DepED
DEPARTMENT OF EDUCATION

COMPUTER PROGRAMMING
(ICT)

Grade 11

QUARTER 2

MODULE 8

Introduction of JavaScript

Computer Programming (ICT) – Grade 11

Quarter 2 – Module 8: Introduction of JavaScript.

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Introductory Message

For the Facilitator:

Welcome to the Computer Programming for the ICT Module on Introduction of JavaScript.

This module was collaboratively designed, developed and reviewed by educators from Schools Division Office of Pasig City headed by its Officer-In-Charge Schools Division Superintendent, Ma. Evalou Concepcion A. Agustin in partnership with the Local Government of Pasig through its mayor, Honorable Victor Ma. Regis N. Sotto. The writers utilized the standards set by the K to 12 Curriculum using the Most Essential Learning Competencies (MELC) while overcoming their personal, social, and economic constraints in schooling.

This learning material hopes to engage the learners into guided and independent learning activities at their own pace and time. Further, this also aims to help learners acquire the needed 21st century skills especially the 5 Cs namely: Communication, Collaboration, Creativity, Critical Thinking and Character while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:

Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

As a facilitator you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Moreover, you are expected to encourage and assist the learners as they do the tasks included in the module.

Computer Programming

11

Quarter 2

Self Learning Module 8

Introduction of JavaScript.

Writer: Magiel L. Boncayao
Editor: Ma. Lerma I. Cantanero
Validator/Reviewer: Rowena O. Dimagiba

For the Learner:

Welcome to the Computer Programming for the ICT Module on Introduction of JavaScript.

The hand is one of the most symbolized part of the human body. It is often used to depict skill, action and purpose. Through our hands we may learn, create and accomplish. Hence, the hand in this learning resource signifies that you as a learner is capable and empowered to successfully achieve the relevant competencies and skills at your own pace and time. Your academic success lies in your own hands!

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning material while being an active learner.

This module has the following parts and corresponding icons:

Expectation - These are what you will be able to know after completing the lessons in the module

Pre-test - This will measure your prior knowledge and the concepts to be mastered throughout the lesson.

Recap - This section will measure what learnings and skills that you understand from the previous lesson.

Lesson- This section will discuss the topic for this module.

Activities - This is a set of activities you will perform.

Wrap Up- This section summarizes the concepts and applications of the lessons.

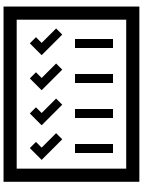
Valuing-this part will check the integration of values in the learning competency.

Post-test - This will measure how much you have learned from the entire module. Ito po ang parts ng module.

EXPECTATION

At the end of this module the learner is expected to:

1. understand the JavaScript.
2. identify how JavaScript can change HTML content.
3. apply JavaScript in an HTML Document.



PRE–TEST

Instructions: Select the letter that corresponds to the correct answer.

1. The program in this language are called script.

   A. JAVA B. JAVASCRIPT C. CSS D. HTML

2. Which of the following language was initially created to make web pages a live?

   A. CSS B. HTML C. JAVA D. JAVASCRIPT

3. JavaScript code must be inserted between _____ tags?

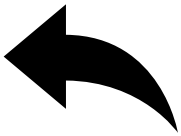
   A. <script> B. <p> C. (demo) D. document.getElementById

4. A JavaScript **function** is a block of JavaScript code, that can be executed when "called" for.

   A. event B. function C. script D. document.getElementById

5. Which of the following JavaScript values that can also called Fixed Values?

   A. Expressions B. Variables C. Literals D. Operators



RECAP

Yesterday, we discussed about flexbox to ensure that elements behave predictably when the page layout must accommodate different screen sizes and different display devices.

For this activity students will get 5 points, all they need to do is to answer this question. Why is it important to add CSS Flexblox in making a website? Write it in ¼ sheet of piece of paper.

_____
_____
_____
_____
_____
_____

LESSON

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 and Java are completely different languages, both in concept and design.

JavaScript was invented by Brendan Eich in 1995 and became an ECMA standard in 1997. ECMA-262 is the official name of the standard. ECMAScript is the official name of the language.

5 Things JavaScript can do

1. JavaScript can change HTML Content
2. JavaScript can change HTML Attributes
3. JavaScript can change HTML Style (CSS)
4. JavaScript can hide HTML Elements
5. JavaScript can show HTML Elements

In HTML, JavaScript code must be inserted between <script> and </script> tags.

Example syntax of JavaScript:

```
<!DOCTYPE html>
<html>
<body>

<h2>JavaScript in Body</h2>

<p id="demo"></p>

<script>
document.getElementById("demo").inner
HTML = "My First JavaScript";
</script>

</body>
</html>
```

JavaScript Functions and Events

A JavaScript **function** is a block of JavaScript code, that can be executed when "called" for.

For example, a function can be called when an **event** occurs, like when the user clicks a button.

JavaScript in <head> or <body>

You can place any number of scripts in an HTML document.

Scripts can be placed in the <body>, or in the <head> section of an HTML page, or in both.

JavaScript in <head>

In this example, a JavaScript function is placed in the <head> section of an HTML page.

