1-oy 7-dars. JS tarmoqlanuvchi va takrorlanuvchi operatorlar

JavaScript Type Conversions

- Implicit Conversion - automatic type conversion
- Explicit Conversion - manual type conversion
  - string
  - number

> Note

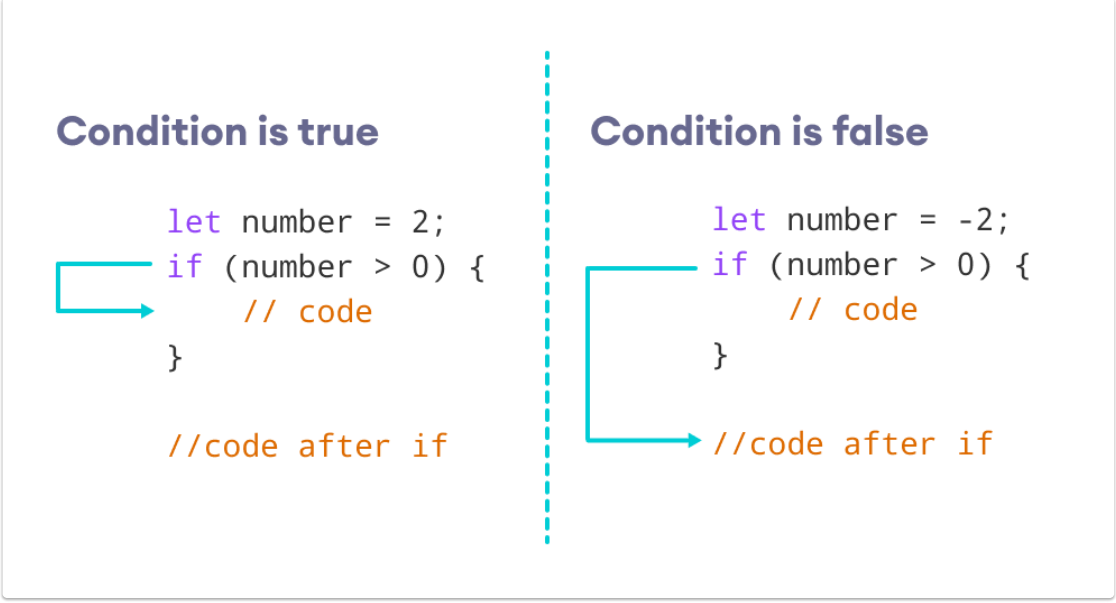
When a number is added to a string, JavaScript converts the number to a string before concatenation.

Convert to Boolean Explicitly

> *In JavaScript, `undefined`, `null`, `0`, `NaN`, `''` converts to `false`*

```
// numeric string used with + gives string type
let result;

result = '3' + 2;
console.log(result) // "32"

result = '3' + true;
console.log(result); // "3true"

result = '3' + undefined;
console.log(result); // "3undefined"

result = '3' + null;
console.log(result); // "3null"
```

