

AZURE PYTHON

COMPUTER ENGINEERING
TECHNOLOGY 5

JAVASCRIPT FUNDAMENTALS

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JAVASCRIPT VARIABLES

VARIABLES

- Variables are Containers for Storing Data
- JavaScript Variables can be declared in 4 ways:
 - a.
 - b. Using ***var***
 - c. Using ***let***
 - d. Using ***const***

It is considered good programming practice to always declare variables before use.

- The ***var*** keyword was used in all JavaScript code from 1995 to 2015.
- The ***let*** and ***const*** keywords were added to JavaScript in 2015.
- The ***var*** keyword should only be used in code written for older browsers.

IDENTIFIERS

All JavaScript variables must be identified with unique names.

These unique names are called **identifiers**.

Identifiers can be short names (like x and y) or more descriptive names (age, sum, totalVolume).

The general rules for constructing names for variables (unique identifiers) are:

- Names can contain letters, digits, underscores, and dollar signs.
- Names must begin with a letter.
- Names can also begin with \$ and _ (but we will not use it in this tutorial).
- Names are case sensitive (y and Y are different variables).
- Reserved words (like JavaScript keywords) cannot be used as names.

DATA TYPES

- JavaScript variables can hold numbers like **100** and text values like "**Mary Ann**".
- In programming, text values are called text **strings**.
- JavaScript can handle many types of data, but for now, just think of **numbers** and **strings**.
- Strings are written inside **double** or **single quotes**. Numbers are written **without quotes**.

ARITHMETIC

As with algebra, you can do arithmetic with JavaScript variables, using operators like **=** and **+**:

ex.

```
let x = 5 + 2 + 3;
```

result: 10

JAVASCRIPT STRINGS

STRING LENGTH

To find the length of a string, use the built-in `length` property:

ESCAPE CHARACTER

Because strings must be written within quotes, JavaScript will misunderstand this string:

```
let text = "The sign on the door read, \"Please knock before entering.\"";
```

The string will be chopped to "The sign on the door read, ".

The solution to avoid this problem, is to use the backslash escape character.

The backslash (\) escape character turns special characters into string characters:

Code	Result	Description
\'	'	Single quote
\"	"	Double quote
\\"	\	Backslash

STRING METHODS

- String length
- String slice()
- String substring()
- String substr()
- String replace()
- String replaceAll()
- String toUpperCase()
- String toLowerCase()
- String concat()

- String trim()
- String trimStart()
- String trimEnd()
- String padStart()
- String padEnd()
- String charAt()
- String charCodeAt()
- String split()

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