**Data Structure Using C/C++ (SYLLABUS)**

Duration: 50 Hrs prerequest: be strong in basic c programming

Course Fee: Rs. 8,500/- G-Pay: 98940 83890

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| **S.No** | **Table of Contents** | **Remarks** |
| 1. | **Introduction to Data Structures** |  |
| 2. | **Array: Array Initialization**  **Find array size dynamically**  **Dynamic insert values to array**  **Display unique array values**  **Delete particular values in an array**  **Search element in an array**  **Find index of value in an array**  **Find value of index in an array** |  |
| 3 | **Recursive Function** |  |
| 4. | Pointers var creation,  Pointer vs variable,  Pointer vs Array  Pointer vs object  Pointer Increment  Pointer object creation,  New memory allocation,  Delete memory allocation.  Call by value  Call by reference(address) |  |
| 5. | Sorting:   * Selection Sort * Bubble Sort * Insertion sort * Quick sort * Merge Sort * Shell sort |  |
| 6. | **Searching:**  **- Linear Search**  **- Binary Search** |  |
| 7. | **Stack : LIFO**  **Queue: FIFO**  **( both array & pointer implementation)** |  |
| 8. | **Linked List:( insert,delete,search)**  **-Singly Linked List**  **-Double Linked List**  **-Circular Linked List** |  |
| 9. | **Trees**   * **Tree representation** * **Binary Tree Properties** * **Binary Tree Traversals** * **Implementation of Binary Tree** |  |
| 10. | **Mini Project** |  |