

BACHELOR OF COMPUTER APPLICATIONS (BCA)

(Revised Syllabus)

BCA(Revised Syllabus)/ASSIGN/SEMESTER-III

ASSIGNMENTS

(July – 2026 & January - 2027)

MCS-021, MCS-023, MCS-014, BCS-031, BCSL-032, BCSL-033, BCSL-034,



**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-033
Course Title	:	Data and File Structures Lab
Assignment Number	:	BCA(III)/L-033/Assignment/2026-27
Maximum Marks	:	100
Weightage	:	25%
Last Dates for Submission	:	31st October, 2026 (for July 2026 Session)
	:	30th April, 2027 (for January 2027 Session)

There are 8 questions of 10 marks each in this assignment, carrying a total of 80 marks. The remaining 20 marks are for viva voce. Please go through the guidelines regarding assignments given in the Programme Guide for the format of the presentation. Write all the programs in the C' language.

Q1: (10 Marks)

Write an algorithm and program that accepts the following list of integers and uses Bubble Sort to sort and print them:

Q2: (10 Marks)

Write a program in the C language to accept a string as input and print the modified string having only the consonant letters of the input string. Do not use any built-in string-related functions.

Q3: (10 Marks)

Write a program to implement a doubly linked list for integers (user input) and perform the following operations on it:

- (i) Count and display the number of even and odd integer nodes separately.
- (ii) Sort the nodes in ascending order and display them.

Q4: (10 Marks)

Write a program using a linked list that accepts two polynomials as input from the user and displays the resultant polynomial after performing the multiplication operations on the user input polynomials.

Q5: (10 Marks)

Write a program in the C language to insert user input integers into an initially empty BST. Make assumptions, if necessary.

Q6: (10 Marks)

Write a program in C to sort user input data using the selection sort method. Also, print the number of swaps and comparison operations performed for sorting the given data set.

Q7:

(10 Marks)

Write a program to convert a postfix expression to an infix expression. Use an appropriate data structure.

Q8:

(10 Marks)

Write a program in the C language for the traversal of a Binary Search tree.