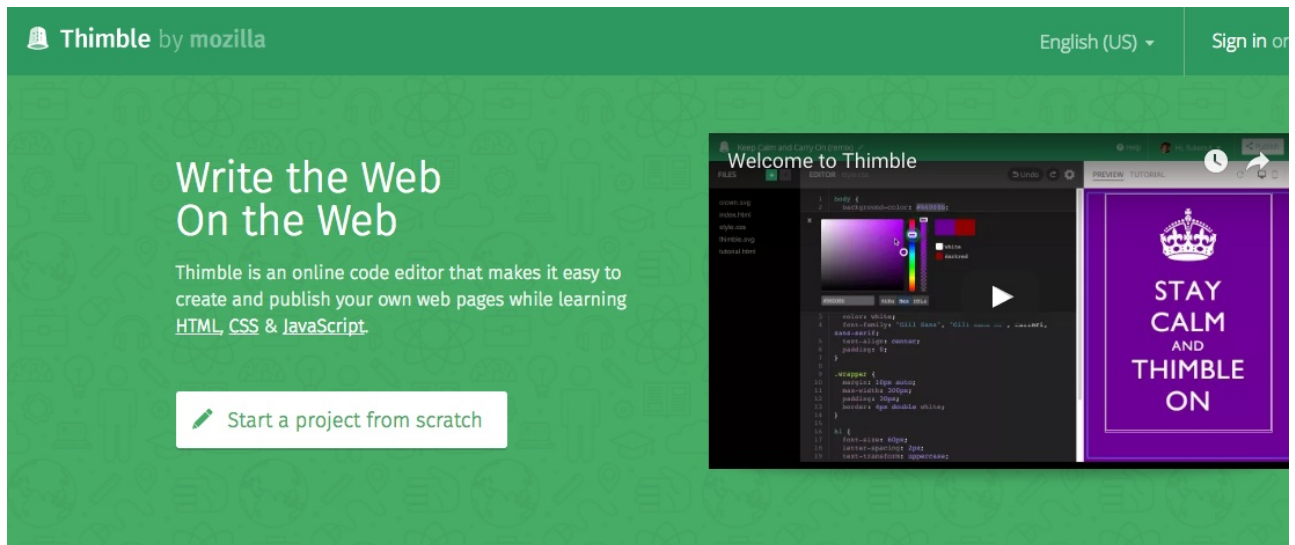


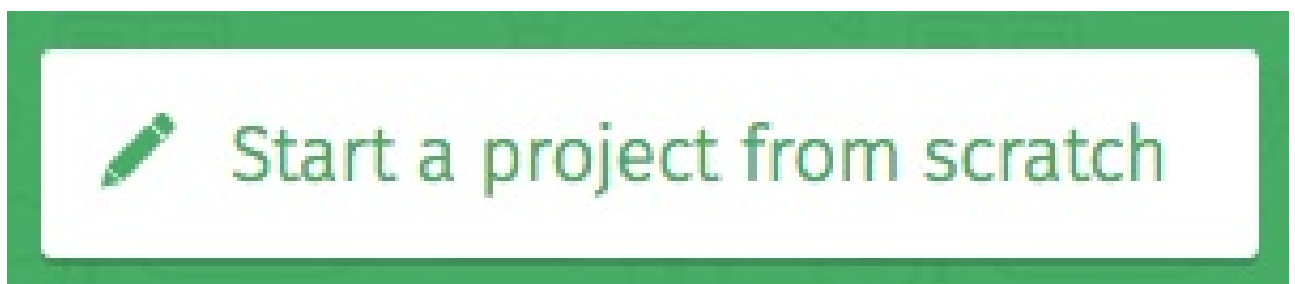
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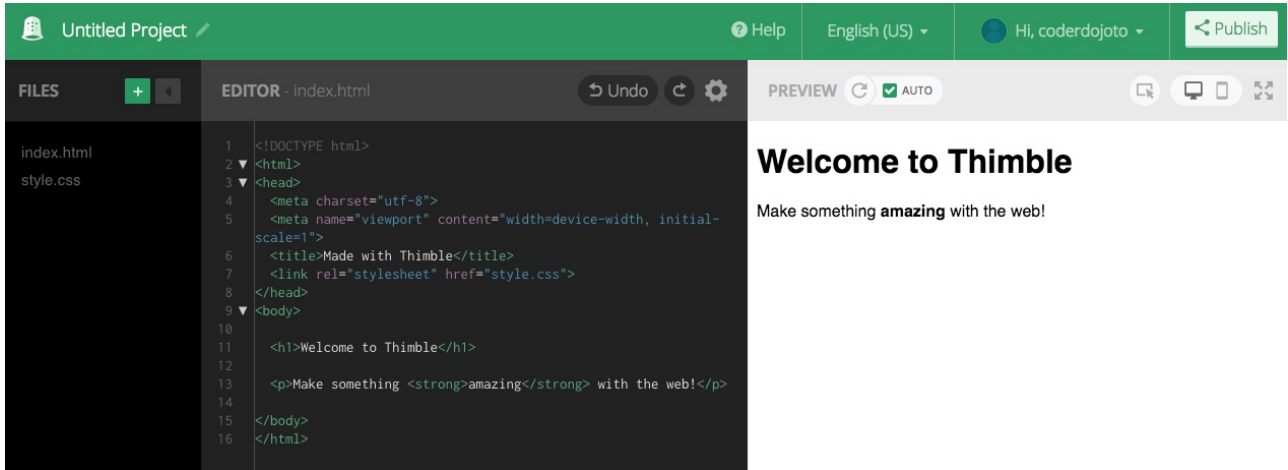
- 1 In these JavaScript lessons, we will use **Mozilla Thimble**, a text editor for writing HTML, CSS, and JavaScript. In these lessons we will focus on JavaScript.
- 2 To use Thimble, open your web browser (Chrome or Firefox) and go to <https://thimble.mozilla.org/>. Create an account to be able to save your work and revisit it later to keep building (optional).



