**Study Guide for Exam 1Z0-808:**

**Oracle Certified Associate, Java SE 8 Programmer**

This document maps the topics in Oracle exam 1Z0-808 to chapters in the Java training course. The exam topics are divided into 9 sections, and are covered by training materials in this course.

To prepare for the exam, you should first study all the chapters in the training course, in sequence. Read each of these chapters, look at all the demos, and try all the lab exercises.

Once you've gone through the chapters, and you're happy that you understand the content, we suggest you go through the materials a second time, this time with your "exam preparation" hat on. This document lists all the exam topics as specified by Oracle, and maps each topic to a particular slide (or set of slides) in the training course. Go through this document from start to finish, and refer to the relevant slides for each exam topic. The slides cover each topic in a lot of detail – the slides were written specifically with the exam in mind.

Note: Oracle doesn't always list exam topics in a particularly logical order (in terms of how you learn a subject from the bottom up). The training course provides a cohesive storyline which allows you to actually learn the subject, and this document acts as an index into the training course from an exam perspective.

**Java Basics**

Define the scope of variables

* Chapter 3, slides 16

Define the structure of a Java class

* Chapter 8, slides 3-16

Create executable Java applications with a main method; run a Java program from the command line; produce console output

* Chapter 2, slides 15-17

Import other Java packages to make them accessible in your code

* Chapter 7, slides 14-15

Compare and contrast the features and components of Java such as: platform independence, object orientation, encapsulation, etc.

* Chapter 1, slides 8-9 (platform independence)
* Chapter 1, slide 13 (object orientation and encapsulation)
* Chapter 2, slides 4-10 (the Java product range)

**Working With Java Data Types**

Declare and initialize variables (including casting of primitive data types)

* Chapter 3, slides 8-17
* Chapter 3, slide 32

Differentiate between object reference variables and primitive variables

* Chapter 3, slides 18-19

Know how to read or write to object fields

* Chapter 8, slides 8-14

Explain an Object's Lifecycle (creation, "dereference by reassignment" and garbage collection)

* Chapter 8, slide 20 (creating an object)
* Chapter 8, slide 22 (dereference by reassignment, either to null or to another object)
* Chapter 8, slide 23 (garbage collection)

Develop code that uses wrapper classes such as Boolean, Double, and Integer

* Chapter 3, slides 20-26

**Using Operators and Decision Constructs**

Use Java operators

* Chapter 3, slides 27-33
* Chapter 5, slides 5-8

Use parenthesis to override operator precedence

* Chapter 3, slide 33 (see the example in the notes beneath the slide)

Test equality between Strings and other objects using == and equals ()

* Chapter 7, slide 24

Create if and if/else constructs

* Chapter 5, slides 4-7

Use a switch statement

* Chapter 5, slides 9-10

**Creating and Using Arrays**

Declare, instantiate, initialize and use a one-dimensional array

* Chapter 10, slides 3-11

Declare, instantiate, initialize and use multi-dimensional arrays

* Chapter 10, slides 12-14

**Using Loop Constructs**

Create and use while loops

* Chapter 5, slides 12-13

Create and use for loops including the enhanced for loop

* Chapter 5, slides 16-17 (for loop)
* Chapter 10, slide 11 (enhanced for loop)

Create and use do/while loops

* Chapter 5, slides 14-15

Compare loop constructs

* Chapter 4, slides 6-11

Use break and continue

* Chapter 5, slides 18-19

**Working with Methods and Encapsulation**

Create methods with arguments and return values

* Chapter 6, slide 15 (return values)
* Chapter 6, slides 20-21 (return values)
* Chapter 6, slides 17-18 (arguments)

Overloaded methods

* Chapter 6, slide 19

Apply the static keyword to methods and fields

* Chapter 8, slides 25-27

Create and overload constructors

* Chapter 9, slides 1-6

Differentiate between default and user defined constructors

* Chapter 9, slide 7

Apply access modifiers

* Chapter 8, slide 7

Apply encapsulation principles to a class

* Chapter 8, slides 13-14

Determine the effect upon object references and primitive values when they are passed into methods that change the values

* Chapter 6, slide 17

**Working with Inheritance**

Describe inheritance and its benefits

* Chapter 11, whole chapter
* Chapter 12, slides 1-11

Develop code that makes use of polymorphism; develop code that overrides methods

* Chapter 12, slides 12-17 (polymorphism)
* Chapter 12, slides 10-11 (overriding)

Differentiate between the type of a reference and the type of an object

* Chapter 12, slide 14

Determine when casting is necessary

* Chapter 12, slide 16

Use super and this to access objects and constructors

* Chapter 12, slide 9 (accessing superclass constructor)
* Chapter 12, slide 11 (accessing other superclass members)

Use abstract classes and interfaces

* Chapter 13, slides 3-5 (abstract classes)
* Chapter 13, slides 6-10 (interfaces)

**Handling Exceptions**

Differentiate among checked exceptions, unchecked exceptions and Errors

* Chapter 14, slide 5

Create a try-catch block and determine how exceptions alter normal program flow

* Chapter 14, slide 7

Describe the advantages of Exception handling

* Chapter 14, slide 4

Create and invoke a method that throws an exception

* Chapter 14, slide 8

Recognize common exception classes (such as NullPointerException, ArithmeticException, ArrayIndexOutOfBoundsException, ClassCastException)

* Chapter 14, slide 9

**Working with Selected classes from the Java API**

Manipulate data using the StringBuilder class and its methods

* Chapter 7, slides 25-27

Creating and manipulating Strings

* Chapter 7, slides 21-24

Create and manipulate calendar data using classes from java.time.LocalDateTime, java.time.LocalDate, java.time.LocalTime, java.time.format.DateTimeFormatter, java.time.Period

* Chapter 15, slides 14-17

Declare and use an ArrayList of a given type

* Chapter 10, slides 15-18

Write a simple Lambda expression that consumes a Lambda Predicate expression

* Chapter 15, slides 3-13 (introduction to lambdas)
* Chapter 15, slides 10 (using predicates in particular)