

Day 5 - Activity

Task 1 : anonymous function & IIFE

a) Print odd numbers in an array

Output:

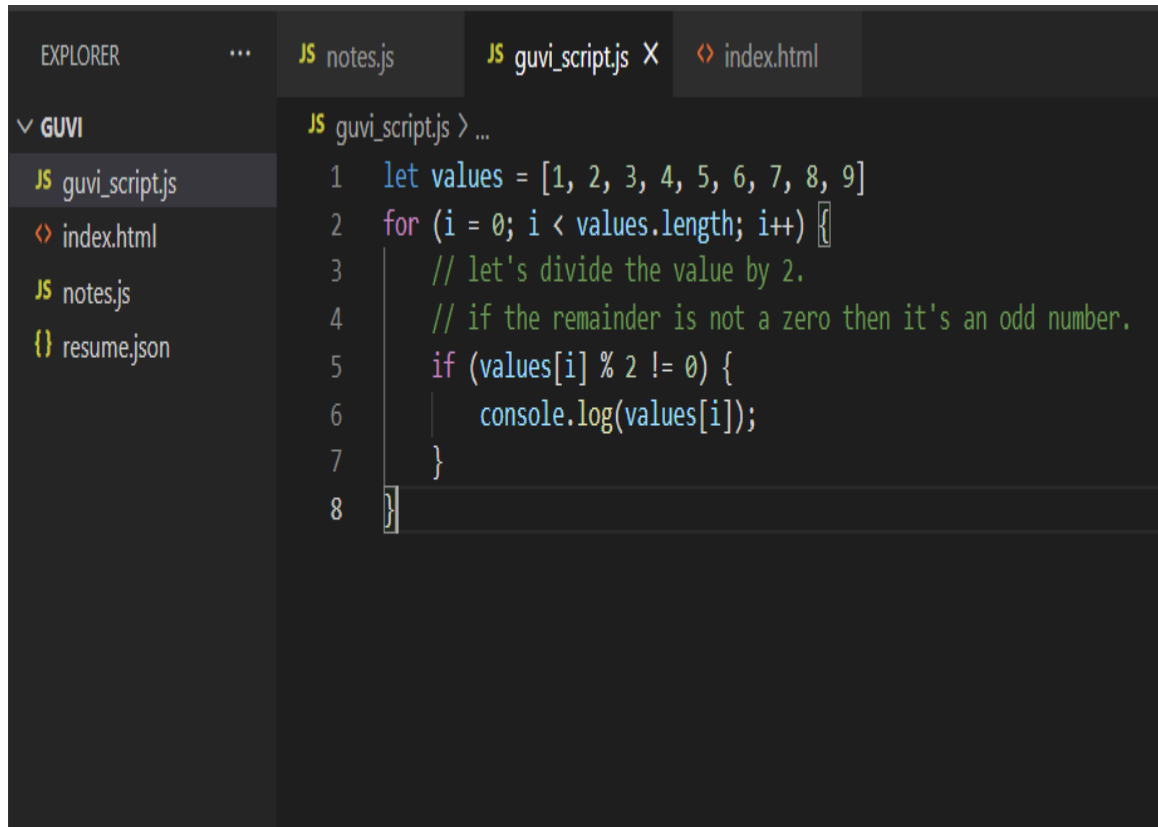
(raw code lines)

```
let values = [1, 2, 3, 4, 5, 6, 7, 8, 9]
for (i = 0; i < values.length; i++) {
  // let's divide the value by 2.
  // if the remainder is not a zero then it's an odd
  number.
  if (values[i] % 2 !== 0) {
    console.log(values[i]);
  }
}
```

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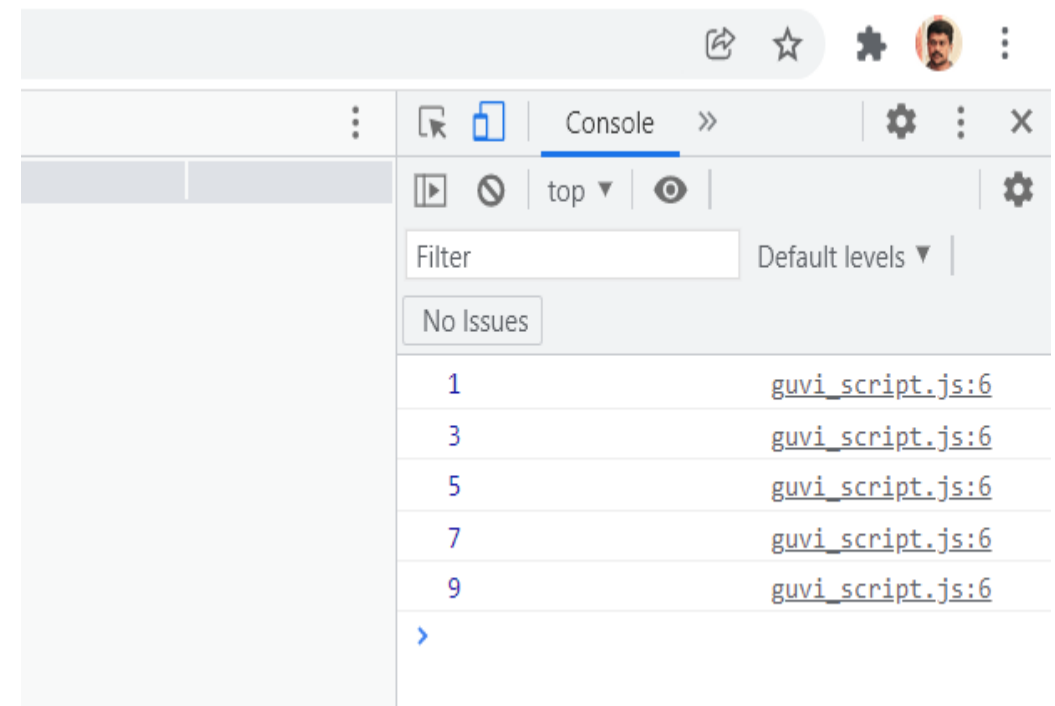
Screenshots:

