







index.js + 1.Positive or Negative  NEW JAVASCRIPT 

```
1 function checkNumber(num) {  
2   if (num > 0) {  
3     return "The number is positive.";  
4   } else if (num < 0) {  
5     return "The number is negative.";  
6   } else {  
7     return "The number is zero.";  
8   }  
9 }  
10 console.log(checkNumber(5));  
11 console.log(checkNumber(-3));  
12 console.log(checkNumber(0));  
13 console.log(checkNumber(10.5));  
14 console.log(checkNumber(-7.2));
```

STDIN
Input for the program (Optional)

Output:

The number is positive.
The number is negative.
The number is zero.
The number is positive.
The number is negative.

index.js + 2.Even or Odd   AI NEW JAVASCRIPT  RUN 

```
1 function checkEvenOrOdd(num) {  
2   if (num % 2 === 0) {  
3     return "The number is even.";  
4   } else {  
5     return "The number is odd.";  
6   }  
7 }  
8 console.log(checkEvenOrOdd(4));  
9 console.log(checkEvenOrOdd(7));  
10 console.log(checkEvenOrOdd(0));  
11 console.log(checkEvenOrOdd(-2));  
12 console.log(checkEvenOrOdd(-3));
```

STDIN
Input for the program (Optional)
Output:
The number is even.
The number is odd.
The number is even.
The number is even.
The number is odd.

```
1 function calculatePower(base, exponent) {  
2   return Math.pow(base, exponent);  
3 }  
4 const base = 5;  
5 const exponent = 2;  
6 const result = calculatePower(base, exponent);  
7 console.log(`${base} raised to the power of ${exponent} is ${result}.`);
```

STDIN

Input for the program (Optional)

Output:

5 raised to the power of 2 is 25.




```
index.js + 4.Compare2No
1 function compareNumbers(num1, num2) {
2   if (num1 > num2) {
3     return `${num1} is greater than ${num2}.`;
4   } else if (num1 < num2) {
5     return `${num2} is greater than ${num1}.`;
6   } else {
7     return `Both numbers are equal.`;
8   }
9 }
10 const number1 = 10;
11 const number2 = 20;
12 const result = compareNumbers(number1, number2);
13 console.log(result);
```

STDIN

Input for the program (Optional)



Output:

20 is greater than 10.

index.js + 5.Leap Year   NEW JAVASCRIPT  RUN 

```
1 function isLeapYear(year) {  
2   if ((year % 4 === 0 && year % 100 !== 0) || (year % 400 === 0)) {  
3     return `${year} is a leap year.`;  
4   } else {  
5     return `${year} is not a leap year.`;  
6   }  
7 }  
8  
9 const yearInput = 2024;  
10 const result = isLeapYear(yearInput);  
11 console.log(result);
```

STDIN
Input for the program (Optional)
Output:
2024 is a leap year.

index.js + 6.Garde Calculator   NEW JAVASCRIPT  RUN 

```
1 function calculateGrade(score) {  
2   if (score >= 90 && score <= 100) {  
3     return "Grade: A";  
4   } else if (score >= 80 && score < 90) {  
5     return "Grade: B";  
6   } else if (score >= 70 && score < 80) {  
7     return "Grade: C";  
8   } else if (score >= 60 && score < 70) {  
9     return "Grade: D";  
10  } else if (score < 60 && score >= 0) {  
11    return "Grade: F";  
12  } else {  
13    return "Invalid score. Please enter a score between 0 and 100.";  
14  }  
15 }  
16 const studentScore = 85;  
17 const result = calculateGrade(studentScore);  
18 console.log(result);
```

STDIN
Input for the program (Optional)
Output:
Grade: B

index.js + 7.Age Based Messages

```
1 function ageMessage(age) {  
2   if (age < 16) {  
3     return "You're still a kid, enjoy your youth!";  
4   } else if (age >= 16 && age <= 17) {  
5     return "You're on the verge of adulthood, enjoy your freedom!";  
6   } else if (age >= 18 && age <= 24) {  
7     return "Welcome to adulthood! Make wise choices.";  
8   } else if (age >= 25) {  
9     return "You're in the prime of your life, seize the day!";  
10  } else {  
11    return "Invalid age. Please enter a valid age.";  
12  }  
13 }  
14 const personAge = 20;  
15 const result = ageMessage(personAge);  
16 console.log(result);
```

Input for the program (Optional)

Output:

Welcome to adulthood! Make wise choices.

index.js + 8.FizzBuzz

```
1 function fizzBuzz() {  
2   for (let i = 1; i <= 100; i++) {  
3     if (i % 3 === 0 && i % 5 === 0) {  
4       console.log("FizzBuzz");  
5     } else if (i % 3 === 0) {  
6       console.log("Fizz");  
7     } else if (i % 5 === 0) {  
8       console.log("Buzz");  
9     } else {  
10      console.log(i);  
11    }  
12  }  
13 }  
14 fizzBuzz();
```

AI NEW JAVASCRIPT RUN

Input for the program (Optional)

Output:

```
1  
2  
Fizz  
4  
Buzz  
Fizz  
7  
8  
Fizz  
Buzz  
11  
Fizz  
13  
14  
FizzBuzz  
16  
17  
Fizz  
19  
Buzz  
Fizz  
22  
23  
Fizz
```


index.js + 9.Leap Year Checker

```
1 function isLeapYear(year) {  
2   if ((year % 4 === 0 && year % 100 !== 0) || (year % 400 === 0)) {  
3     console.log(`${year} is a leap year.`);  
4   } else {  
5     console.log(`${year} is not a leap year.`);  
6   }  
7 }  
8 const yearInput = 2028;  
9 isLeapYear(yearInput);
```

AI NEW JAVASCRIPT RUN

Input for the program (Optional)

Output:

2028 is a leap year.

index.js + 9.Leap Year Checker  NEW JAVASCRIPT 

```
1 function isLeapYear(year) {  
2   if ((year % 4 === 0 && year % 100 !== 0) || (year % 400 === 0)) {  
3     console.log(`${year} is a leap year.`);  
4   } else {  
5     console.log(`${year} is not a leap year.`);  
6   }  
7 }  
8 const yearInput = 2027;  
9 isLeapYear(yearInput);
```

Input for the program (Optional)

Output:
2027 is not a leap year.