UNIT 02

LESSON 02.02

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nested if-else logic

truthy-falsey values

&& (AND) operator

|| (AND) operator

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nested if-else logic

In the previous lesson we saw if-else logic involving a planned activity:

- if it's rainy, go to the museum.
- else if it's sunny, go to the beach
- else (it's cloudy) so go to the park.

But what if there are also wind conditions that will determine our activities at the beach and park:

```
- If it is sunny, go to the beach.
    - If it is windy, go windsurfing.
    - If it is not windy, play frisbee.
- If it is cloudy, go to the park.
    - If it is windy, fly a kite.
    - If it is not windy, have a picnic.
- If it is rainy, go to the museum.
```

This is nested decision making, and it requires nested if-else logic.

1. Set up the basic, "non-nested" if-else logic, and add a new variable, windy, that we can use for "nested logic":

```
    let weather = "cloudy";
    let windy = true;

    if (weather == "rainy") {
        console.log('Go to the museum!');
    } else if (weather == "sunny") {
        console.log('Go to the beach!');
    } else {
```

```
        console.log('Go to the park!');
    }
```

2. Wind conditions do not apply if we are at the museum. So, move on to the "else if", and add this nested logic that specifies what to do at the beach:

```
    if (weather == "rainy") {
        console.log('Go to the museum!');
    } else if (weather == "sunny") {
        console.log('Go to the beach!');
        if (windy == true) {
            console.log('Go windsurfing!');
        } else {
            console.log('Play frisbee!');
        }
    } else {
        console.log('Go to the park!');
    }
```

3. Moving on to the last part, specify what to do at the park:

```
    if (weather == "rainy") {
        console.log('Go to the museum!');
    } else if (weather == "sunny") {
        console.log('Go to the beach!');
        if (windy == true) {
            console.log('Go windsurfing!');
        } else {
            console.log('Play frisbee!');
        }
    } else {
        console.log('Go to the park!');
        if (windy) {
            console.log('Fly a kite!');
        } else {
            console.log('Have a picnic!');
        }
    }
```

4. Change weather and windy to get different output.

truthy and falsey values

Truthy and falsey values are not literally true or false, but they return true or false in a boolean context, i.e. in an "if-statement". Here are the falsey values:

falsey values

```
- NaN
- undefined
- null
- 0
- "", ''
```

All other values, including all strings and non-zero numbers, both positive and negative, are truthy.

A falsey resolves to false in an if-statement:

5. Do a test to confirm that **NaN** is falsey:

```
let baNaNa = Number('banana');
console.log('baNaNa', baNaNa, typeof(baNaNa));
// baNaNa NaN number

if(baNaNa) {
    console.log('NaN is truthy');
} else {
    console.log('NaN is falsey'); // runs
}
```

6. Do a test to confirm that **undefined** is falsey:

```
let player1;
console.log('player1', player1, typeof(player1));
// player1 undefined undefined

if(player1) {
    console.log('undefined is truthy');
} else {
    console.log('undefined is falsey'); // runs
}
```

7. Do a test to confirm that **null** is falsey:

```
let score = null;
console.log('score', score, typeof(score));
// score null object

if(score) {
    console.log('null is truthy');
} else {
    console.log('null is falsey'); // runs
}
```

8. Do a test to confirm that **0** is falsey:

```
let x = 0;
console.log('x', x, typeof(x));
// x 0 number

if(x) {
    console.log('0 is truthy');
} else {
    console.log('0 is falsey'); // runs
}
```

9. Do a test to confirm that empty strings are falsey:

```
let zip = "";
console.log('zip', zip, typeof(zip));
// zip  string

if(zip) {
    console.log('empty strings are truthy');
} else {
    console.log('empty strings are is falsey'); // runs
}
```

- **END Lesson 02.02**
- **NEXT Lab 02.02**
- **Lesson 02.03**