Vs Code



```
1 let values = [1, 2, 3, 4, 5, 6, 7, 8, 9]
2 for (i = 0; i < values.length; i++) {
3     // let's divide the value by 2.
4     // if the remainder is not a zero then it's an odd number.
5     if (values[i] % 2 !== 0) {
6         console.log(values[i]);
7     }
8 }
```

Console



Line	Source
1	guvi_script.js:6
3	guvi_script.js:6
5	guvi_script.js:6
7	guvi_script.js:6
9	guvi_script.js:6

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Task 1 :anonymous function & IIFE

b) Convert all the strings to title caps in a string array

Output:

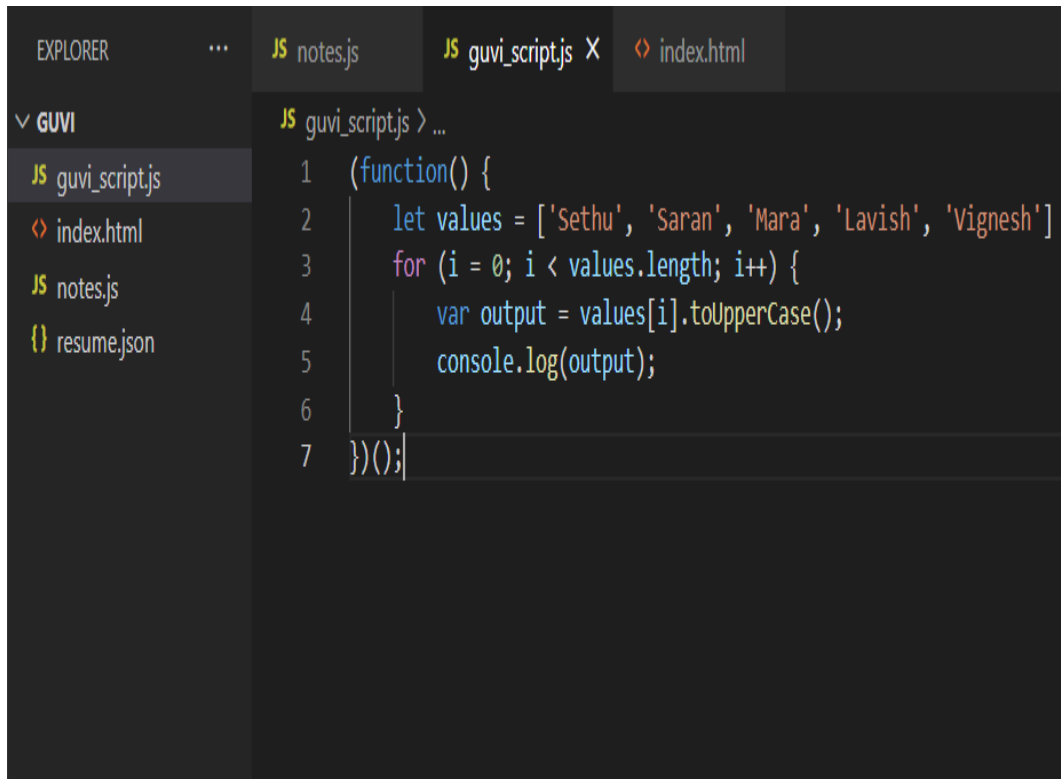
(raw code lines)

```
(function() {  
  let values = ['Sethu', 'Saran', 'Mara', 'Lavish',  
  'Vignesh']  
  for (i = 0; i < values.length; i++) {  
    var output = values[i].toUpperCase();  
    console.log(output);  
  }  
})();
```

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Screenshots:

Vs Code

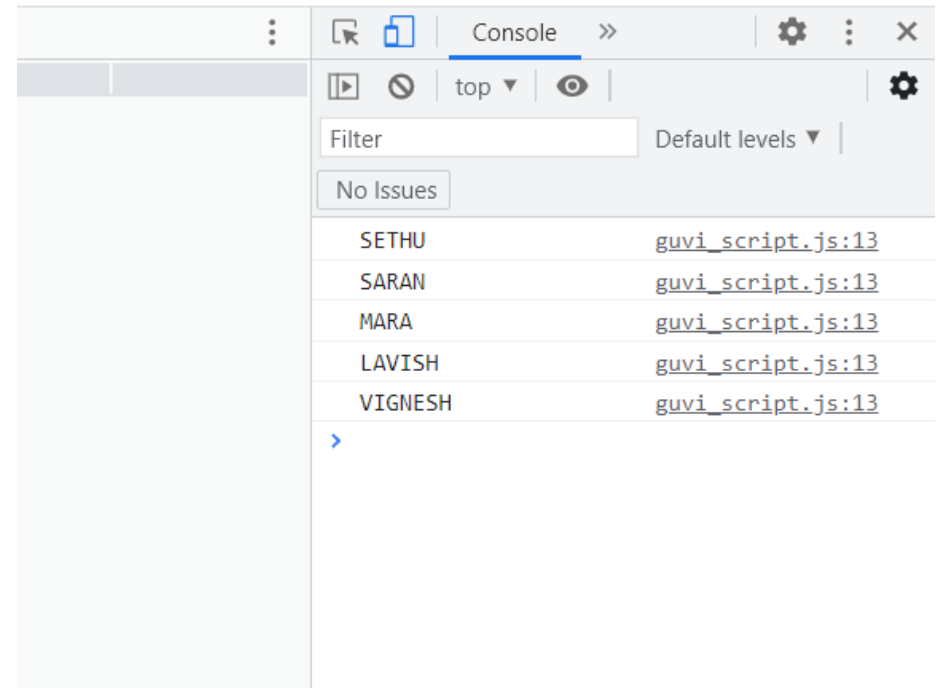


```
EXPLORER  ...  JS notes.js  JS guvi_script.js X  index.html

▼ GUVI
  JS guvi_script.js
  index.html
  JS notes.js
  {} resume.json

JS guvi_script.js > ...
1  (function() {
2      let values = ['Sethu', 'Saran', 'Mara', 'Lavish', 'Vignesh']
3      for (i = 0; i < values.length; i++) {
4          var output = values[i].toUpperCase();
5          console.log(output);
6      }
7  })();
```