JavaScript if...else Statement




```
let score = 45;

if (score ⩾ 50) {
```

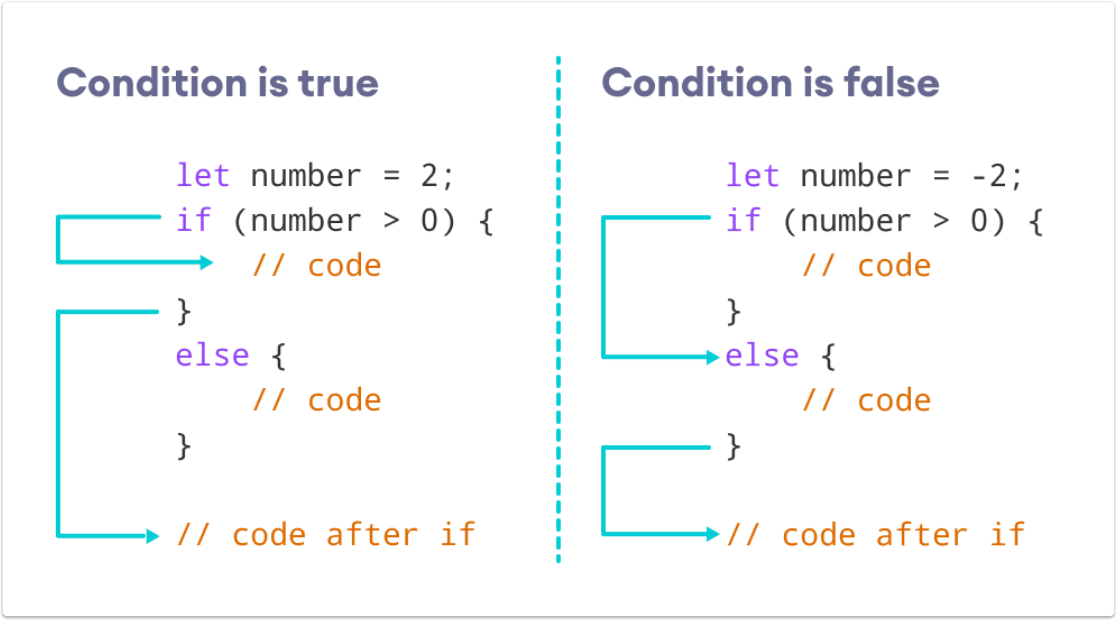
```
    console.log("You passed the examination.");
}
else {
    console.log("You failed the examination.");
