Course Ou

OCP Java SE 8 Progr



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Contents

1. Course Objective
2. Pre-Assessment
3. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
4. Expert Instructor-Led Training
5. ADA Compliant & JAWS Compatible Platform
6. State of the Art Educator Tools
7. Award Winning Learning Platform (LMS)
8. Chapter & Lessons

   Syllabus

   Chapter 1: Advanced Class Design

   Chapter 2: Design Patterns and Principles

   Chapter 3: Generics and Collections

   Chapter 4: Functional Programming

   Chapter 5: Dates, Strings, and Localization

   Chapter 6: Exceptions and Assertions

   Chapter 7: Concurrency

   Chapter 8: IO

   Chapter 9: NIO.2

   Chapter 10: JDBC

   Chapter 11: Appendix A

   Chapter 12: Appendix B

   Chapter 13: Appendix C

   Chapter 14: Appendix D: How to Install JDK 8 (on Windows & Ubuntu)

   Videos and How To
9. Practice Test

Here's what you get

Features

10. Live labs

    Lab Tasks

    Here's what you get

11. Post-Assessment

1. Course Objective

Prepare for the Oracle OCP 1Z0-809 exam with OCP Java SE 8 Programmer II course. The complete course completely covers the Oracle Java 1Z0-809 exam objectives and provides understanding on the areas such as functional programming; basics of object-oriented programming, application of knowledge in database work, and much more. The course covers all fundamental aspects of Java programming and demonstrates that you are proficient in Java technologies and use industry-standard best practices.

2. Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

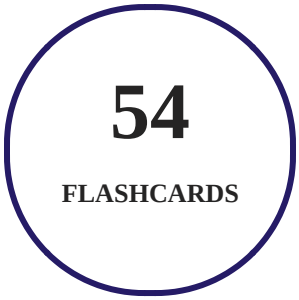
3. Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.



4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.



6. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

7. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

8. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

9. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution

2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

- **2016**
  1. Best Virtual Learning Solution
  2. Best Education Cloud-based Solution
  3. Best College and Career Readiness Solution
  4. Best Corporate / Workforce Learning Solution
  5. Best Postsecondary Learning Content Solution
  6. Best Postsecondary LMS or Learning Platform
  7. Best Learning Relationship Management Solution

- **2017**
  1. Best Overall Education Solution
  2. Best Student Assessment Solution
  3. Best Corporate/Workforce Learning Solution
  4. Best Higher Education LMS or Learning Platform

- **2018**
  1. Best Higher Education LMS or Learning Platform
  2. Best Instructional Solution in Other Curriculum Areas
  3. Best Learning Relationship Management Solution

- **2019**
  1. Best Virtual Learning Solution
  2. Best Content Authoring Development or Curation Solution
  3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

10. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Advanced Class Design

- Reviewing OCA Concepts
- Using instanceof
- Understanding Virtual Method Invocation
- Annotating Overridden Methods
- Coding equals, hashCode, and toString
- Working with Enums
- Creating Nested Classes

- Summary
- Exam Essentials

Chapter 2: Design Patterns and Principles

- Designing an Interface
- Introducing Functional Programming
- Implementing Polymorphism
- Understanding Design Principles
- Working with Design Patterns
- Summary
- Exam Essentials

Chapter 3: Generics and Collections

- Reviewing OCA Collections
- Working with Generics
- Using Lists, Sets, Maps, and Queues
- Comparator vs. Comparable
- Searching and Sorting
- Additions in Java 8

- Summary
- Exam Essentials

Chapter 4: Functional Programming

- Using Variables in Lambdas
- Working with Built-In Functional Interfaces
- Returning an Optional
- Using Streams
- Working with Primitives
- Working with Advanced Stream Pipeline Concepts
- Summary
- Exam Essentials

Chapter 5: Dates, Strings, and Localization

- Working with Dates and Times
- Reviewing the String class
- Adding Internationalization and Localization
- Summary

- Exam Essentials

Chapter 6: Exceptions and Assertions

- Reviewing Exceptions
- Creating Custom Exceptions
- Using Multi-catch
- Using Try-With-Resources
- Rethrowing Exceptions
- Working with Assertions
- Summary
- Exam Essentials

Chapter 7: Concurrency

- Introducing Threads
- Creating Threads with the ExecutorService
- Synchronizing Data Access
- Using Concurrent Collections
- Working with Parallel Streams
- Managing Concurrent Processes