Console



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Task 1 :anonymous function & IIFE
c) Sum of all numbers in an array

Output:

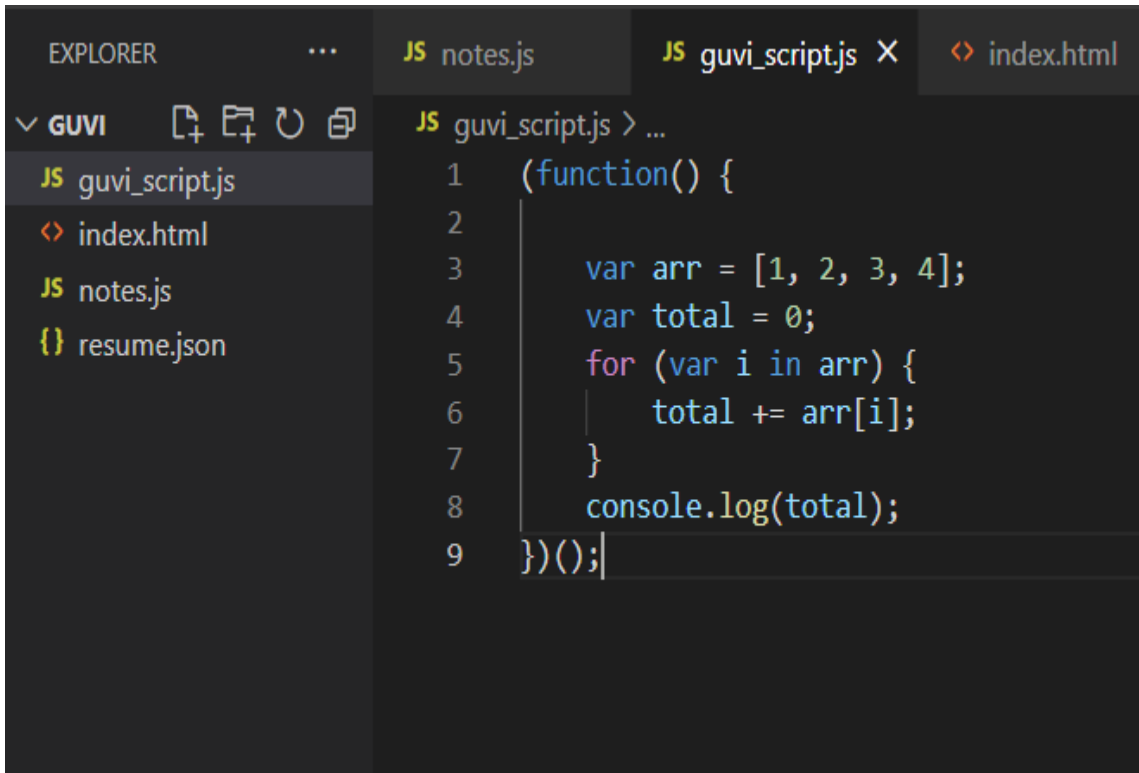
(raw code lines)

```
(function() {  
    var arr = [1, 2, 3, 4];  
    var total = 0;  
    for (var i in arr) {  
        total += arr[i];  
    }  
    console.log(total);  
})();
```

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Screenshots:

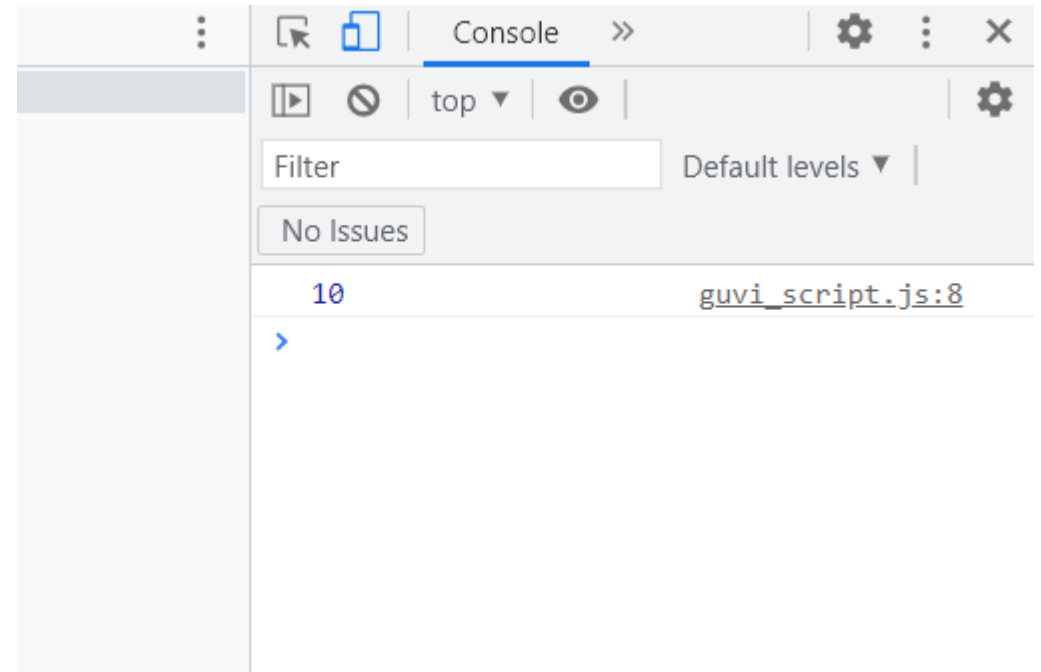
Vs Code



The screenshot shows the VS Code editor interface. The Explorer sidebar on the left displays a project named 'GUVI' containing files 'guvi_script.js', 'index.html', 'notes.js', and 'resume.json'. The main editor area shows the 'guvi_script.js' file with the following code:

```
1 (function() {  
2  
3     var arr = [1, 2, 3, 4];  
4     var total = 0;  
5     for (var i in arr) {  
6         total += arr[i];  
7     }  
8     console.log(total);  
9 })();
```

Console



The screenshot shows the VS Code Console output. The console is titled 'Console' and displays the output of the code execution. The output is '10', which is the sum of the array [1, 2, 3, 4]. The console also shows the source file 'guvi_script.js:8' and a blue arrow pointing to the line of code that executed.

