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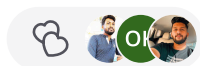


# Errors In Javascript

## Syntax Error vs. Reference Error vs. Type Error

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Errors are like a by-product of coding. Like any other programming language, errors are also present in javascript. Let's look at basic errors in javascript.

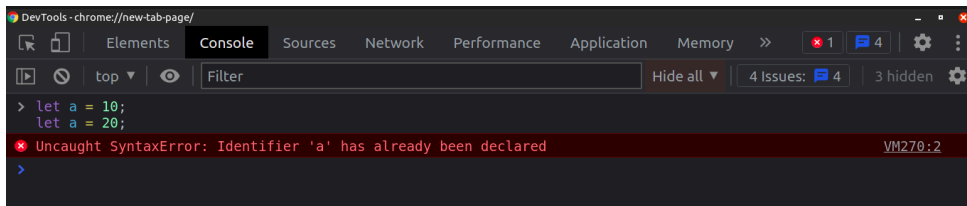
### 1. Syntax Error

In the programming language way of writing code called syntax, Javascript also has its own syntax to write code. and if you messed up with that syntax javascript engine will throw a syntax error.

For example,



```
let a = 10;
let a = 20;
```



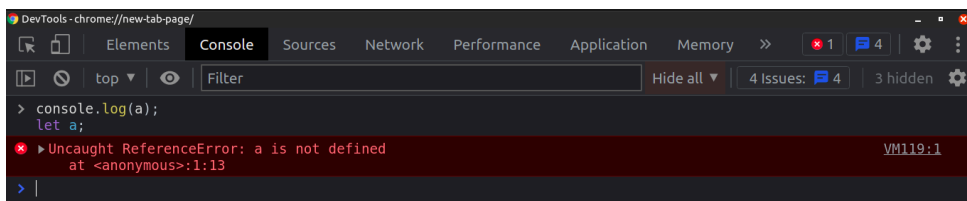
In the above example, we declaring the variable `a` two times in the same scope, which is not allowed in javascript syntax because a variable with the same name has already been declared.

## 2. Reference Error

When we declare a variable javascript engine assigns memory for that variable. After when we want to access that variable javascript will look for a reference in memory for it. If it's not able to find a reference it will give a reference error.

For example,

```
console.log(a);
let a = 10;
```



In the above example, we are trying to access the variable `a` before declaring it, so the javascript engine is not able to get a reference for that hence it throwing a reference error.

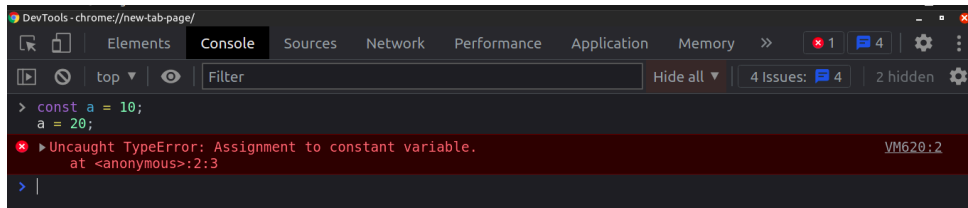
## 3. Type Error

Javascript is a dynamic language as you can store any type of data in any variable at a time. But only with `let` we can have this

freedom, there is one more way we can declare a variable in modern javascript which is using `const`. As the name suggests it's going to be a constant variable which means you are can't change the value later in the program. If you do then let's see, what happens.

For example,

```
const a = 10;
a = 20;
```



In the above example, we are trying to reassign value to a variable `a` which is not allowed for constant variable type, hence the javascript engine will throw a type error.

## TL;DR

1. Syntax Error: If you are messed with javascript syntax.
2. Reference Error: If you are trying to access a variable before declaring it.
3. Type Error: If you are trying to reassign a value to a constant variable.

Thanks for reading. 😊

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