For example, you can use the Java EE JDK to create a web shopping (eCommerce) application for a retail company's website.

Java EE is built on top of the Java SE platform, extending it with additional support for large-scale, high-performance enterprise software.

Some of the kinds of functionality supported include objects, UI, integration, persistence, transactions, and security.

Java ME

- Is used to create applications for devices with limited storage, display, and power capacities.
- Is used to develop applications for mobile phones, PDAs, TV set-top boxes, smart cards, Raspberry Pi, and many more.

Java Card

- 5 billion Java Cards are in use.
- It's used to create applications that can run securely on smart cards and similar small-memory devices.
- Java Card is typically used in the following areas (and many more):
  - Identity
  - Security
  - Transactions
  - Mobile phone SIMs

1.4 billion Java Cards are manufactured every year (InStat 2010).

Summary

In this lesson, you should have learned how to:

- Show examples of how people interact with Java in their daily lives
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