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Task 1 :anonymous function & IIFE

d) Return all the prime numbers in an array

Output:

(raw code lines)

```
let array = [2, 3, 5, 7, 11, 13, 17, 18, 19];

function isPrime(num) {
  for (let start = 2; num > start; start++) {
    if (num % start == 0) {
      return false;
    }
  }
  return num > 1;
}

console.log(array.filter(isPrime)); //
```

Day 5 - Activity

Screenshots:

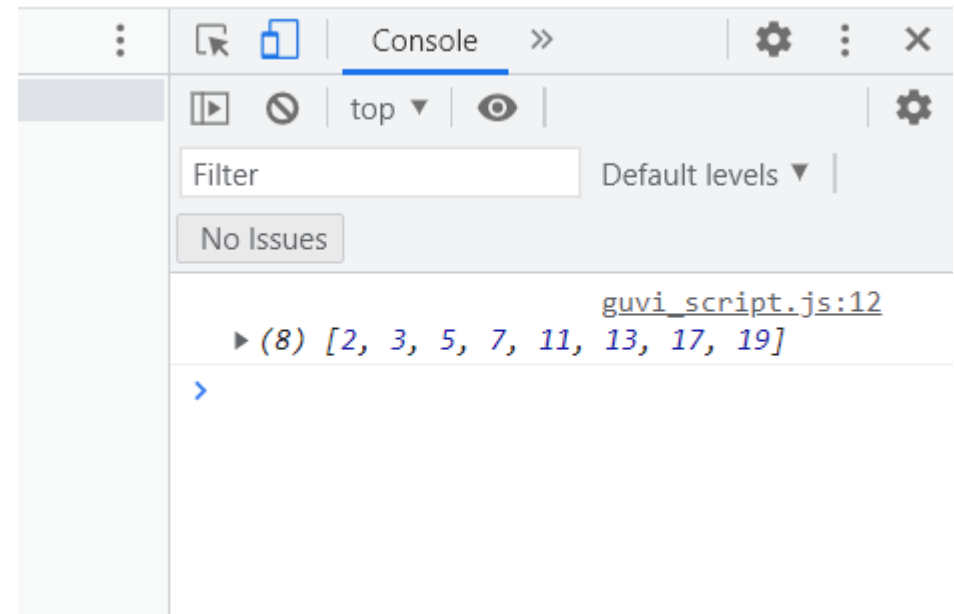
Vs Code



```
EXPLORER
  GUVI
    guvi_script.js
    index.html
    notes.js
    resume.json

JS guvi_script.js > ...
1  let array = [2, 3, 5, 7, 11, 13, 17, 18, 19];
2
3  function isPrime(num) {
4      for (let start = 2; num > start; start++) {
5          if (num % start == 0) {
6              return false;
7          }
8      }
9      return num > 1;
10 }
11 console.log(array.filter(isPrime)); //
```

Console



```
Console
  top
  Filter
  No Issues
  guvi_script.js:12
    ▶ (8) [2, 3, 5, 7, 11, 13, 17, 19]
```


Day 5 - Activity

Task 1 :anonymous function & IIFE

e) Return all the palindromes in an array

Output:

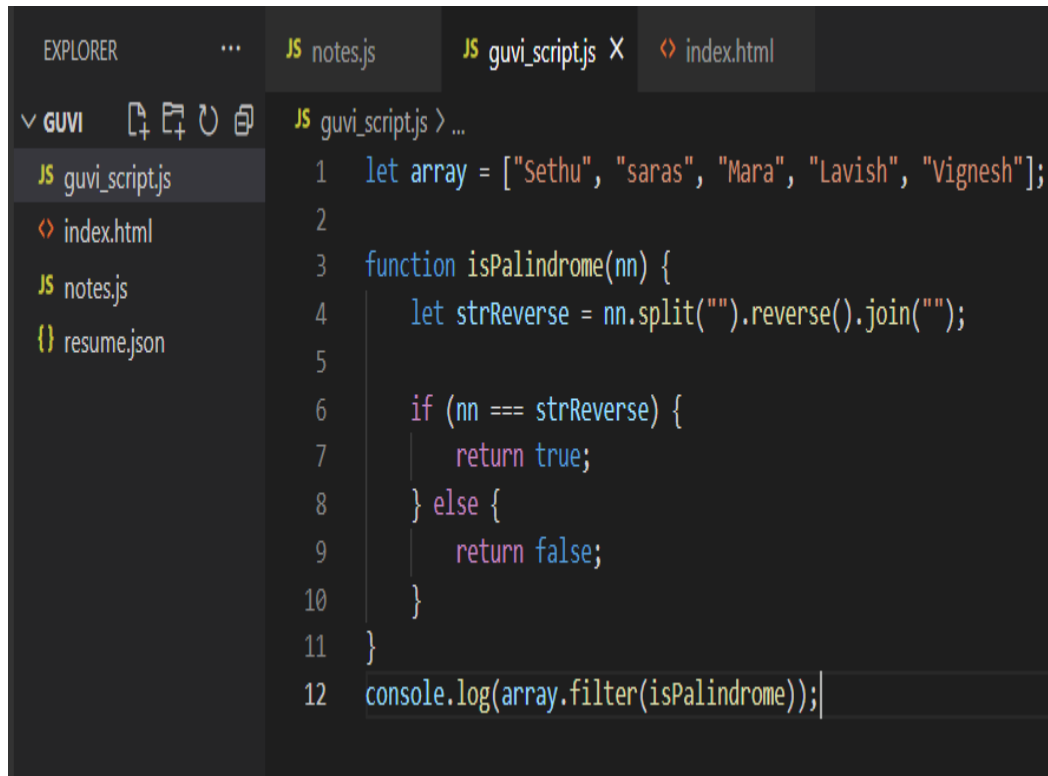
(raw code lines)

```
let array = ["Sethu", "saras", "Mara", "Lavish",  
"Vignesh"];  
  
function isPalindrome(nn) {  
    let strReverse = nn.split("").reverse().join("");  
  
    if (nn === strReverse) {  
        return true;  
    } else {  
        return false;  
    }  
}  
  
console.log(array.filter(isPalindrome));
```

