BACHELOR OF COMPUTER APPLICATIONS
(BCA)

(Revised Syllabus)

BCA(Revised Syllabus)/ASSIGN/SEMESTER-III

ASSIGNMENTS

(July-2025 & January-2026 sessions)

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

SCHOOLOFCOMPUTERANDINFORMATIONSCIENCES
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/2025-26**
Maximum Marks	:	**100**
Weightage	:	**25%**
Last Dates for Submission	:	**31ˢᵗOctober,2025(for July Session)**
		30ᵗʰApril, 2026(for January Session)

There are 8 questions of 10 marks each in this assignment carrying a total of 80 marks. Rest 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 'C' language.

Q1. Write a program to take input of two matrices from user using arrays. Multiply both the matrices and display the resultant matrix. **(10 Marks)**

Q2. Write a program in `C' Language to accept a string as input and print them in reverse order . Do not use any inbuilt string related functions. **(10 Marks)**

Q3. Write a program to implement singly linked list for integers (user input) and perform the following operations on it:
(i) Count and display the number of even and odd numbers of integer nodes separately.
(ii) Sort the nodes in ascending order and display them. **(10 Marks)**

Q4. Write a program using linked list that accepts two polynomials as input from the user and displays the resultant polynomial after performing the addition and subtraction operations on the user input polynomials. **(10 Marks)**

Q5. Write a program in 'C' language to insert user input integers into an initially empty AVL tree. Make assumptions, if necessary. **(10 Marks)**

Q6. Write a program in C to sort user input data using insertion sort method. Also, print the number of swaps and comparison operations performed for sorting the given data set. **(10 Marks)**

Q7. Write a program to convert an infix expression to a postfix expression. Use appropriate data structure. **(10 Marks)**

Q8. Write a program in 'C' language for the creation of a Binary Search tree. Also, implement insertion deletion operations and traversal operations on it. **(10 Marks)**