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Smart Professional Android (OV-5010)

Duration:	8 Months*	**Fee:**	**LUMPSUM** / **INSTALLMENT**

Eligibility: Undergraduates/ graduates/ working professionals/ engineers

Job opportunities: *On successfully completing the Smart Pro Android course, you will be ready to join top companies as **Java Developer**, **Android App Developer.***

Evaluation Strategy:

***Award of* Grades**

PASS	CREDIT	DISTINCTION
Overall Weighted Marks >= 40% but < 60% qualifies for **PASS**	Overall Weighted Marks >= 60% but < 75% qualifies for **CREDIT**	Overall Weighted Marks >= 75% but < 60% qualifies for **DISTINCTION**

Note: To attain a PASS/CREDIT/DISTINCTION grade, a student should achieve at least 40% in Final Examination; otherwise he/she will be declared as 'Referred'.

Learner's Guide (eBook)

Course Content

Fundamentals of Java

1. Develop classes and how declare classes
2. Create a Java class
3. Understand the benefits of using an IDE
4. Declare and initialize variables
5. List and understand the different data types
6. Understand the major operators
7. Understand the use of decision making and loop constructs
8. Work with Arrays and String classes
9. Understand the use of packages and access specifiers
10. Use inheritance to declare and define a subclass for a superclass
11. Understand nested class
12. Describe error handling in a Java program
13. Explain the new Date and Time API
14. Explain the Functional programming features of Java 8
15. Explain the new Features of Java

Object oriented Programming with Java

1. Explain Exceptions and Assertions
2. Implement Java I/O operations
3. Explain on how to build database applications with JDBC
4. Describe Thread implementation in Java
5. Explain the role of Lambdas in refactoring Java
6. Explain Swing API
7. Describe Concurrency and Parallelism in Java
8. Define Class Design
9. Describe Java Data Structures
10. Understand Java Logging API and ResourceBundle
11. Explain JavaDoc
12. Describe how to work with Lambda

Modern Android Apps Development

1. Identify different techniques to plan, design and prototype your mobile apps before writing any code
2. Understand the App life cycle and its main components
3. Learn to create a graphical user interface (GUI)
4. Learn to implement a custom application theme
5. Implement menu-based navigation
6. Design and build a functional Android application
7. Set up and understand your Android Development Environment
8. Learn to program with Android 9 (Pie) and Notifications
9. Implement display cutouts

UI/UX for Mobile Devices

1. Define User Interface (UI) and User Interface design
2. List and explain the different elements of User Interface Design
3. Describe the principles of User Interface Design
4. Describe the types of User Interface Design
5. Explain the User Interface Design process
6. Describe the models in User Interface Design
7. Define User Experience (UX) and User Experience Design
8. Describe the difference between UI and UX
9. Describe the different elements of UX Design
10. Explain the significance of UX
11. List and explain the principles of User Experience Design
12. Describe the best practices in User Experience Design
13. Define Responsive UI design
14. Describe the evolution of RWD
15. Describe the importance of Progressive Enhancement
16. Outline the differences between Graceful Degradation and Progressive Enhancement
17. Explain the RWD Workflow
18. Describe the significance of RWD
19. Explain the strategies for RWD in mobile phones, Android based devices, and laptops
20. Describe the need for content strategy in RWD
21. Describe the importance of content audit
22. Explain the performance optimization for a mobile-friendly site
23. Explain the difference between responsive and adaptive Website designs
24. Define Breakpoints
25. Describe Navigation Drawers
26. Describe Stacked Pagination
27. Explain Fluid Images
28. Define Bottom Bar
29. Describe Top Bar
30. Define Front Action Calls
31. Explain Short and Simple Menus
32. Describe usability studies
33. Explain the importance of usability studies
34. List the steps for testing in usability studies
35. Describe usability studies for Responsive Web Design
36. Describe the mobile User Interface (UI)
37. Describe the mobile User Experience (UX)
38. Describe the application of mobile UI
39. Describe the application of mobile UX

Testing Apps using Android

1. Learn Software Testing
2. List Android Testing Framework
3. Understand Components Used for Creating Tests
4. Understanding Android Testing Environment
5. Learn Testing Android Projects
6. Learn Testing for Different Situations
7. Learn Auomation Testing and AWS device farm

Project-Android App Development

Documents Required:

1. All educational certificates
2. Age proof
3. Residential address proof (Permanent and Current)
4. Two Passport size Photograph

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