The function is invoked (called) when a button is clicked:

Example:

```
<!DOCTYPE html>
<html>
<head>
<script>
function myFunction() {

 document.getElementById("demo").inne
rHTML = "Paragraph changed.";
}
</script>
</head>

<body>

<h2>JavaScript in Head</h2>

<p id="demo">A Paragraph.</p>

<button type="button"
onclick="myFunction()">Try
it</button>

</body>
</html>
```

JavaScript in <body>

In this example, a JavaScript function is placed in the <body> section of an HTML page.

The function is invoked (called) when a button is clicked:

Example:

```
<!DOCTYPE html>
<html>
<body>

<h2>JavaScript in Body</h2>

<p id="demo">A Paragraph.</p>

<button type="button" onclick="myFunction()">Try it</button>

<script>
function myFunction() {
    document.getElementById("demo").innerHTML = "Paragraph changed.";
}
</script>

</body>
</html>
```

Placing scripts at the bottom of the <body> element improves the display speed, because script compilation slows down the display.

External JavaScript

Like CSS, JavaScripts can also be placed in external files.

External scripts are practical when the same code is used in many different web pages.

JavaScript files have the file extension **.js**.

To use an external script, put the name of the script file in the src (source) attribute of a <script> tag:

Example External file: myScript.js

```
<!DOCTYPE html>
<html>
<body>

<h2>External JavaScript</h2>

<p id="demo">A Paragraph.</p>

<button type="button" onclick="myFunction()">Try it</button>

<p>(myFunction is stored in an external file called "myScript.js")</p>

<script src="myScript.js"></script>

</body>
</html>
```

You can place an external script reference in <head> or <body> as you like.

The script will behave as if it was located exactly where the <script> tag is located.

External JavaScript Advantages

Placing scripts in external files has some advantages:

- It separates HTML and code.
- It makes HTML and JavaScript easier to read and maintain.
- Cached JavaScript files can speed up page loads.

To add several script files to one page - use several script tags:

Example:

```
<script src="myScript1.js"></script>
<script src="myScript2.js"></script>
```

External References

External scripts can be referenced with a full URL or with a path relative to the current web page.

This example uses a full URL to link to a script:

Example:

```
<script src="https://www.w3schools.com/js/myScript1.js"></script>
```

This example uses a script located in a specified folder on the current web site:

```
<script src="/js/myScript1.js"></script>
```

This example links to a script located in the same folder as the current page:

```
<script src="myScript1.js"></script>
```

ACTIVITIES

JavaScript

Create an HTML Document and incorporate JavaScript. Students will make a multiple-choice quiz as their webpage; they need to prepare 10 questions, in every choice, have a button that once you click it, it reveals, weather the answer is correct or wrong. No need to create an external JavaScript

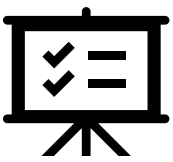
1. Set the Title Activity no. 8 Multiple-choice Quiz.
2. Set the background the color that you want.
3. Prepare 10 questions and use the button onclick.
4. Use document.getElementById syntax also the .innerHTML.

Example:

Rubrics:

For Activity 6 the students will get total of 30 points.

Items	Points
1. Title, and Background color	5
2. 10 questions	10
3. font-family and button	5
4. JavaScript sybtax	10
TOTAL	**30 points**



WRAP–UP

In this module we discussed JavaScript, we learned that JavaScript could change HTML Content, change HTML Attributes, change HTML Style (CSS), hide HTML Elements, and show HTML Elements

For this activity students will get 5 points by completing the syntax below. Find the missing syntax to show the word “Welcome to JavaScript World”

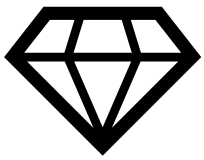
```
<head>
<script>
function myjava() {
    document.getElementById("1._______").innerHTML = " Welcome to
```

```
JavaScript World.";
}
</script>
</head>

<body>

<h1>A Web Page</h1>
<p id="one"> Show it here </p>
<button type="button" onclick="2._____()">click me </button>

</body>
```



VALUING

Instructions: Read carefully the following questions and provide two to three sentences answer to each number.

1. Why JavaScript is important?
   _____
   _____
   _____
   _____
2. What do you think are the advantages of JavaScript in making a website?
   _____
   _____
   _____
   _____

POST TEST

INSTRUCTIONS: Select the letter that corresponds to the correct answer.

1. JavaScript code must be inserted between _____ tags?
   a. A. <script> B. <p> C. (demo) D. document.getElementById

2. The program in this language are called script.
   a. A. JAVA B. JAVASCRIPT C. CSS D. HTML

3. Which of the following language was initially created to make web pages a live?

a. A. CSS B. HTML C. JAVA D. JAVASCRIPT

4. Which of the following JavaScript values can also be called Fixed Values?

   a. A. Expressions B. Variables C. Literals D. Operators

5. A JavaScript **function** is a block of JavaScript code, that can be executed when "called" for.

   a. A. event B. function C. script D. document.getElementById

KEY TO CORRECTION

Pre-test:	Post-test:	Wrap-up
1. B	1. A	1. one
2. D	2. B	2. myJava
3. A	3. D	
4. B	4. C	
5. C	5. B	

REFERENCES

Websites

- Accessed September, 17 2020 2:10 am https://www.w3schools.com/