VISHWAKARMA INSTITUTE OF TECHNOLOGY, PUNE-37
DEPARTMENT OF COMPUTER ENGINEERING

TY. B. Tech.

CS3215: Web Technology

Assignment No: 04

Title: Write a JavaScript program to reverse the elements of a given array.

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Approach 1: Using reverse() method: This approach is the simplest as well as the native approach which marks the usage of the reverse() method available under arrays in JavaScript. First, we will declare an array with certain values and then we will apply the reverse() method to it to print the reversed array.

CODE:

main.js

Run

```
1
2       let numbers_array = [1, 2, 3, 4, 5];
3
4       console.log("Original Array: ");
5       console.log(numbers_array);
6
7       numbers_array.reverse();
8
9       console.log("Reversed Array: ");
10      console.log(numbers_array);
```

OUTPUT

Output

```
node /tmp/tWFh6QOJDT.js
Original Array:
[ 1, 2, 3, 4, 5 ]
Reversed Array:
[ 5, 4, 3, 2, 1 ]
```

Approach 2: Using reverse for() loop: In this approach, we will use the for() loop to reverse an array. First, we will create an array and then use the for loop to print the array elements in reverse order.

CODE

main.js

Run

```
let original_array = [1, 2, 3, 4];

    let reversed_array = [];

    console.log("Original Array: ");
    console.log(original_array);

    for (let i = original_array.length - 1; i >= 0; i--) {
        reversed_array.push(original_array[i]);
    }

    console.log("Reversed Array: ");
    console.log(reversed_array);
```

OUTPUT

```
Output

node /tmp/tWFh6QOJDT.js
Original Array:
[ 1, 2, 3, 4 ]
Reversed Array:
[ 4, 3, 2, 1 ]
```

Approach 3: Using unshift() method: This approach uses the JavaScript unshift**()** method. This method adds elements at the beginning of the array itself. We will use the forEach**()** loop that will perform operations on each element of the array. We will use a newly created array in which we will add the elements from the previous array but in reversed manner itself.

CODE

main.js

Run

```
let original_array = [1, 2, 3, 4, 5, 6];

    let reversed_array = [];

    console.log("Original Array: ");
    console.log(original_array);

    original_array.forEach((element) => {
        reversed_array.unshift(element);
    });

    console.log("Reversed Array: ");
    console.log(reversed_array);
```

OUTPUT

Output

```
node /tmp/tWFh6QOJDT.js
Original Array:
[ 1, 2, 3, 4, 5, 6 ]
Reversed Array:
[ 6, 5, 4, 3, 2, 1 ]
```

Approach 4: Using reduce() method: In this approach we we reduce function which apply callback function on each element and get summarized result of all item in accumulator. First, we will use reduce method on array and take empty as accumulator and append each element at the beginning of array. At the end we get the reverse of original array.

CODE

main.js

Run

```
1  let original_array = [1, 2, 3, 4];
2
3      let reversed_array = [];
4
5      console.log("Original Array: ");
6      console.log(original_array);
7
8      reversed_array = original_array.reduce((acc, item)=> [item]
           .concat(acc), [])
9
10     console.log("Reversed Array: ");
11     console.log(reversed_array);
```

OUTPUT

Output

```
node /tmp/tWFh6QOJDT.js
Original Array:
[ 1, 2, 3, 4 ]
Reversed Array:
[ 4, 3, 2, 1 ]
```