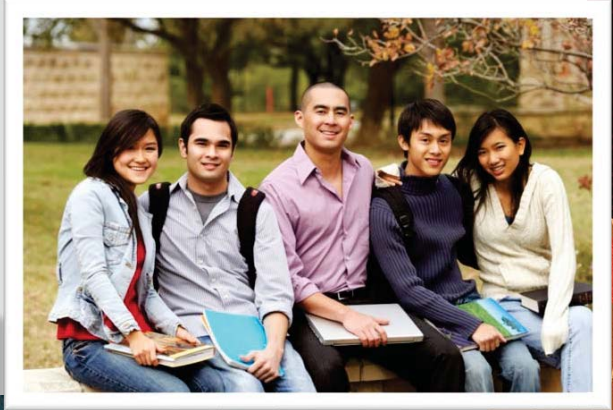


Java Foundations

About This Course



Objectives

- This lesson covers the following objectives:
 - Identify course goals and objectives
 - Understand the course environment
 - Describe the course learning strategy



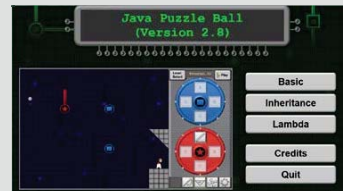
Course Goals

- Demonstrate knowledge of basic programming language concepts
- Demonstrate knowledge of the Java programming language
- Implement basic Java programming and object-oriented concepts



Course Goals

- NetBeans
 - A tool used for writing code
 - Installation instructions are provided later
- Java Puzzle Ball
 - A game used throughout the course



Your Code

- You'll type your code in NetBeans
- NetBeans code looks like this:



```
2 public class HelloWorld {  
3  
4     public static void main(String[] args) {  
5         System.out.println("Hello World!");  
6     }  
7 }
```

Course Outline

- Section 1: What Is Java?
 - Lesson 1: About This Course
 - Lesson 2: Java: A Brief History
 - Lesson 3: Setting Up Java
- Section 2: Java Basics
 - Lesson 1: The Software Development Process
 - Lesson 2: What Is My Program Doing?
 - Lesson 3: Introduction to Object-Oriented Programming Concepts



Course Outline

- Section 3: Data Types
 - Lesson 1: What Is a Variable?
 - Lesson 2: Numeric Data Types
 - Lesson 3: Textual Data Types
 - Lesson 4: Converting Between Data Types
 - Lesson 5: Keyboard Input

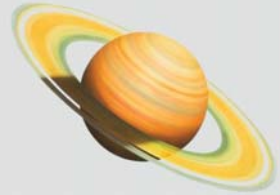


Course Outline

- Section 4: Important Classes from the Java API
 - Lesson 1: What Is a Method?
 - Lesson 2: The Import Declaration and Packages
 - Lesson 3: The String Class
 - Lesson 4: The Random Class
 - Lesson 5: The Math Class
- Section 5: Decision Statements
 - Lesson 1: Boolean Expressions and if/else Constructs
 - Lesson 2: Conditional Execution
 - Lesson 3: switch Statements

Course Outline

- Section 6: Loop Statements
 - Lesson 1: for Loops
 - Lesson 2: while and do/while Loops
 - Lesson 3: break and continue Statements
- Section 7: Classes
 - Lesson 1: Creating a Class
 - Lesson 2: Instantiating Objects
 - Lesson 3: Overloading Methods
 - Lesson 4: Object Interaction and Encapsulation
 - Lesson 5: static Variables and Methods



Course Outline

- Section 8: Arrays, ArrayLists, and Exceptions
 - Lesson 1: Arrays
 - Lesson 2: ArrayLists
 - Lesson 3: Exception Handling
 - Lesson 4: Debugging Concepts
- Section 9: GUI Applications with JavaFX
 - Lesson 1: Introduction to JavaFX
 - Lesson 2: Colors and Shapes
 - Lesson 3: Graphics, Audio, and Mouse Events



What You Could Do After Taking This Course

- Enjoy creating simple programs
- Appreciate an engineer's perspective
- Take more advanced courses

Certification

- Consider testing for an Oracle Certification:
 - Exam: Java Foundations (1Z0-811)
 - Credential: Java Foundations Certified Junior Associate

Summary

- In this lesson, you should have learned how to:
 - Identify course goals and objectives
 - Understand the course environment
 - Describe the course learning strategy