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Screenshots:

Vs Code

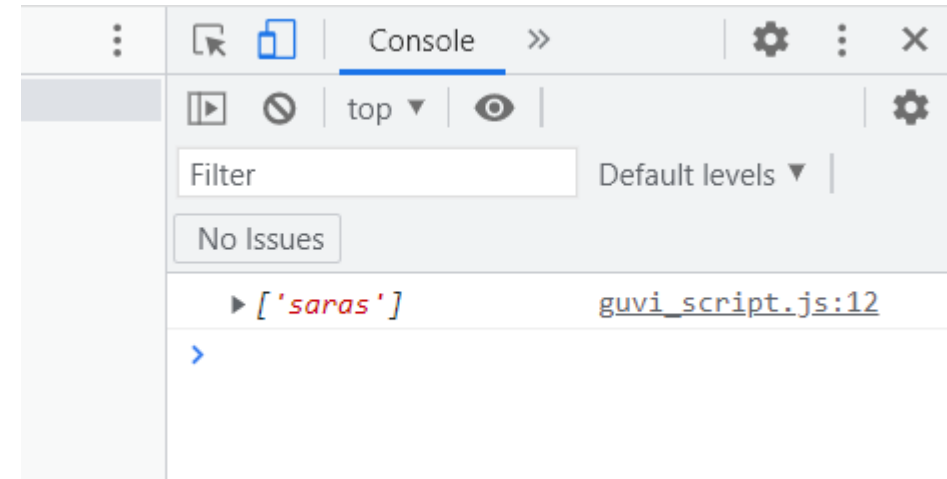


```
EXPLORER  ...  JS notes.js  JS guvi_script.js X  index.html

v GUVI  [Icons]
  JS guvi_script.js
  index.html
  JS notes.js
  {} resume.json

JS guvi_script.js > ...
1  let array = ["Sethu", "saras", "Mara", "Lavish", "Vignesh"];
2
3  function isPalindrome(nn) {
4      let strReverse = nn.split("").reverse().join("");
5
6      if (nn === strReverse) {
7          return true;
8      } else {
9          return false;
10     }
11 }
12 console.log(array.filter(isPalindrome));
```

Console



Day 5 - Activity

Task 1 :anonymous function & IIFE

f) Return median of two sorted arrays of same size

Output:

(raw code lines)

```
function getMedian(ar1, ar2, n) {
    var i = 0; /* Current index of i/p array ar1[] */
    var j = 0; /* Current index of i/p array ar2[] */
    var count;
    var m1 = -1,
        m2 = -1;

    /* Since there are 2n elements, median will be average
    of elements at index n-1 and n in the array obtained after
    merging ar1 and ar2 */
    for (count = 0; count <= n; count++) {
        /*Below is to handle case where all elements of ar1[] are
        smaller than smallest(or first) element of ar2[]*/
        if (i == n) {
            m1 = m2;
            m2 = ar2[0];
            break;
        }

        /*Below is to handle case where all elements of ar2[] are
        smaller than smallest(or first) element of ar1[]*/
        else if (j == n) {
            m1 = m2;
            m2 = ar1[0];
            break;
        }
    }
}
```

```
/* equals sign because if two
arrays have some common elements */
if (ar1[i] <= ar2[j]) {
    m1 = m2; /* Store the prev median */
    m2 = ar1[i];
    i++;
} else {
    m1 = m2; /* Store the prev median */
    m2 = ar2[j];
    j++;
}

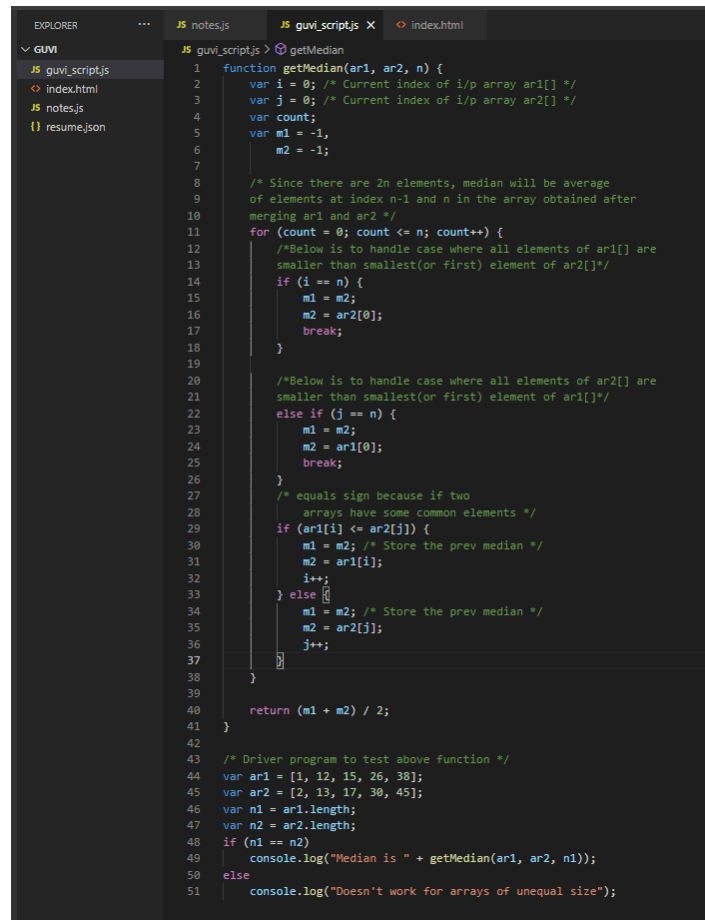
return (m1 + m2) / 2;
}

/* Driver program to test above function */
var ar1 = [1, 12, 15, 26, 38];
var ar2 = [2, 13, 17, 30, 45];
var n1 = ar1.length;
var n2 = ar2.length;
if (n1 == n2)
    console.log("Median is " + getMedian(ar1, ar2, n1));
else
    console.log("Doesn't work for arrays of unequal size");
```