- Identifying Threading Problems
- Summary
- Exam Essentials

Chapter 8: IO

- Understanding Files and Directories
- Introducing Streams
- Working with Streams
- Interacting with Users
- Summary
- Exam Essentials

Chapter 9: NIO.2

- Introducing NIO.2
- Interacting with Paths and Files
- Understanding File Attributes
- Presenting the New Stream Methods
- Comparing Legacy File and NIO.2 Methods

- Summary
- Exam Essentials

Chapter 10: JDBC

- Introducing Relational Databases and SQL
- Introducing the Interfaces of JDBC
- Connecting to a Database
- Obtaining a Statement
- Executing a Statement
- Getting Data from a ResultSet
- Closing Database Resources
- Dealing with Exceptions
- Summary
- Exam Essentials

Chapter 11: Appendix A

- OCP 8 (1Z0-809)
- Upgrade from Java 7 (1Z0-810)
- Upgrade from Java 6 or lower (1Z0-813)

Chapter 12: Appendix B

- Enhancing the Java Language
- Formatting and Parsing
- Applying Locks
- Working with Directories
- Summary
- Exam Essentials

Chapter 13: Appendix C

- Method Details
- Intrinsic Locks
- Interface Details
- Class ThreadLocalRandom
- Class RandomAccessFile
- Enum StandardOpenOption
- Enum FileVisitResult

Chapter 14: Appendix D: How to Install JDK 8 (on Windows & Ubuntu)

- Downloading JDK
- Installing JDK on Microsoft Windows
- Installing JDK on Ubuntu

Videos and How To

uCertify course includes videos to help understand concepts. It also includes How Tos that help learners in accomplishing certain tasks.

50	03:17
VIDEOS	HOURS

11. Practice Test

Here's what you get

90	5	90
PRE-ASSESSMENTS QUESTIONS	FULL LENGTH TESTS	POST-ASSESSMENTS QUESTIONS

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

12. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Advanced Class Design

- Using the final Keyword

- Using the static Keyword
- Using the implements and extends Keywords
- Using the equals() method
- Using the toString() Method
- Using the hashCode() Method
- Using the Enumerated Types
- Using the Inner Classes
- Using Anonymous Inner Classes
- Using the Static Inner Classes
- Using the Inner Classes Including the Nested Class

Design Patterns and Principles

- Using the Singleton Classes
- Using the Immutable Classes

Generics and Collections

- Using an ArrayList Class
- Using the Generic Class
- Using the TreeSet Class
- Using the TreeMap Class
- Using the ArrayDeque Object
- Using the java.util.Comparator Interface
- Using the java.lang.Comparable Interface
- Using the forEach() Method
- Using the filter() method with Lambda Expression
- Using the Method Reference in a Streams

Functional Programming

- Using the UnaryOperator Interface
- Using the Binary Version of Functional Interfaces
- Using the Optional Classes
- Using the Stream Classes Including the findFirst() and findAny() Methods
- Using the flatMap() Method of the Stream API

- Sorting of Collection Using the Stream API
- Using the Search Methods of the Stream Classes
- Using the Stream Data Method and Calculation Method
- Using the peek() and map() Methods
- Using the collect() Method

Dates, Strings, and Localization

- Using the DateTimeFormatter Class
- Using the Date-based and Time-based Events with TemporalUnit
- Using Date and Time Across Time Zones
- Using Instant, Period, and Duration
- Using the Properties File
- Using the Locale Class

Exceptions and Assertions

- Creating Custom Exceptions and AutoCloseable Resources
- Using the AutoClose Resources

Concurrency

- Using the Runnable and ExecutorService Classes
- Using the Callable Class
- Using the synchronized Keyword
- Using the java.util.concurrent Collections
- Using Parallel Streams
- Using the java.util.concurrent Collections
- Using the Parallel Fork/Join Framework
- Showing the Deadlock Condition

IO

- Reading and Writing Data from the Console Class
- Using the FileInputStream and FileOutputStream Classes
- Using the BufferedReader, File, FileReader, and FileWriter classes

NIO.2

- Using the Stream API with NIO.2
- Using the Path Interface
- Using the Files Class

JDBC

- Understanding Database Management
- Connecting to a Database

Here's what you get

57	14	40
LIVE LABS	VIDEO TUTORIALS	MINUTES

13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

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