CompuScholar, Inc.

Alignment to
"*Oracle Java Foundations Certified Junior Associate* "
Certification Exam Requirements

Oracle Exam Details:

Exam Title:	Java Foundations Certified Junior Associate (novice-level certification)
Exam Code(s):	1Z0-811
Exam Link:	Java Foundations

CompuScholar Course Details:

Course Title:	Java Programming (Abridged)
Course ISBN:	978-0-9887070-4-7
Course Year:	2018

OR

Course Title:	Java Programming (AP)
Course ISBN:	978-0-9887070-2-3
Course Year:	2018

Note 1: Citation(s) listed may represent a subset of the instances where objectives are met throughout the course.
Note 2: Citation(s) for a "Lesson" refer to the "Lesson Text" elements and associated "Activities" within the course, unless otherwise noted. The "Instructional Video" components are supplements designed to introduce or re-enforce the main lesson concepts, and the Lesson Text contains full details.

Course Description

The Oracle Java Foundations Certified Junior Associate exam is targeted at high school students who would like to demonstrate mastery of fundamental Java language skills. Preparation for this exam can generally be accomplished within a single school year.

EITHER the CompuScholar "Java Programming (Abridged)" OR the "Java Programming" courses can be used to prepare for this exam. All exam topics are covered by each course.

Exam Requirements

What Is Java?	CITATION(S)
Describe the features of Java	Chapter 1, Lesson 3 Chapter 2, Lesson 1
Describe the real-world applications of Java	Chapter 2, Lesson 1

Java Basics	CITATION(S)
Describe the Java Development Kit (JDK) and the Java Runtime Environment (JRE)	Chapter 2, Lesson 1
Describe the components of object-oriented programming	Chapter 10, Lesson 1 Chapter 10, Lesson 2
Describe the components of a basic Java program	Chapter 2, Lesson 1 Chapter 2, Lesson 2
Compile and execute a Java program	Chapter 2, Lesson 3

Basic Java Elements	CITATION(S)
Identify the conventions to be followed in a Java program	Chapter 2, Lesson 2 Chapter 4, Lesson 2
Use Java reserved words	Java keywords are introduced and used throughout the course
Use single-line and multi-line comments in Java programs	Chapter 2, Lesson 2
Import other Java packages to make them accessible in your code	Chapter 2, Lesson 4
Describe the java.lang package	Chapter 2, Lesson 2

Working with Java Data Types	CITATION(S)
Declare and initialize variables including a variable using final	Chapter 4, Lesson 2
Cast a value from one data type to another including automatic and manual promotion	Chapter 4, Lesson 2
Declare and initialize a String variable	Chapter 5 (all Lessons)

Working with Java Operators	CITATION(S)
Use basic arithmetic operators to manipulate data including +, -, *, /, and %	Chapter 5, Lesson 1
Use the increment and decrement operators	Chapter 7, Lesson 4
Use relational operators including ==, !=, >, >=, <, and <=	Chapter 7, Lesson 1
Use arithmetic assignment operators	Chapter 4, Lesson 2
Use conditional operators including &&, ||, and ?	Chapter 7, Lesson 1
Describe the operator precedence and use of parenthesis	Chapter 7, Lesson 1

Working with the String Class	CITATION(S)
Develop code that uses methods from the String class	Chapter 5 Activity
Format Strings using escape sequences including %d, %n, and %s	Chapter 4, Lesson 3 Chapter 5, Lesson 4

Working with the Random and Math Classes	CITATION(S)
Use the Random class	Chapter 20, Lesson 1 (Abridged) OR Chapter 21, Lesson 1 (full)
Use the Math class	Chapter 17, Lesson 1

Using Decision Statements	CITATION(S)
Use the decision making statement (if-then and if-then-else)	Chapter 7, Lesson 2
Use the switch statement	Chapter 7, Lesson 3
Compare how == differs between primitives and objects	Chapter 7, Lesson 1 Chapter 15, Lesson 5
Compare two String objects by using the compareTo and equals methods	Chapter 5, Lesson 2 Chapter 5, Lesson 3

Using Looping Statements	CITATION(S)
Describe looping statements	Chapter 7, Lesson 4 Chapter 7, Lesson 5
Use a for loop including an enhanced for loop	Chapter 7, Lesson 4 Chapter 14, Lesson 3
Use a while loop	Chapter 7, Lesson 5
Use a do- while loop	Chapter 7, Lesson 5
Compare and contrast the for, while, and do-while loops	Chapter 7, Lesson 4 Chapter 7, Lesson 5
Develop code that uses break and continue statements	Chapter 7, Lesson 3 Chapter 7, Lesson 4

Debugging and Exception Handling	CITATION(S)
Identify syntax and logic errors	Chapter 9, Lesson 1 Chapter 9, Lesson 3
Use exception handling	Chapter 9, Lesson 2 Chapter 18, Lesson 2
Handle common exceptions thrown	Chapter 9, Lesson 1 Chapter 9, Lesson 2 Chapter 18, Lesson 2
Use try and catch blocks	Chapter 9, Lesson 2 Chapter 18, Lesson 2

Arrays and ArrayLists	CITATION(S)
Use a one-dimensional array	Chapter 14, Lesson 1
Create and manipulate an ArrayList	Chapter 14, Lesson 2
Traverse the elements of an ArrayList by using iterators and loops including the enhanced for loop	Chapter 14, Lesson 2 Chapter 14, Lesson 3
Compare an array and an ArrayList	Chapter 14, Lesson 1 Chapter 14, Lesson 2

Classes and Constructors	CITATION(S)
Create a new class including a main method	Chapter 2, Lesson 2
Use the private modifier	Chapter 10, Lesson 3

Describe the relationship between an object and its members	Chapter 10, Lesson 2
Describe the difference between a class variable, an instance variable, and a local variable	Chapter 10, Lesson 2
Develop code that creates an object's default constructor and modifies the object's fields	Chapter 11, Lesson 1
Use constructors with and without parameters	Chapter 11, Lesson 1 Chapter 15, Lesson 6
Develop code that overloads constructors	Chapter 11, Lesson 1 Chapter 15, Lesson 6

Java Methods	**CITATION(S)**
Describe and create a method	Chapter 8, Lesson 1
Create and use accessor and mutator methods	Chapter 10, Lesson 3
Create overloaded methods	Chapter 8, Lesson 2
Describe a static method and demonstrate its use within a program	Chapter 11, Lesson 3