



# Common JavaScript Algorithms and Data Structures





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# 1. Pascal's triangle

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







## 2. Fibonacci Series

```
const number = parseInt(prompt("Enter the number of terms: "));
    let n1 = 0,
 3
      n2 = 1,
 4
      nextTerm;
 5
 6
    console.log("Fibonacci Series:");
 8
    for (let i = 1; i <= number; i++) {
 9
      console.log(n1);
      nextTerm = n1 + n2;
10
11
      n1 = n2;
12
      n2 = nextTerm;
13
14
15
    Output: 0 1 1 2 3 5 8 13 21 34
```









# 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]
```



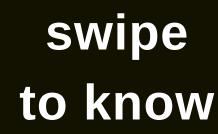


# 4. Reverse String

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

Output: "olleh";
```









## 5. Odd\_Even

```
const arr = [1, 2, 3, 4, 5];
    for (let i = 0; i < arr.length; <math>i++) {
      if (i % 2 == 0) {
         console.log(arr[i] + " is odd");
 6
      } else {
        console.log(arr[i] + " is even");
 8
10
    Output:
11
12 1,3,5 is odd
13 2,4 is even
```