}
```

JavaScript if...else Statement

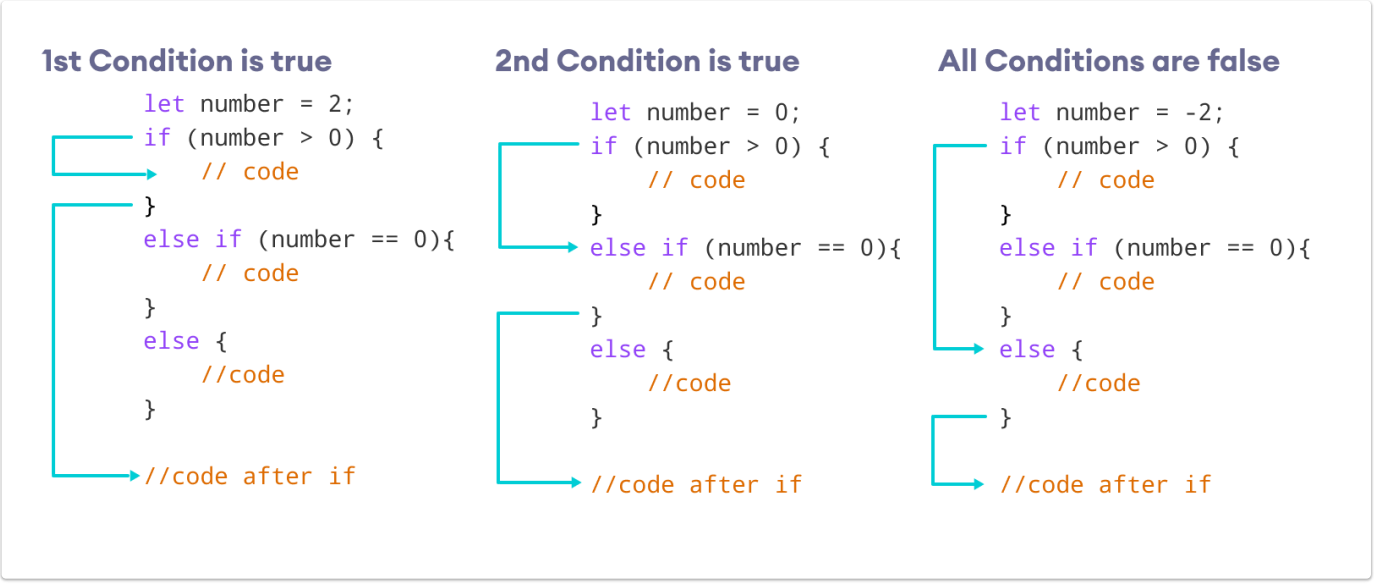
- If a student scores above 90, assign grade A.
- If a student scores above 75, assign grade B.
- If a student scores above 65, assign grade C.