- 3 Click on the **Start a project from scratch** button, let's make something fun!



1 Thimble will open a new project, and you will see default **Welcome to Thimble** FILES, EDITOR, and PREVIEW.



FILES - Where code is saved.

EDITOR - Where code is edited.

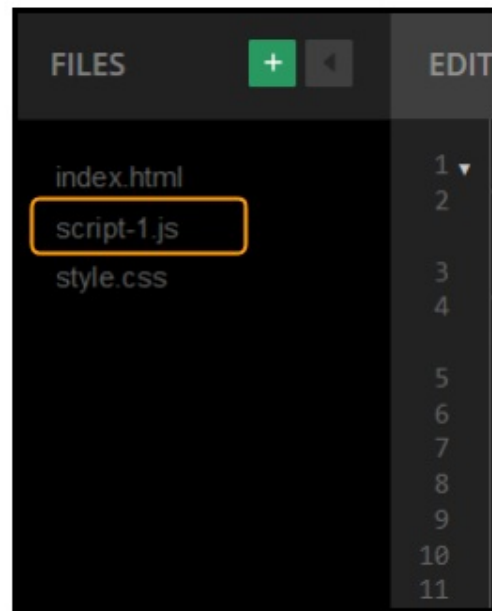
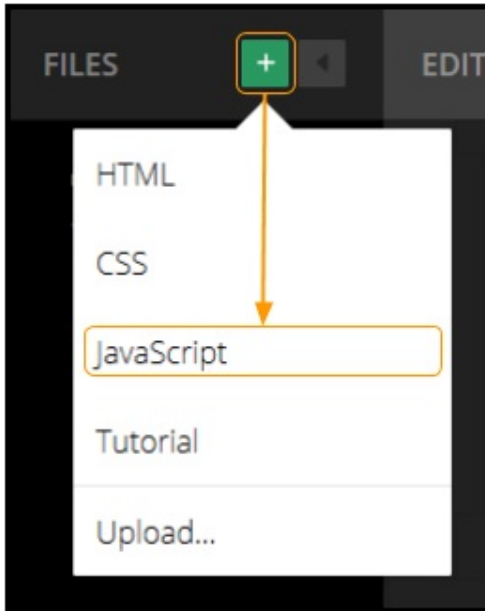
PREVIEW - See your changes as you work.

