

**Department of CSE-AI & ML****III Year II Sem****MR22 – 1 CS0208- DESIGN AND ANALYSIS OF ALGORITHMS****Holiday Assignment Questions****LEETCODE DAA Challenges**

You are expected to work through the DAA exercises and challenges available at the following link:

<https://leetcode.com/problem-list/linked-list/>

Develop the code for following Leet Code problems		
S.No	Questions	Level
1	Find the Index of the First occurrence in a String	Easy
2	Bitwise and of Number Range e	Easy
3	Square Root	Hard
4	Largest Number	Hard
5	Valid Parenthesis	Easy
6	Merge two Sorted List	Medium
7	Remove duplicates from sorted list	Medium
8	Find a Peek Element	Medium
9	<b>Binary Tree:</b> IN order Traversal	Medium
10	N-Queens	Easy
Case Study		
S.No	Questions	
1.	<p><b>Scenario:</b></p> <p>An e-commerce platform is implementing a feature where products need to be sorted by various attributes (e.g., price, rating, and name). The product list contains millions of items, and the sorting operation needs to be efficient and scalable.</p> <ol style="list-style-type: none"><li>1. What are the time and space complexities of the commonly used sorting algorithms (Quick Sort, Merge Sort)?</li><li>2. How do the characteristics of the data (e.g., range of prices, product name lengths) impact the choice of sorting algorithm?</li></ol>	

## **Submission Instructions**

Once you have completed the assignment, you must upload the completed project to your respective **LEETCODE** repository

Ensure that all code ,results ,and necessary documentation are included in your Leetcode repository

The **deadline for submission** is 16-01-2025.

If you have any doubts or need assistance, please feel free to reach out to me or your respective instructors.

Wishing you all a **HAPPY SANKRANTI** enjoy the holidays and submit the assignment on time

**DEAN-AI&ML**