JavaScript Intro

JavaScript is

- the world's most popular programming language.

- the programming language of the Web.

- easy to learn.

Why JavaScript? JavaScript is one of the 3 languages all web developers must learn:

1. HTML to define the content of web pages

2. CSS to specify the layout of web pages

3. JavaScript to program the behavior of web pages

JavaScript Statment

JavaScript statements often start with a keyword to identify the JavaScript action to be performed.

Some of JavaScript Keywords

- **var** Declares a variable
- **let** Declares a block variable
- **const** Declares a block constant
- **if** Marks a block of statements to be executed on a condition
- **switch** Marks a block of statements to be executed in different cases
- **for** Marks a block of statements to be executed in a loop
- **function** Declares a function
- **return** Exits a function
- **try** Implements error handling to a block of statements

Variables

Variables defined with **const** cannot be Redeclared and cannot be Reassigned.

Variables defined with **let** cannot be Redeclared.

- **Global Scope**
    - A variable declared at the top of a program or outside of a function is considered a global scope variable.
- **Local Scope**
    - A variable can also have a local scope, i.e it can only be accessed within a function.

JavaScript Arithmetic Operators

Operator	Description
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulus (Division Remainder)
++	Increment
--	Decrement

Operator	Example	Same As
=	x = y	x = y
+=	x += y	x = x + y
-=	x -= y	x = x - y
*=	x *= y	x = x * y
/=	x /= y	x = x / y
%=	x %= y	x = x % y
**=	x **= y	x = x ** y

JavaScript Data Types

There are eight basic data types in JavaScript. They are:

Data Types	Description	Example
String	represents textual data	'hello', "hello world!" etc
Number	an integer or a floating-point number	3, 3.234, 3e-2 etc.
BigInt	an integer with arbitrary precision	900719925124740999n , 1n etc.
Boolean	Any of two values: true or false	true and false
undefined	a data type whose variable is not initialized	let a;
null	denotes a null value	let a = null;
Symbol	data type whose instances are unique and immutable	let value = Symbol('hello');
Object	key-value pairs of collection of data	let student = { };

All data types except Object are primitive data types, whereas Object is non-primitive.

The Object data type (non-primitive type) can store collections of data, whereas primitive data type can only store a single data.

JavaScript Function

A function is a block of code that performs a specific task.

A function is declared using the function keyword.

The body of function is written within {}.
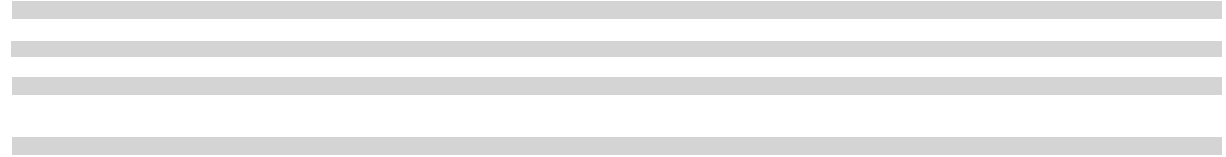
The syntax to declare a function is:

```
function nameOfFunction () {
    // function body
}
```

Function Return

- The return statement can be used to return the value to a function call.
- The return statement denotes that the function has ended. Any code after return is not executed.
- If nothing is returned, the function returns an undefined value.

Benefits of Using a Function

- Function makes the code reusable. You can declare it once and use it multiple times.
- Function makes the program easier as each small task is divided into a function.
- Function increases readability.

Parcel

is a web application bundler, differentiated by its developer experience. It offers blazing fast performance utilizing multicore processing, and requires zero configuration.

https://parceljs.org/getting_started.html