

Variable Keywords, Scopes & Hoisting in JS

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<https://sakshat.ac.in>

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Learning Objectives

In this tutorial, we will learn about:



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In this tutorial, we will learn about:

- ▶ **Variable Keywords**



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- ▶ **Scopes**



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System Specifications

This tutorial is recorded using:



System Specifications

This tutorial is recorded using:

▶ **Ubuntu Linux OS version 18.04**



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This tutorial is recorded using:

- ▶ **Ubuntu Linux OS version 18.04**
- ▶ **Visual Studio Code version 1.51.1**
(code editor)



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This tutorial is recorded using:

- ▶ **Ubuntu Linux OS version 18.04**
- ▶ **Visual Studio Code version 1.51.1**
(code editor)
- ▶ **Firefox Web Browser**



Prerequisites



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- ▶ You should be familiar with writing and executing JS files



Prerequisites

- ▶ You should be familiar with writing and executing JS files
- ▶ If not, please go through the prerequisite tutorials on <https://spoken-tutorial.org>



Code Files

- ▶ **The files used in this tutorial are available in the `Code files` link on this tutorial page**



Code Files

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- ▶ **Please download and extract the files**



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- ▶ **Make a copy and then use them for practicing**



Variable Keywords



Variable Keywords

- ▶ `let` keyword **is used for smaller scopes**
technically called `block scope`



Variable Keywords

- ▶ `let` keyword **is used for smaller scopes technically called** block scope
- ▶ `const` keyword **is used for declaring constants like** Pi value



Scope

- ▶ **The scope of var keyword is functional scope**



Scope

- ▶ **The scope of var keyword is functional scope**
- ▶ **The variable declared inside a function using var, cannot be accessed outside the function**



Scope

- ▶ **To declare variables, ES6 has introduced two new keywords:**



Scope

- ▶ **To declare variables, ES6 has introduced two new keywords:**
 - ▶ `let`



Scope

- ▶ **To declare variables, ES6 has introduced two new keywords:**
 - ▶ `let`
 - ▶ `const`



Scope

- ▶ **To declare variables, ES6 has introduced two new keywords:**
 - ▶ `let`
 - ▶ `const`
- ▶ **They both have block scope**



Scope

- ▶ A variable **declared with** `let` **or** `const` **inside** a loop, `if/else` condition **or** `switch` case



Scope

- ▶ **A variable declared with let or const inside a loop, if/else condition or switch case**
- ▶ **Cannot be accessed outside the block scope**



Lexical Scope

In JavaScript,

- ▶ Variables which are declared outside the function or a block



Lexical Scope

In JavaScript,

- ▶ Variables **which are declared outside the function or a block**
- ▶ **are available inside the function or a block**



Hoisting

- ▶ Hoisting **is** JavaScript's **default behavior of moving** declarations **to the top of the Scope before** execution



Summary

In this tutorial, we have learnt:

- ▶ **Variable Keywords**
- ▶ **Scopes**
- ▶ **Hoisting**



Assignment

- ▶ **Open the file `assignment.js`**
- ▶ **Clear the existing code**
- ▶ **Log the value `x` in the console first before declaring `x` value**
- ▶ **Declare a variable `x` using `const` below the log statement**



Assignment

- ▶ **Open the file `MyPage.html` in the web browser**
- ▶ **Observe the output in the browser's console**
- ▶ **An error is observed**
- ▶ **Reason:** Recall that the variables declared with `const` will not be hoisted



About Spoken Tutorial project

- ▶ Watch the video available at https://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarises the Spoken Tutorial project
- ▶ If you do not have good bandwidth, you can download and watch it



Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- ▶ Conducts workshops using spoken tutorials
- ▶ Gives certificates to those who pass an online test
- ▶ For more details, please write to contact@spoken-tutorial.org



Answers for THIS Spoken Tutorial

- ▶ Questions in THIS Spoken Tutorial?
- ▶ Visit <https://forums.spoken-tutorial.org>
- ▶ Choose the minute and second where you have the question
- ▶ Explain your question briefly
- ▶ The Spoken Tutorial project will ensure an answer
- ▶ You will have to register to ask questions



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Thank you

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