

FOR LOOPS

IN THIS LESSON

For loops vs while loops

For loop syntax & walk-through

For loops & arrays

For ... of loops

FOR LOOPS VS WHILE LOOPS

For loops are like **while** loops, but with built-in support for an incrementing iterator ... what does this mean?

If we want a **while** loop to repeat X number of times, we can do this:

```
let i = 0;
while (i < 5) {
  console.log('Loop iteration #', i);
  i += 1;
}
```

The same logic expressed as a **for** loop looks like this:

```
for(let i = 0; i < 5; i++) {
  console.log('Loop iteration #', i);
}
```



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> let i = 0;

< undefined

```
> while (i < 5) {  
    console.log('Loop iteration #', i);  
    i += 1;  
}
```

Loop iteration # 0

Loop iteration # 1

Loop iteration # 2

Loop iteration # 3

Loop iteration # 4

< 5

>



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```
> for (let i = 0; i < 5; i++) {  
    console.log('Loop iteration #', i);  
}
```

Loop iteration # 0

Loop iteration # 1

Loop iteration # 2

Loop iteration # 3

Loop iteration # 4

< undefined

> |

```
    console.log('Loop iteration #', i);  
  }  
}
```

Loop iteration # 0

Loop iteration # 1

Loop iteration # 2

Loop iteration # 3

Loop iteration # 4

⏪ undefined

```
> for (let i = 0; i < 5; i += 1) {  
    console.log('Loop iteration #', i);  
}
```

Loop iteration # 0

Loop iteration # 1

Loop iteration # 2

Loop iteration # 3

Loop iteration # 4

⏪ undefined

>



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```
> for (let i = 0; i < 10; i += 2) {  
    console.log('Printing only even numbers between 0 and 9:', i);  
}
```

Printing only even numbers between 0 and 9: 0

Printing only even numbers between 0 and 9: 2

Printing only even numbers between 0 and 9: 4

Printing only even numbers between 0 and 9: 6

Printing only even numbers between 0 and 9: 8

< undefined

> |

FOR LOOP SYNTAX & WALK-THROUGH

```
for ( initialization ; condition ; final expression ) {  
    ...code to execute...  
}
```


FOR LOOP SYNTAX & WALK-THROUGH

```
for ( let i = 0; i < 5; i++) {  
  console.log('Loop iteration #', i);  
}
```

FOR LOOPS & ARRAYS

We can use loops and arrays to set up a dynamic number of iterations

```
const guestsArray = ['Jack', 'Aravind', 'Samira', 'Haley', 'Lydia', 'Adrian'];
```

```
for (let i = 0; i < guestsArray.length; i++) {  
  console.log('Welcome to the party ' + guestsArray[i] + '!');  
}
```

FOR ... OF LOOPS

for ... of loop works with arrays and other iterables (data structures that contain lists of items that can be iterated over)

```
const guestsArray = ['Jack', 'Aravind', 'Samira', 'Haley', 'Lydia', 'Adrian'];
```

```
for (const guest of guestsArray) {  
  console.log('Welcome to the party ' + guest + '!');  
}
```

```
for (const/let variableName of arrayName) {  
  ... code to execute once per each item in the array ...  
  ... use variableName to access each array item in turn ...  
}
```



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```
> const guestsArray = ['Jack', 'Aravind', 'Samira', 'Haley', 'Lydia', 'Adrian'];
```

```
< undefined
```

```
> for (let i = 0; i < guestsArray.length; i++) {  
    console.log('Welcome to the party ' + guestsArray[i] + '!');  
}
```

```
Welcome to the party Jack!
```

```
Welcome to the party Aravind!
```

```
Welcome to the party Samira!
```

```
Welcome to the party Haley!
```

```
Welcome to the party Lydia!
```

```
Welcome to the party Adrian!
```

```
< undefined
```

```
>
```

Welcome to the party Jack!

Welcome to the party Aravind!

Welcome to the party Samira!

Welcome to the party Haley!

Welcome to the party Lydia!

Welcome to the party Adrian!

⏪ undefined

```
> for (const guest of guestsArray) {  
    console.log('Welcome to the party ' + guest + '!');  
}
```

Welcome to the party Jack!

Welcome to the party Aravind!

Welcome to the party Samira!

Welcome to the party Haley!

Welcome to the party Lydia!

Welcome to the party Adrian!

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```
> for (let guest of guestsArray) {  
  guest = guest.toUpperCase();  
  console.log('Welcome to the party ' + guest + '!');  
}
```

Welcome to the party JACK!

Welcome to the party ARAVIND!

Welcome to the party SAMIRA!

Welcome to the party HALEY!

Welcome to the party LYDIA!

Welcome to the party ADRIAN!

⏪ undefined

>