

Practise Questions: Mar 30

DSA

1. Given a perfect binary tree, print the values of alternating left and right nodes for each level in a top-down and bottom-up manner.
2. Given a binary tree and a node in it, write an efficient algorithm to find its next node at the same level as the node.
3. Given a binary tree, check if it is a complete binary tree or not.

JS

1. Given an unsorted integer array, find a pair with the given sum in it.

Input:

```
nums = [8, 7, 2, 5, 3, 1]
target = 10
```

Output:

```
Pair found (8, 2)
or
Pair found (7, 3)
```

Input:

```
nums = [5, 2, 6, 8, 1, 9]
target = 12
```

Output: Pair not found

2. Given an integer array, rearrange it such that every second element becomes greater than its left and right elements. Assume no duplicate elements are present in the array.

Input: {1, 2, 3, 4, 5, 6, 7}

Output: {1, 3, 2, 5, 4, 7, 6}

Input: {9, 6, 8, 3, 7}

Output: {6, 9, 3, 8, 7}

Input: {6, 9, 2, 5, 1, 4}

Output: {6, 9, 2, 5, 1, 4}