



# Re-Evaluating Digital Technology to Enhance Learning

## Lesson Plan

---

<b>Course:</b>	Mark-up Language and Management Systems
<b>Lesson Title:</b>	VSCode. Summary of useful plugins to introduce JavaScript.
<b>Lesson Duration:</b>	1,5 hours.
<b>Student Age Range:</b>	19 to 30.
<b>Learning Style(s) of students:</b>	Kinesthetic and auditory learners.
<b>Digital Technology Hardware Required:</b>	Basic computer or laptop, microphone.
<b>Digital Technology Software Required:</b>	Virtual Studio Code, web browser
<b>Other Equipment Required:</b>	A projector or television.

**Lesson Plan:** The main objective of this part of the course is to understand and assimilate an efficient way to improve web design skills by adding functionality to a web page that is based on mark-up language such as HTML and CSS.

Therefore, the next step is to learn the JavaScript language that will become a static web page into a dynamic web, providing content updates and interactive animations among many other things. In this lesson, the students will receive an introduction to JavaScript language.

### Temporalization.

- **Class introduction (5 min):** List of attendance and learning objectives. Students at home have to access the class invitation in Google Meets.
- **Auditory lecture (25 min):** The bases of JavaScript language are introduced. `<script>` tag and its extension (.js) to program JavaScript modules. After that, students will be familiarized with terms and specific words such as “variable”, “data types”, “method”, “command”, “value”, “assignment”, “control structure”, “object”, etc.
- **Period of activity (28 min):** The students have to create an HTML document that includes an internal script that displays a text. When finished, they have to read a text and concatenate it with the previous one to show its output on the screen.

Learning the concept of variables, assignment, inputs and outputs, operators and data types is the main objective of this lesson.

- **Cleaning (2 min):** The students use disinfectant on the tables and hand sanitizer.

**Moodle Ribera del Tajo.** <https://fp.cloud.riberadeltaajo.es/moodle/index.php>

In order to have constant communication with our students, this private course is used for educators and trainers to achieve learning goals.

Moodle is just another tool that facilitates learning and it comes with many customizable management features.

Here is an example of the ongoing course:



The screenshot displays a Moodle course interface. At the top, there is a list of activities and tasks:

- UT 4. Advanced CSS part 3
- Flexbox Examples.
- AirBnB\_Ribera\_2ndTermTask

Below the tasks, there is a text instruction: "Find up here the mandatoy task named AirBnb\_Ribera for the second term".

The next section is titled "AirBnB\_Ribera\_TaskDelivery" and contains a task named "Training containers\_CAKE".

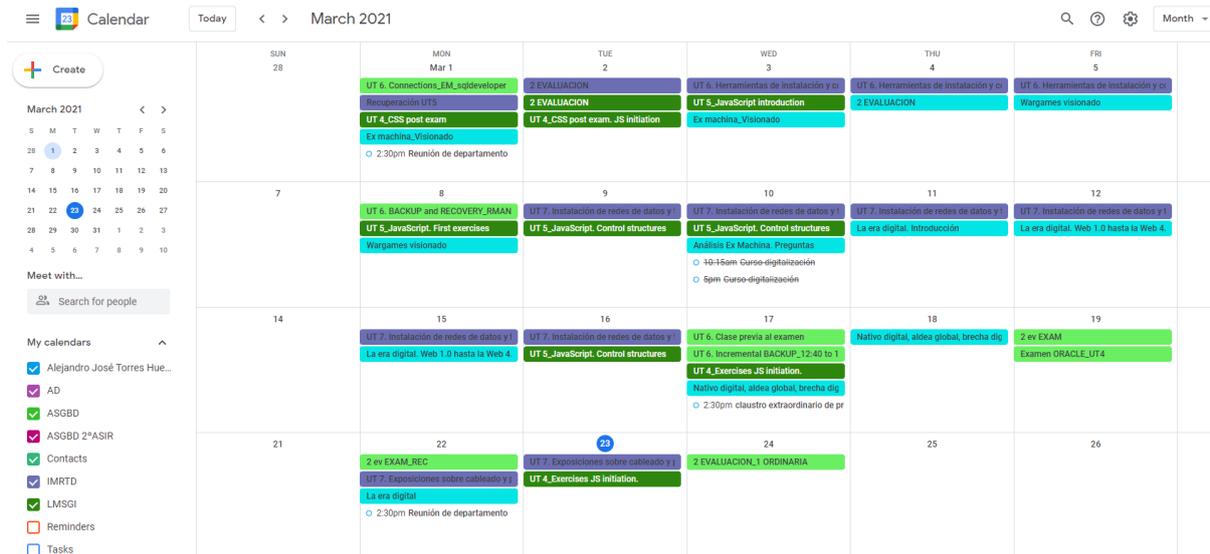
Underneath the task, there is a section for "Useful Links:" with the following list:

- *Using animations:* [https://developer.mozilla.org/es/docs/Web/CSS/CSS\\_Animations/Usando\\_animaciones\\_CSS](https://developer.mozilla.org/es/docs/Web/CSS/CSS_Animations/Usando_animaciones_CSS)
- *State of CSS:* <https://2020.stateofcss.com/en-US/>
- *CSS Tricks:* <https://css-tricks.com/>

