**Data Structure and Algorithm Practicals**

13. Practical based on Divide and Conquer Technique-Binary Search

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<script>

let recursiveFunction = function (arr, x, start, end) {

// Base Condition

if (start > end) return false;

// Find the middle index

let mid=Math.floor((start + end)/2);

// Compare mid with given key x

if (arr[mid]===x) return true;

// If element at mid is greater than x,

// search in the left half of mid

if(arr[mid] > x)

return recursiveFunction(arr, x, start, mid-1);

else

// If element at mid is smaller than x,

// search in the right half of mid

return recursiveFunction(arr, x, mid+1, end);

}

// Driver code

let arr = [1, 3, 5, 7, 8, 9];

let x = 5;

if (recursiveFunction(arr, x, 0, arr.length-1))

document.write("Element found!<br>");

else document.write("Element not found!<br>");

x = 6;

if (recursiveFunction(arr, x, 0, arr.length-1))

document.write("Element found!<br>");

else document.write("Element not found!<br>");

</script>

<title>Document</title>

</head>

<body>

</body>

</html>