Prompt

```
// Program to check if the number is positive

const number = prompt("Enter a number: ");

// check if number is greater than 0
if (number > 0) {
    // the body of the if statement
    console.log("positive number");
}

console.log("nice number");
```




```
let age = 17;

// if age is 18 or above, you are an adult
// otherwise, you are a minor

if (age ⩾ 18) {
    console.log("You are an adult");
}
else {
    console.log("You are a minor");
}
```



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How to use multiple else if statements?

```
let marks = 60;

// outer if...else statement
// student passed if marks 40 or above
// otherwise, student failed

if (marks ⩾ 40) {

    // inner if...else statement
    // distinction if marks is 80 or above

    if (marks ⩾ 80) {
        console.log("Distinction");
    }
    else {
        console.log("Passed");
    }
}

else {
    console.log("Failed");
}
```

```
let grade = 40;
let result;

if (grade ⩾ 50)
    result = 'pass'
else
    result = 'fail'

console.log(result)
```

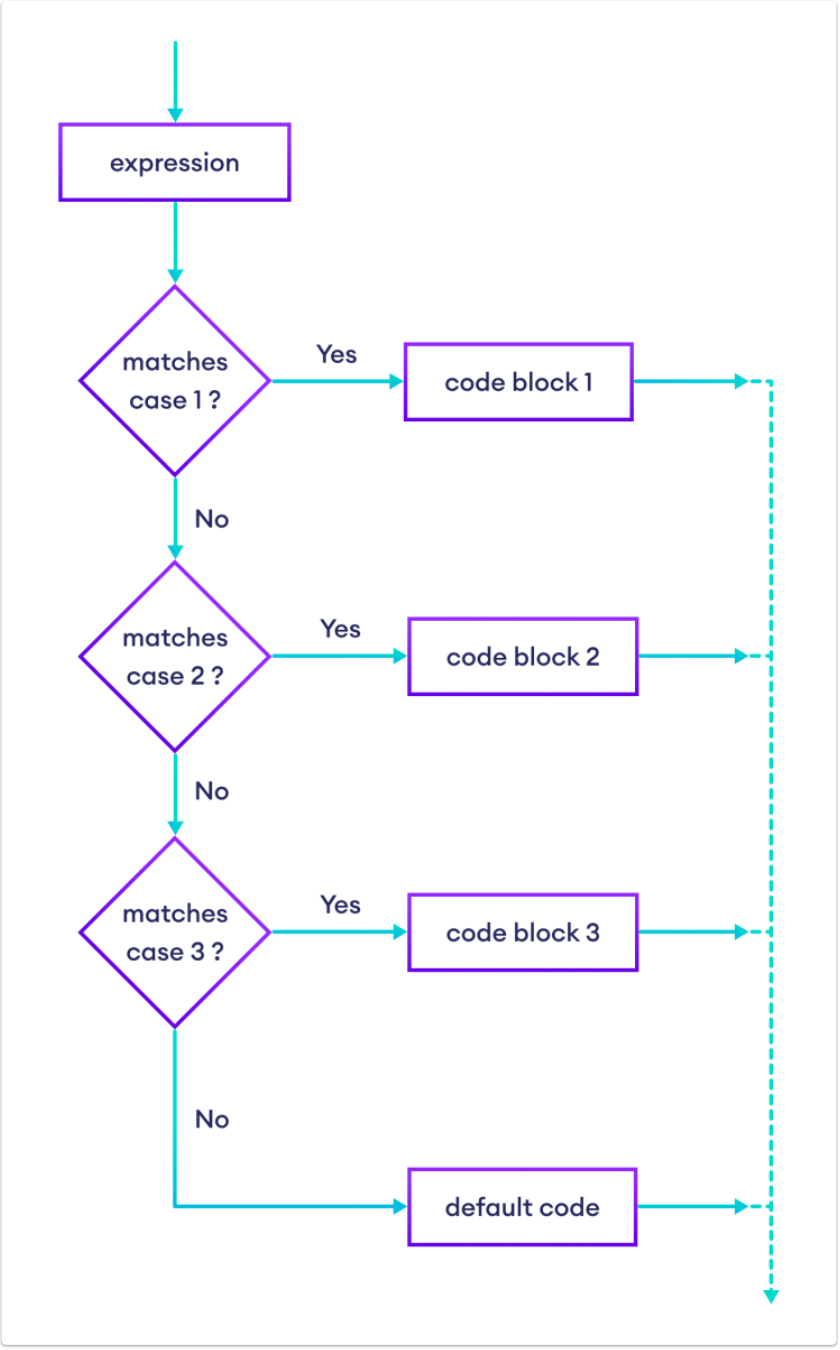
```
let grade = 40;

let result = (grade ⩾ 50) ? 'pass' : 'fail';
```

```
console.log(result)
```

```
let age = 35;
let salary = 6000;

// combine two conditions
// using the "and" operator &&
if (age ⩾ 30 && salary ⩾ 5000) {
    console.log("Eligible for premium membership.");
}
else {
    console.log("Not eligible for premium membership.");
}
```

