

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(Revised Syllabus)

BCA(Revised Syllabus)/ASSIGN/SEMESTER-V

ASSIGNMENTS

(July-2025 & January-2026 sessions)

(BCS-051, BCS-052, BCS-053, BCS-054, BCS-055

BCSL-056, BCSL-057, BCSL-058)



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068**

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Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.
2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to BCA 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 BCA Programme Guide.

Course Code	:	BCSL-056
Course Title	:	Network Programming and Administration Lab
Assignment Number	:	BCA(V)/L-056/Assignment/2025-26
Maximum Marks	:	50
Weightage	:	25%
Last date of Submission	:	31stOctober,2025(For July, Session) 30thApril, 2026 (For January, Session)

Note: This assignment has two questions. Answer all the questions. These questions carry 40 marks. Rest 10 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation. Make necessary assumptions.

Q1. (a): Write a UDP client and UDP server program in C language on Unix/Linux, where client program interact with the Server as given below: **(8 Marks)**

1. The client will send a message “welcome” to the Server.
2. Server program sends an acknowledgement for receiving the message.
3. The sever program will find the length of the message and send it to the respective client.
4. The client will send an acknowledgement to the server upon receiving the response.
5. The server program will reverse the message and send it to the respective client.
6. The client will send an acknowledgement to the server upon receiving the response.

Q1. (b) Write the steps to install the network monitor application on Unix/Linux. Demonstrate the use of the capture filter and display filter with the help of examples for each. **(6 Marks)**

Q1. (c) Run the following Linux commands on your machine and show the output: **(6 Marks)**

- cat
- sort
- ping
- more
- df-h
- tail - f

Q2. (a) Write the command(s) to perform the following tasks **(10 Marks)**

- (i) Checking the status of the destination host and communication with another host name.
- (ii) Finding host/domain name and IP address.

Q2. (b) Configure the DHCP server on the Linux operating system. Write all the steps and sort each column of the table, then show the result. **(10 Marks)**