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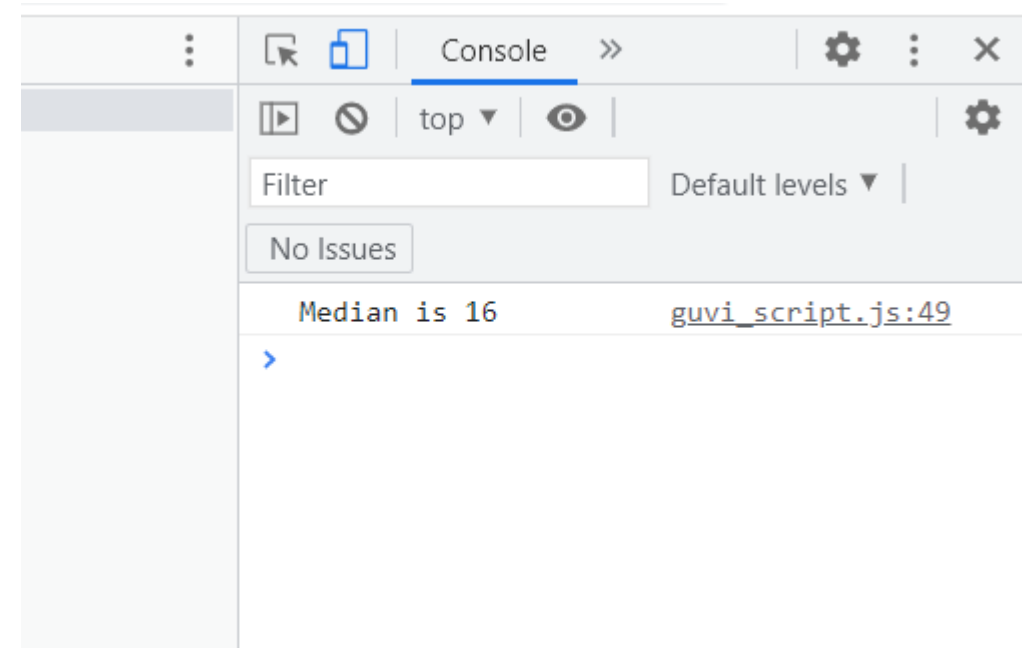
Screenshots:

Vs Code



```
1 function getMedian(ar1, ar2, n) {
2   var i = 0; /* Current index of i/p array ar1[] */
3   var j = 0; /* Current index of i/p array ar2[] */
4   var count;
5   var m1 = -1,
6       m2 = -1;
7
8   /* Since there are 2n elements, median will be average
9    of elements at index n-1 and n in the array obtained after
10  merging ar1 and ar2 */
11  for (count = 0; count <= n; count++) {
12    /*Below is to handle case where all elements of ar1[] are
13     smaller than smallest(or first) element of ar2[]*/
14    if (i == n) {
15      m1 = m2;
16      m2 = ar2[0];
17      break;
18    }
19
20    /*Below is to handle case where all elements of ar2[] are
21     smaller than smallest(or first) element of ar1[]*/
22    else if (j == n) {
23      m1 = m2;
24      m2 = ar1[0];
25      break;
26    }
27
28    /* equals sign because if two
29     arrays have some common elements */
30    if (ar1[i] <= ar2[j]) {
31      m1 = m2; /* Store the prev median */
32      m2 = ar1[i];
33      i++;
34    } else {
35      m1 = m2; /* Store the prev median */
36      m2 = ar2[j];
37      j++;
38    }
39  }
40  return (m1 + m2) / 2;
41 }
42
43 /* Driver program to test above function */
44 var ar1 = [1, 12, 15, 26, 38];
45 var ar2 = [2, 13, 17, 30, 45];
46 var n1 = ar1.length;
47 var n2 = ar2.length;
48 if (n1 == n2)
49   console.log("Median is " + getMedian(ar1, ar2, n1));
50 else
51   console.log("Doesn't work for arrays of unequal size");
```

Console



Day 5 - Activity

Task 1 :anonymous function & IIFE g) Remove duplicates from an array

Output:

(raw code lines)

```
function removeDuplicates(arr, n) {
    // Return, if array is empty
    // or contains a single element
    if (n == 0 || n == 1) return n;

    var temp = new Array(n);

    // Start traversing elements
    var j = 0;
    for (var i = 0; i < n - 1; i++)
        // If current element is not equal
        // to next element then store that
        // current element
        if (arr[i] != arr[i + 1]) temp[j++] = arr[i];

    // Store the last element as whether
    // it is unique or repeated, it hasn't
    // stored previously
    temp[j++] = arr[n - 1];

    // Modify original array
    for (var i = 0; i < j; i++) arr[i] = temp[i];

    return j;
}

var arr = [1, 2, 2, 3, 4, 4, 4, 5, 5];
var n = arr.length;

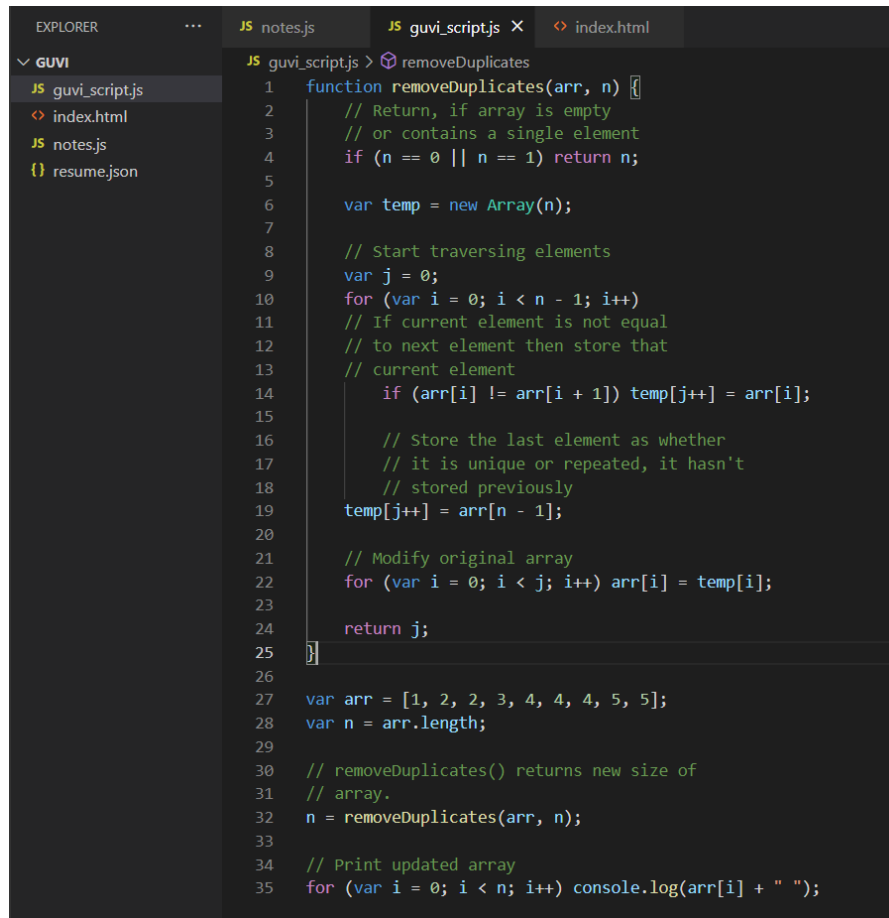
// removeDuplicates() returns new size of
// array.
n = removeDuplicates(arr, n);

// Print updated array
for (var i = 0; i < n; i++) console.log(arr[i] + " ");
```

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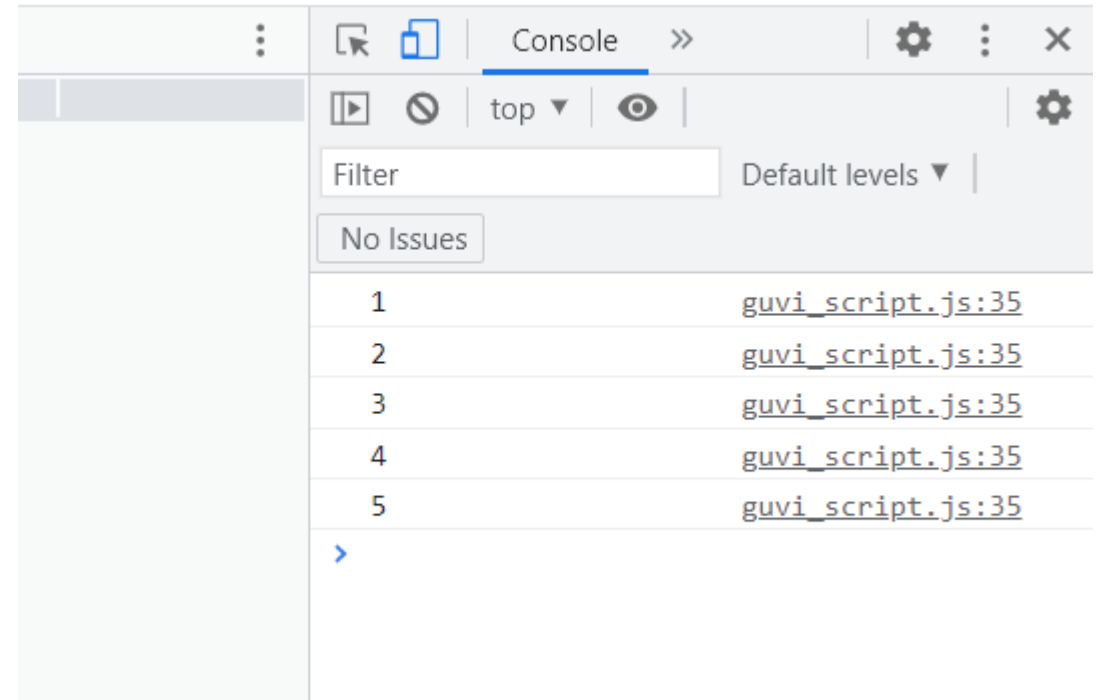
Screenshots:

Vs Code



```
1 function removeDuplicates(arr, n) {  
2     // Return, if array is empty  
3     // or contains a single element  
4     if (n == 0 || n == 1) return n;  
5  
6     var temp = new Array(n);  
7  
8     // Start traversing elements  
9     var j = 0;  
10    for (var i = 0; i < n - 1; i++)  
11        // If current element is not equal  
12        // to next element then store that  
13        // current element  
14        if (arr[i] != arr[i + 1]) temp[j++] = arr[i];  
15  
16        // Store the last element as whether  
17        // it is unique or repeated, it hasn't  
18        // stored previously  
19    temp[j++] = arr[n - 1];  
20  
21    // Modify original array  
22    for (var i = 0; i < j; i++) arr[i] = temp[i];  
23  
24    return j;  
25 }  
26  
27 var arr = [1, 2, 2, 3, 4, 4, 4, 5];  
28 var n = arr.length;  
29  
30 // removeDuplicates() returns new size of  
31 // array.  
32 n = removeDuplicates(arr, n);  
33  
34 // Print updated array  
35 for (var i = 0; i < n; i++) console.log(arr[i] + " ");
```