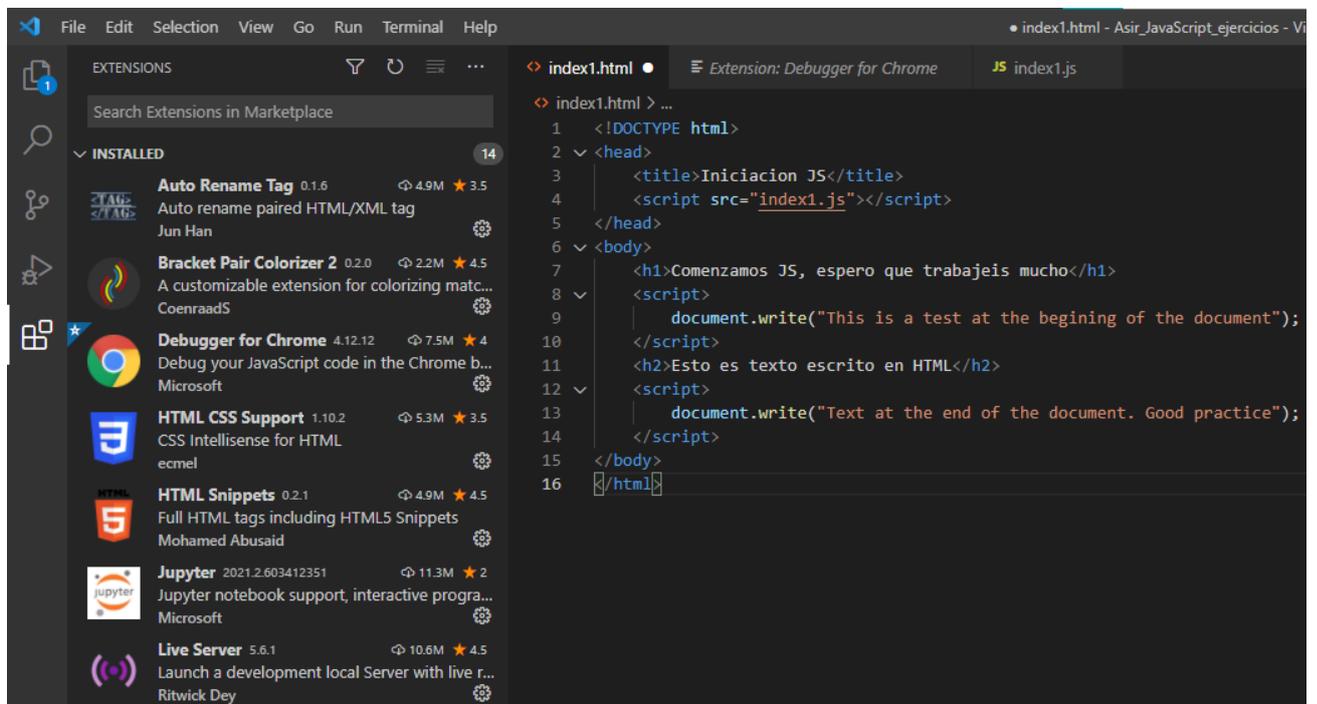
The bottom section of the screenshot is titled "UT5 JAVA SCRIPT" and contains a list of activities:

- State of JavaScript
- UT5\_JavaScript part 1
- Initiation exercises of JavaScript

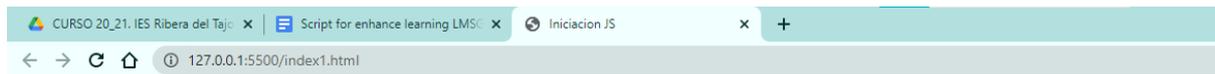
Due to COVID precautions, distance learning was adopted at the beginning of the school year. So, the students must get connected with the class through Google Meets.



**Visual Studio Code.** It's a code editor optimized for building and debugging modern web and cloud applications. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.



In the following image, the result of the code is displayed on Google Chrome browser. The HTML document shows three ways to output a string text on a web page.



This is an external code

## Comenzamos JS, espero que estudies mucho en esta parte del curso

## Starting JS, I hope you study a lot in this part of the course

This is a test at the beginning of the document

**Esto es texto escrito en HTML**

**This is text written in HTML**

Text at the end of the document. Good practice

```
File Edit Selection View Go Run ... index1.html - Asir_JavaScript_ejercicios - Visual Stu...
index1.html x JS index1.js
index1.html > ...
1 <!DOCTYPE html>
2 <head>
3   <title>Iniciacion JS</title>
4   <script src="index1.js"></script>
5 </head>
6 <body>
7   <h1>Comenzamos JS, espero que estudies mucho en esta parte del curso</h1>
8   <h1>Starting JS, I hope you study a lot in this part of the course</h1>
9   <script>
10    document.write("This is a test at the beginning of the document");
11  </script>
12  <h2>Esto es texto escrito en HTML</h2>
13  <h2>This is text written in HTML</h2>
14  <script>
15    document.write("Text at the end of the document. Good practice");
16  </script>
17 </body>
18 </html>
```

To be able to fix errors on the code, the students must know how to use plugins and also the tools offered by the browser. For example, the console.

```
Elements Console Sources Network Performance Memory Application >>
top Filter Default levels 3 hidden
> document
< ▼ #document
  <!DOCTYPE html>
  <html>
    ▶ <head>...</head>
    ▼ <body>
      "This is an external code
      "
      <h1>Comenzamos JS, espero que estudies mucho en esta parte del curso</h1>
      <h1>Starting JS, I hope you study a lot in this part of the course</h1>
      ▼ <script>
        document.write("This is a test at the beginning of the document");
        var a;
        a = 1;
      </script>
      "This is a test at the beginning of the document
      "
      <h2>Esto es texto escrito en HTML</h2>
      <h2>This is text written in HTML</h2>
      <script>
        document.write("Text at the end of the document. Good practice");
      </script>
      "Text at the end of the document. Good practice
      "
      <!-- Code injected by live-server -->
      ▶ <script type="text/javascript">...</script>
    </body>
  </html>
> typeof a
< "number"
>
```