Additional Notes: Variables

How to declare a variable in JavaScript?

Declaring a variable with var:

- Use the reserved keyword var to declare a variable in JavaScript.

Syntax:

```
var variable_name;
var variable_name = value;
```

E.g.1 **var name;** //declaring a variable without assigning value.

*Note: default value of the variable that does not have any value is **undefined**.*

E.g. 2. **var name = "John";** //declares and assign a string value

Since JavaScript is a loosely typed language that means it does not require a data type to be declared. you can assign any value to a variable. (e.g string, integer,float,boolean etc).

Re-Declaring JavaScript variables:
You can re-declare a javascript variable using **var,** which will not be losing its value.

E.g. The variable val will still have the value 10 after the execution of these statements.

```
var val = 10;
var val;
console.log(val);//10
```

Note: You can't re-declare a variable declared with let or const.

let and const keywords

ES6 introduced two new keywords: let and const.

let:

- You can't re-declare the variable defined with the let keyword but can update it.
  E.g.

```
let a = 15;
let a = 15; //SyntaxError : 'a; has already been declared.
a = 15; //It is allowed.
```

const

- Const is used to declare read-only variables, ie, they can't be reassigned and redeclared.
  For e.g.

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

  This will print the value of the constant variable as usual. But what if we tried to reassign a value to it?

```
const a = 10;
console.log(a);
a = 20;
```

  This will produce the following error:

```
a = 20;
//^ TypeError: Assignment to constant variable.
```

Note: You will be learning more about let and const in further lectures.

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).
- Variable names cannot contain spaces.
  - E.g var first Name = "John" (incorrect)
    var firstName = "John" (correct)

- Reserved words (like JavaScript keywords) cannot be used as names.

Check out this complete list of reserved words.

Correct JavaScript Variables:

```
var x = 20;
var _name = "John";
var value1 = 25;
var firstName = "John";
```

Incorrect JavaScript Variables:

```
var 124 = 35;
var *value = 87;
var var = 25; //'var' is not allowed as a variable declaration name.
```