DSA SERIES

- Learn Coding

Topic to be Covered today

Binary Search

LETS START TODAY'S LECTURE

Binary Search using Iterative Approach

```
int binarySearch(vector<int> arr, int target)
{
    int low = 0, high = arr.size() - 1;
    while (low <= high)
    {
        // int mid = (low + high) / 2;
        int mid = low + (high-low)/2;
        if (arr[mid] == target)
        {
            return mid;
        }
        else if (arr[mid] < target)
        {
            low = mid + 1;
        }
        else
        {
            high = mid - 1;
        }
    }
    return -1; // element not found in the array
}
```

Binary Search using Recursive Approach

```
int binarySearch(vector<int> &arr, int low, int high, int target)
{
    if (low > high)
    {
        return -1;
    }

    int mid = low + (high - low) / 2;

    if (arr[mid] == target)
        return mid;
    else if (arr[mid] < target)
    {
      return   binarySearch(arr, mid + 1, high, target);
    }

    else
    {
      return   binarySearch(arr, low, mid - 1, target);
    }
}
```

Learn coding

THANK YOU