2 Before we start coding, we need to set up the project. The first thing to do is **Uncheck the AUTO toggle** button.



3 Next, create a new file by clicking the green [+] button. Select **JavaScript** from the menu.

4 Notice now there is a new file called "script-1.js," this file will have our code inside.



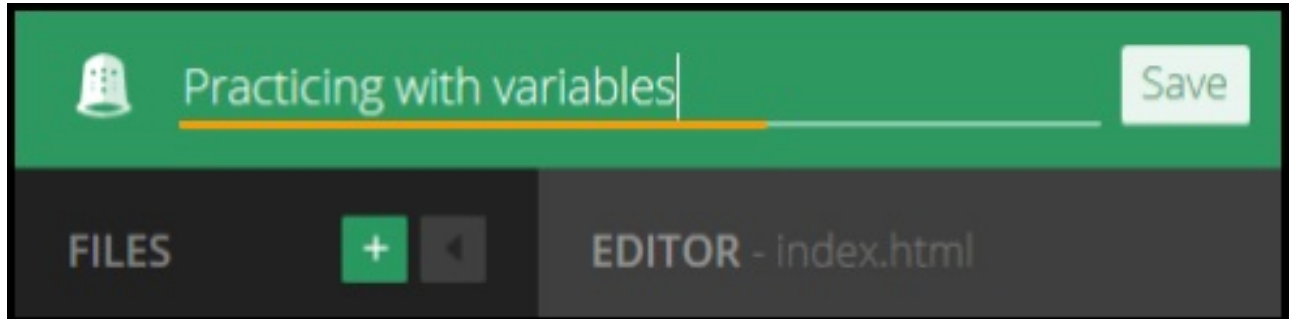
5 Notice the file has sample text. We don't want that. Go ahead and clear it all away! Now we're ready to start coding.

6 Next, in the Now go back to the index.html on the left-sidebar, and add the following line inside the `<body>` element:

```
<script src="stylesheet" href="style.css">
```

```
6 <title>Made with Thimble</title>
7 <link rel="stylesheet" href="style.css">
8 </head>
9 <body>
10 <script src="script-1.js"></script>
11
12 <h1>Welcome to Thimble</h1>
13
14 <p>Make something <strong>amazing</strong> with the web!</p>
15
```

7 Now add a meaningful title to your project and Save. I called mine "Practice with variables".



8 We're ready to start coding using JavaScript.

1 Let's start with a simple `alert()` .

Open *script.js* and type the following:

```
alert( "Hello" );
```

2 Click on the *Preview* button and see what happens.

3 Now try:

```
alert( "Hi, this is an Alert!" );  
alert( "Okay, enough with the alerts!" );
```

And *Preview*.

4 Let's not go into detail on what `alert()` is right now, and focus on what we put inside the brackets: `()`

5 We used **quotes** around text to create a piece of data called a **string**: `"..."` .

6 Strings are text data that are placed inside quotes.

Below are more examples of Strings:

```
"10228302" Yes, even numbers placed inside quotes are strings
```

```
"I'm from Toronto." Notice the single quote inside the String
```

```
'My name is "Thimble"' Notice here we started AND ended the String with single quotes. Start and end quotes must match.
```

7 Go ahead and try more Strings inside `alert()`; . Press *Preview* to execute your code!

8 You can join **strings** together using the plus sign: `+`

```
alert("My favourite food is " + "sushi");  
alert("JavaScript" + " is a pretty cool " + "programming language. I wonder what else we can do?");
```

9 Make up your own examples, and experiment with Strings you join together.

What happens if you join a number without quotes?

```
alert('2 + 2 = ' + 4);
```

1 Variables are a way to store values. For example, let's say you have the String "Vegetables", and I want to use that String in many places, there is a simple way of doing that. We will use the special keyword var.

```
var food = "Vegetables";  
var myRank = "Code Ninja";
```

2 Now, *food*, becomes a **variable** that represents the string "Vegetables" , and the *myRank* variable represents the value "Code Ninja" .

3 Can you guess what the alert will say if you type the following code and run your script?

```
alert("My favourite food is " + food );
```

4 Try it out. What about... `alert("A " + myRank + " is what I like to call myself!");`

5 You can change what a variable represents but assigning a new value to it.

```
var snack = "Cookie";  
snack = "Apple Slices";
```

6 First, we made *snack* represent the value "Cookie" but then we changed it to "Apple Slices".

7 What do you think will be output when you try the following script?

```
var city = "Toronto";  
var building = "CN Tower";  
var year = "1976";  
alert("The " + building + " is in " + city + " and it was built in " + year);
```

8 Now, try writing a script with your own variables and outputting them out in a sentence.

9 Next let's look at another type of value, **Numbers**.

1 Strings allowed us to represent text values. Numbers will give us a way to represent numerical values.

2 Let's create some Number variables.

```
var firstNumber = 200;
var secondNumber = 50;
alert( firstNumber + secondNumber );
```

What was the output?

3 With Numbers you can use:

+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulus (Shows you the remainder of a division)

4 Try practicing with doing some math using Numbers and the operators listed above.

```
alert( firstNumber * secondNumber );
alert( firstNumber / secondNumber );
alert( firstNumber - secondNumber );
alert( firstNumber % secondNumber );
alert( 7 % 2);
alert( 14 % 3);
firstNumber = firstNumber + 1;
alert( firstNumber );
```