JavaScript switch Statement

```
switch (expression) {

    case value1:
        // code block to be executed
        // if expression matches value1
        break;

    case value2:
        // code block to be executed
        // if expression matches value2
        break;

     ...

    default:
        // code block to be executed
        // if expression doesn't match any case
}
```




```
let day = 3;
let activity;

switch (day) {

    case 1:
        console.log("Sunday");
        break;

    case 2:
        console.log("Monday");
        break;

    case 3:
        console.log("Tuesday");
        break;

    case 4:
        console.log("Wednesday");
```

```
        break;

    case 5:
        console.log("Thursday");
        break;

    case 6:
        console.log("Friday");
        break;

    case 7:
        console.log("Saturday");
        break;

    default:
        console.log("Invalid Day");
}
```

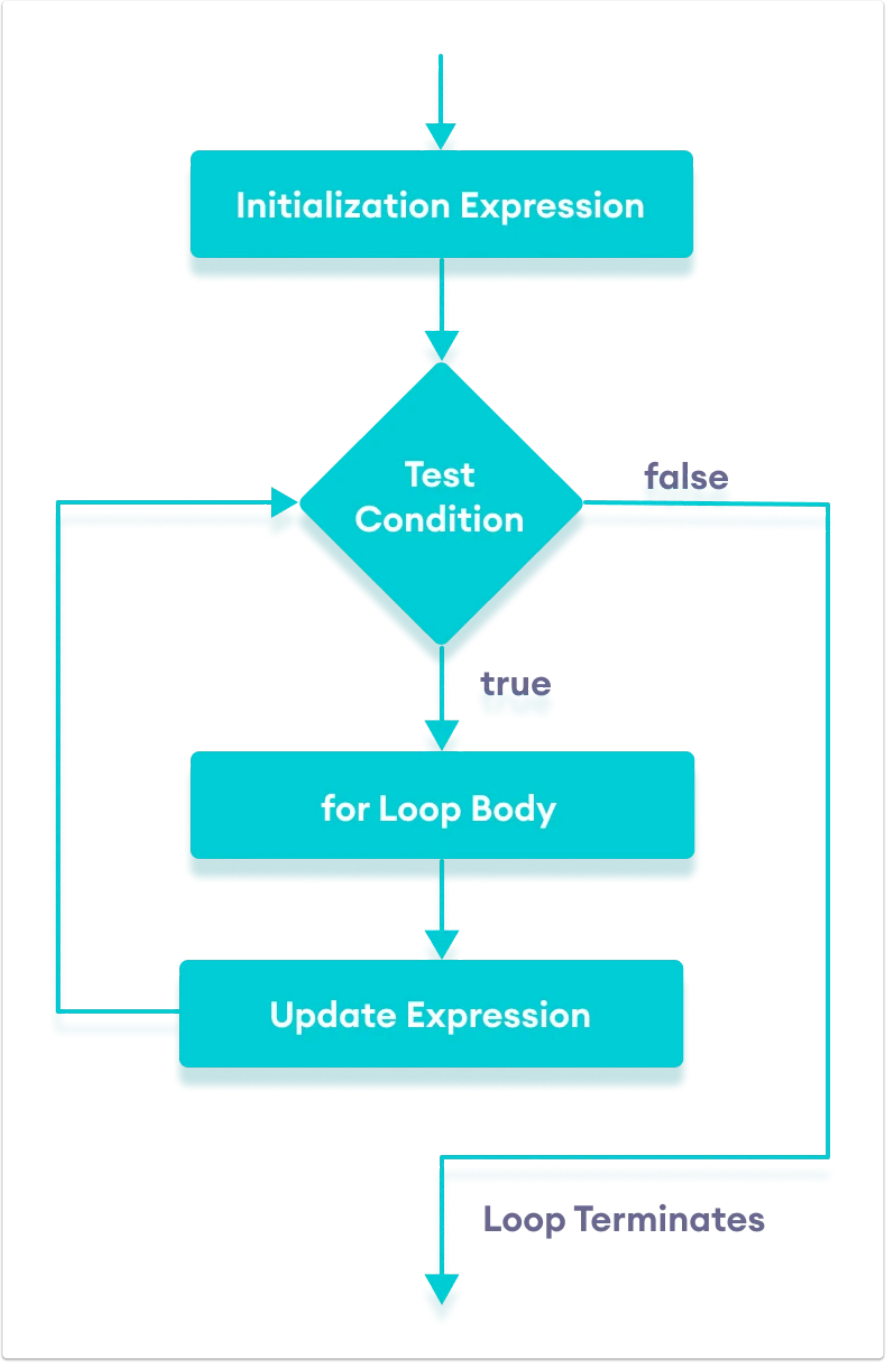
JavaScript Ternary Operator

```
condition ? expression1 : expression2
```

```
// program to check pass or fail

let marks = prompt('Enter your marks :');

// check the condition
let result = (marks >= 40) ? 'pass' : 'fail';

console.log(`You ${result} the exam.`);
```

