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Common JavaScript Algorithms and Data Structures

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1. Pascal's triangle

```
1   for (let i = 1; i <= 5; i++) {
2     let line = "";
3     for (let l = 5; l >= i; l--) {
4       line += " ";
5     }
6     let k = 1;
7     for (let j = 1; j <= i; j++) {
8       line += " " + k;
9       k = (k * (i - j)) / j;
10    }
11    console.log(line);
12  }
13
14  Output:
15          1
16        1 1
17      1 2 1
18    1 3 3 1
19  1 4 6 4 1
```

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2. Fibonacci Series

```
const number = parseInt(prompt("Enter the number of terms: "));
let n1 = 0,
  n2 = 1,
  nextTerm;

console.log("Fibonacci Series:");

for (let i = 1; i <= number; i++) {
  console.log(n1);
  nextTerm = n1 + n2;
  n1 = n2;
  n2 = nextTerm;
}

Output: 0 1 1 2 3 5 8 13 21 34
```

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3. Remove Duplicate Array

```
let arr = [1, 1, 2, 2, 3, 3];

let result = arr.filter((value, index) => {
  return arr.indexOf(value) == index;
});
console.log(result);

Output: [1, 2, 3]
```

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4. Reverse String

```
function reverseString(str) {
  return str.split("").reverse().join("");
}
reverseString("hello");

Output: "olleh";
```

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5. Odd_Even

```
const arr = [1, 2, 3, 4, 5];

for (let i = 0; i < arr.length; i++) {
  if (i % 2 == 0) {
    console.log(arr[i] + " is odd");
  } else {
    console.log(arr[i] + " is even");
  }
}

Output:
1,3,5 is odd
2,4 is even
```

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