

# **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  
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### 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-094**  
**Course Title** : **Programming using PYTHON**  
**Assignment Number** : **CMAD/094/Assignment/2026**  
**Maximum Marks** : **25**  
**Last Date of Submission** : **30<sup>th</sup> April, 2026 (for January session)**  
**31<sup>st</sup> October 2026 (for July session)**

**There are Ten questions in this assignment which carries 25 marks. 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:** Compare Python and Java. Briefly discuss the features of Python programming.

**Question 2:** Discuss the usage of break, continue and pass statements in Python. Give suitable example code for each.

**Question 3:** What are Lambda functions? Write a Lambda function to print the average of two numbers. Also, write the program to print the average of two numbers, without using Lambda functions.

**Question 4:** How do mutable data types differ from immutable data types in Python? List the immutable and mutable data types, separately. Briefly discuss one mutable and one immutable data type.

**Question 5:** Differentiate between Overriding and Overloading in Python. Give suitable code for each.

**Question 6:** What is Software Testing ? How does it relate to software reliability? Compare Functional testing and Non-functional testing.

**Question 7:** Differentiate between Black box and White box testing. Discuss the term “Boundary Value Analysis” in the context of software testing.

**Question 8:** Write a Python code to create a database file and a table named ‘EmployeeDetails’ with three columns, ‘EmpID’, ‘EmpName’ and ‘Department’. Support your code with suitable comments.

**Question 9:** What is Kivy ? Draw the block diagram for the architecture of Kivy. Discuss the core provider, input provider and graphics components in the Kivy architecture.

**Question 10:** What is wxPython ? Create a GUI using wxPython that displays “HelloWorld” message in the window. Discuss the execution of lines of code written by you.