JavaScript for loop

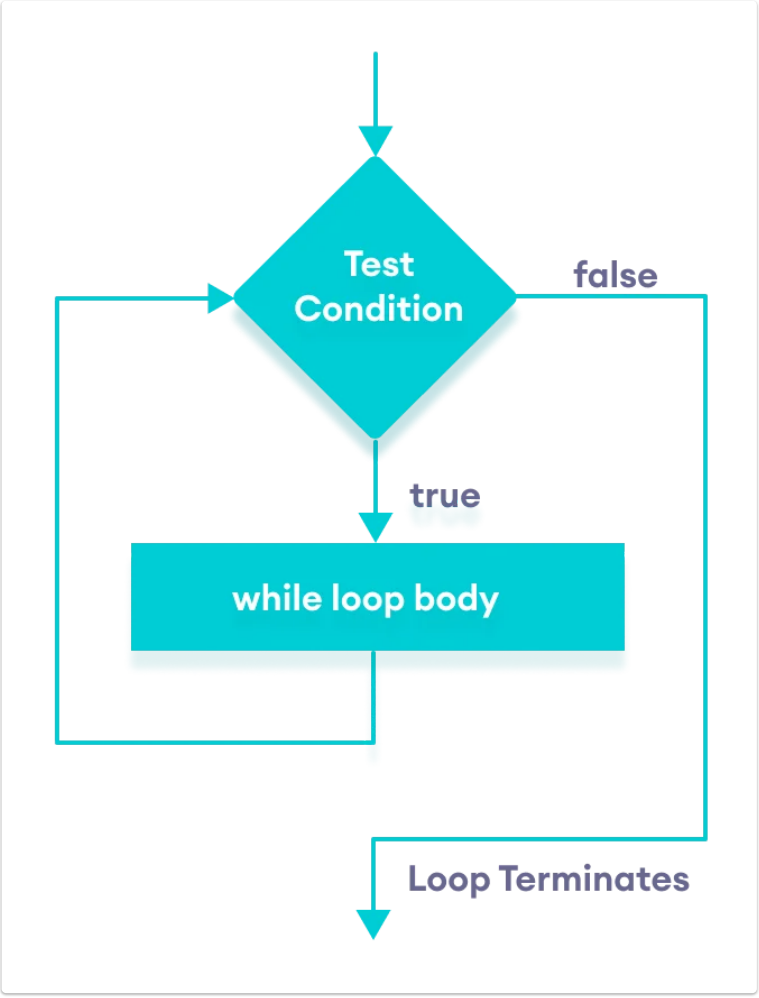
```
for (initialExpression; condition; updateExpression) {
    // for loop body
}
```




```
// program to display text 5 times
const n = 5;

// looping from i = 1 to 5
for (let i = 1; i <= n; i++) {
    console.log(`I love JavaScript.`);
}
```

JavaScript while Loop

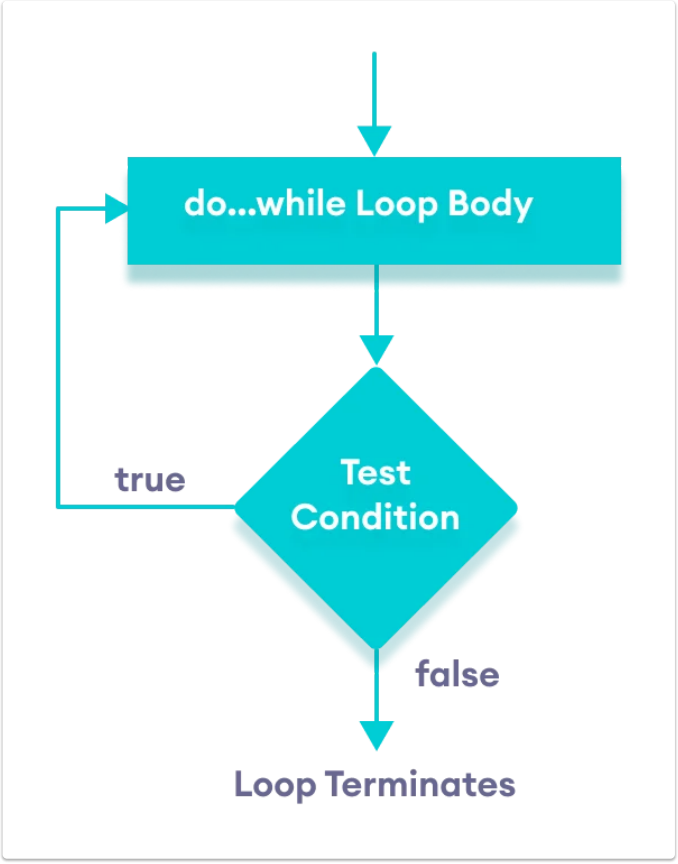
```
while (condition) {
    // body of loop
}
```




```
// program to display numbers from 1 to 5
// initialize the variable
let i = 1, n = 5;

// while loop from i = 1 to 5
while (i <= n) {
    console.log(i);
    i += 1;
}
```

JavaScript do...while Loop

```
do {
    // body of loop
} while(condition)
```


do...while Loop Body
Test Condition
true
false
Loop Terminates