Console



Day 5 - Activity

Task 1 :anonymous function & IIFE

h) Rotate an array by k times

Output:

(raw code lines)

```
function leftRotate(arr, d, n) {
    for (i = 0; i < d; i++)
        leftRotatebyOne(arr, n);
}

function leftRotatebyOne(arr, n) {
    var i, temp;
    temp = arr[0];
    for (i = 0; i < n - 1; i++)
        arr[i] = arr[i + 1];
    arr[n - 1] = temp;
}

/* utility function to print an array */
function printArray(arr, n) {
    for (i = 0; i < n; i++)
        document.write(arr[i] + " ");
}

// Driver program to test above functions

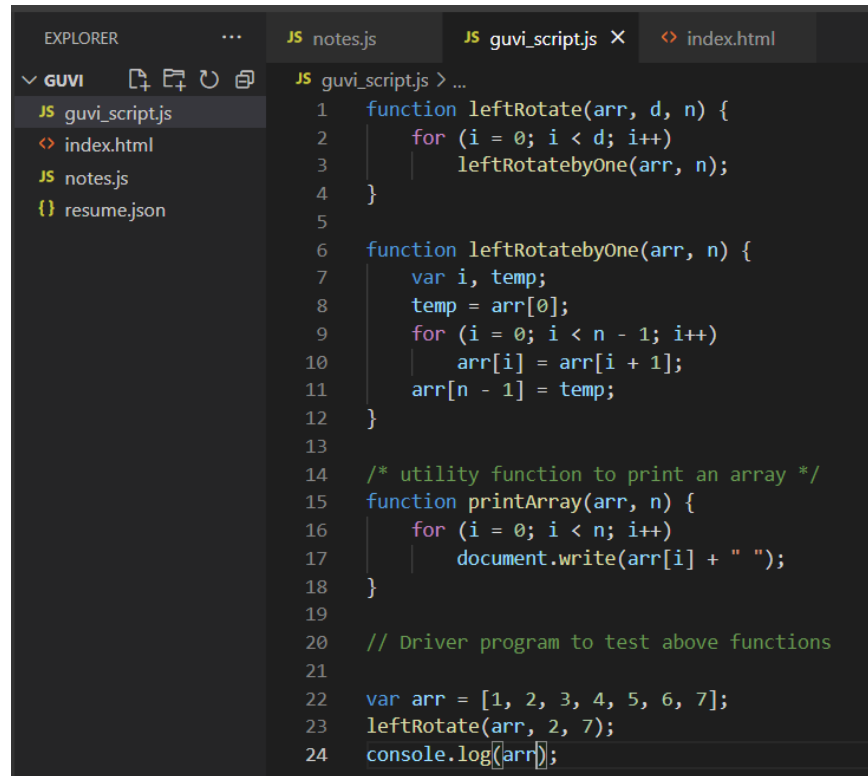
var arr = [1, 2, 3, 4, 5, 6, 7];
leftRotate(arr, 2, 7);
console.log(arr, 7);

// This code is contributed by todaysgaurav
```

Day 5 - Activity

Screenshots:

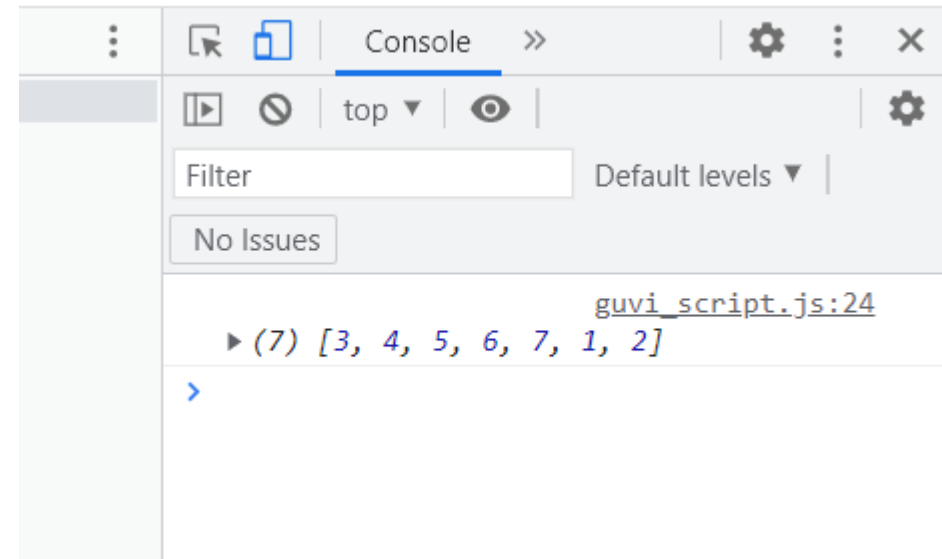
Vs Code



```
EXPLORER  ...  JS notes.js  JS guvi_script.js X  index.html
└─ GUVI
   ├── guvi_script.js
   ├── index.html
   ├── notes.js
   └── resume.json

JS guvi_script.js > ...
1  function leftRotate(arr, d, n) {
2      for (i = 0; i < d; i++)
3          leftRotatebyOne(arr, n);
4  }
5
6  function leftRotatebyOne(arr, n) {
7      var i, temp;
8      temp = arr[0];
9      for (i = 0; i < n - 1; i++)
10         arr[i] = arr[i + 1];
11     arr[n - 1] = temp;
12 }
13
14 /* utility function to print an array */
15 function printArray(arr, n) {
16     for (i = 0; i < n; i++)
17         document.write(arr[i] + " ");
18 }
19
20 // Driver program to test above functions
21
22 var arr = [1, 2, 3, 4, 5, 6, 7];
23 leftRotate(arr, 2, 7);
24 console.log(arr);
```

Console



```
Console >>
top
Filter
Default levels
No Issues

guvi_script.js:24
▶ (7) [3, 4, 5, 6, 7, 1, 2]
```