

CERTIFICATE IN MOBILE APPLICATION DEVELOPMENT (CMAD)

Assignments

(January, 2026 & July, 2026 sessions)

BCS-091, BCS-092, BCS-093, BCS-094, BCSL-091

Assignments



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
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CONTENTS

Course Code	Assignment No.	Submission-Schedule		Page No.
		For January-June Session	For July-December Session	
BCS-091	CMAD/091/Assignment/2026	30 th April, 2026	31 st October, 2026	3
BCS-092	CMAD/092/Assignment/2026	30 th April, 2026	31 st October, 2026	4
BCS-093	CMAD/093/Assignment/2026	30 th April, 2026	31 st October, 2026	6
BCS-094	CMAD/094/Assignment/2026	30 th April, 2026	31 st October, 2026	7
BCSL-091	CMAD/L-091/Assignment/2026	30 th April, 2026	31 st October, 2026	8

Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date. Please refer to <http://www.ignou.ac.in> for latest updates
2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to CMAD Programme Guide.
3. To become eligible for appearing the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date). For further details, please refer to the CMAD Programme Guide.

Course Code : **BCS-093**
Course Title : **Introduction to Android**
Assignment Number : **CMAD/093/Assignment /2026**
Maximum Marks : **25**
Last Dates for Submission : **30th April, 2026 (for January session)**
31st October 2026 (for July session)

Note: There are Ten questions in this assignment. Each question carries 2.5 marks. Answer all the questions. You may use illustrations and diagrams to enhance the explanations. Include the screen layouts also along with your assignment responses.

Question 1: Explain the Android software stack with the help of a neat diagram. How do application frameworks support app development?

Question 2: What is an Intent in Android? Differentiate between explicit and implicit intents with suitable use cases.

Question 3: Explain the concept of Android application components. How does the Android Manifest file coordinate these components?

Question 4: Describe different Android layout types. Explain any two layouts with their advantages and example scenarios.

Question 5: What is Fragment in Android? Explain fragment lifecycle and its role in designing flexible user interfaces.

Question 6: Discuss different data storage options available in Android. How does internal storage differ from external storage?

Question 7: Explain how background processing is handled in Android. What is the role of Services and Work Manager?

Question 8: What is RecyclerView? Explain its architecture and advantages over List View.

Question 9: Discuss permissions in Android. Explain normal and dangerous permissions with examples.

Question 10: Explain Android application testing. Differentiate between unit testing and instrumentation testing.