



ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(Unit of Alva's Education Foundation (R), Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi.

Recognized by Government of Karnataka.

Accredited by NAAC with A+ Grade

Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka

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Department of Computer Science and Engineering(Data Science)



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Department of Computer Science and Engineering(Data Science)

Venue : MBA Seminar Hall

Date: 09-12-2024 to 18-12-2024

Resource Team: Qspiders, Bangalore.

Department of CSE(DS) in association with Placement cell, AIET was organised 9 days company specific placement training program conducted for our 5th semester 2022 batch students.

About QSpiders : QSpiders is the world's ace software training organization with an aim to bridge the gap between the demands of the industry and the curriculum of educational institutions. With centers across the Globe, the institute is a platform where young minds are given the opportunity to build successful careers.

Mr. Vishal Vanaki was the trainer for the topic Data Structures using C from QSpiders.

The sessions were thoughtfully structured, blending conceptual clarity with hands-on practice. Vishal Sir's engaging teaching style and constant encouragement to solve real-time C programming problems ensured that every participant stayed actively involved throughout the training. By focusing on practical problem-solving, he made complex concepts approachable and easy to grasp. This report highlights key aspects of the training, including the topics covered, problem-solving exercises, and the overall impact on participants' programming skills.

DATE	TOPIC COVERED	Trainer name
09/12/2024	Mathematical algorithms Reverse number ,palindrome, Armstrong, Prime(super prime ,sexy prime, Mersenne prime) Fibonacci series, lucky numbers	Mr. Vishal Vanaki
10/12	Arrays(1D-array,initialization , syntax, reading 1D array) Array rotation, Algorithm for array Rotations(problems),	
11/12	Pointer, two pointer technique, Functions, Sieve's Algorithm, Sorting	

12/12	Bubble Sort, selection sort, insertion sort, sliding window,	
13/12	Some problems based on array, bitwise algorithm	
14/12	Strings	
16/12	Reversing a string using recursion, Recursion approach ,2D array,	
17/12	Leet code problems , Dynamic memory allocation	
18/12	Structures and unions , Leetcode problems	

Day 1: The session began with an introduction to mathematical algorithms. Vishal Sir explained foundational concepts like finding GCD, LCM, prime numbers, and efficient algorithms for solving mathematical problems. Practical exercises reinforced the understanding of these topics.



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Day 2: The focus shifted to arrays. The session covered the basics of array manipulation, including initialization, accessing elements, and performing operations like searching and sorting. Vishal Sir encouraged us to solve a variety of array problems, helping to build confidence.

Day 3: We explored pointers and functions. Vishal Sir introduced pointers in a simple yet effective manner, followed by how pointers are used with functions for passing arguments by reference. Real world examples made these concepts clearer.

Day 4: The topics for the day were bubble sort and sliding window techniques. The session involved an in-depth explanation of the bubble sort algorithm and its working, followed by solving problems that required the use of sliding windows for optimized solutions.

Day 5: This day was dedicated to solving problems on arrays. We worked on numerous exercises that involved different array operations such as rotation, subarray sums, and unique element detection. The hands-on approach greatly improved our problem-solving skills.

Day 6: The class covered strings. We learned string manipulation techniques such as reversing, concatenation, and substring operations. Vishal Sir shared useful tips on handling strings efficiently in C, and we practiced solving related problems.

Day 7: The focus was on recursion, specifically reversing a string using recursion. We also covered 2D arrays, including how to traverse and manipulate them. The session included problem-solving exercises, which helped solidify our understanding of these topics.

Day 8: Dynamic memory allocation was the key topic of this session. Vishal Sir explained memory management functions like malloc, calloc, and free. We worked on problems from platforms like LeetCode, which required dynamic memory allocation to solve.

Day 9: The final session focused on structures and unions. Vishal Sir explained how to define and use structures and unions in C, with real-life examples to demonstrate their applications. We also solved practical problems to understand the use of these concepts in programming.

Outcomes:

Students will be able to understand the concepts of C programming in view of interview.

Students can be Improved their problem-solving skills

Students can be solve various real-time problems through Hands-on experience.



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HOD-CSE(DS)



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