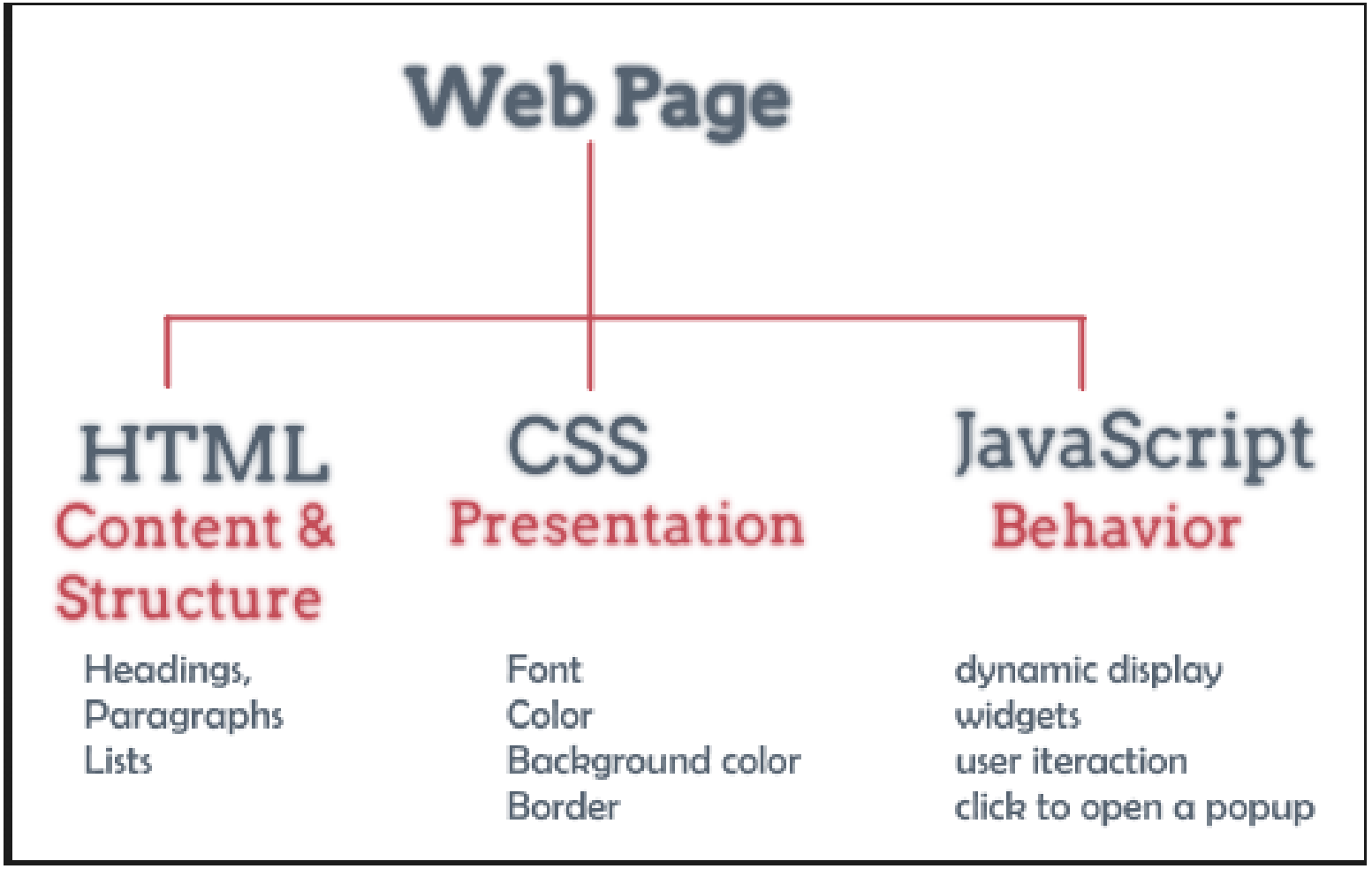
INTRODUCTION TO JAVASCRIPT

Presented by
Eng./Abanoub Nabil
Teaching assistant at ITI

JavaScript …


Web Page
HTML
Content & Structure
Headings,
Paragraphs
Lists
CSS
Presentation
Font
Color
Background color
Border
JavaScript
Behavior
dynamic display
widgets
user iteraction
click to open a popup

Programming languages …

- JavaScript is **a web client side scripting language**.

- Programming for the World Wide Web has two categories.

  1-server-side programming.

  2-client-side programming.

What is the differences??

Programming languages (cont.) …

What is server and what is client?

- **Server**
- The Server is responsible for serving the web pages depending on the client/end-user requirement.

- **Client**
- A client is a part that requests pages from the server and displays them to the end-user. In general a client program is a web browser.

Programming languages (cont.) …

- **Example | Working**
- **We can explain this entire mechanism using the following:**

1-The user opens his web browser (client).

2-The user starts browsing (for example www.iti.gov.eg)

3-The client forwards this request to the server, for accessing their web page.

4-The server then acknowledges the request and replies (response) back to the client program.

5- The client then receives the page source and renders it.

Programming languages (cont.) …

- **Server-side Programming**
- ***Server-side programming can be explained as:***
- It is the general name for the kind of program that runs directly on the server.

1 -It runs on the server.

2- Most web pages are not static since they deal with searching databases.

Programming languages (cont.) …

Server-side Uses

- It processes the user input.
- Structure of web applications.
- Interaction with databases.
- Querying the database.
- Operations over databases like delete, update.

Programming languages (cont.) …

- **Client-side Programming**
- It has to do with the user interface, with which the user interacts (browser).

1- Mostly deals with the user interface with which the user interacts in the web.

2- It is mostly a browser, in the user's machine, that runs the code and is mainly done in any scripting language like JavaScript (or we can use Flash instead of JavaScript or VNScript).

Programming languages (cont.) …

Client-side Uses

- Works as an interface between user and server
- Sends requests to the server
- Interact with local storage
- Validating input
- Animation
- Applying styles

What is JavaScript?

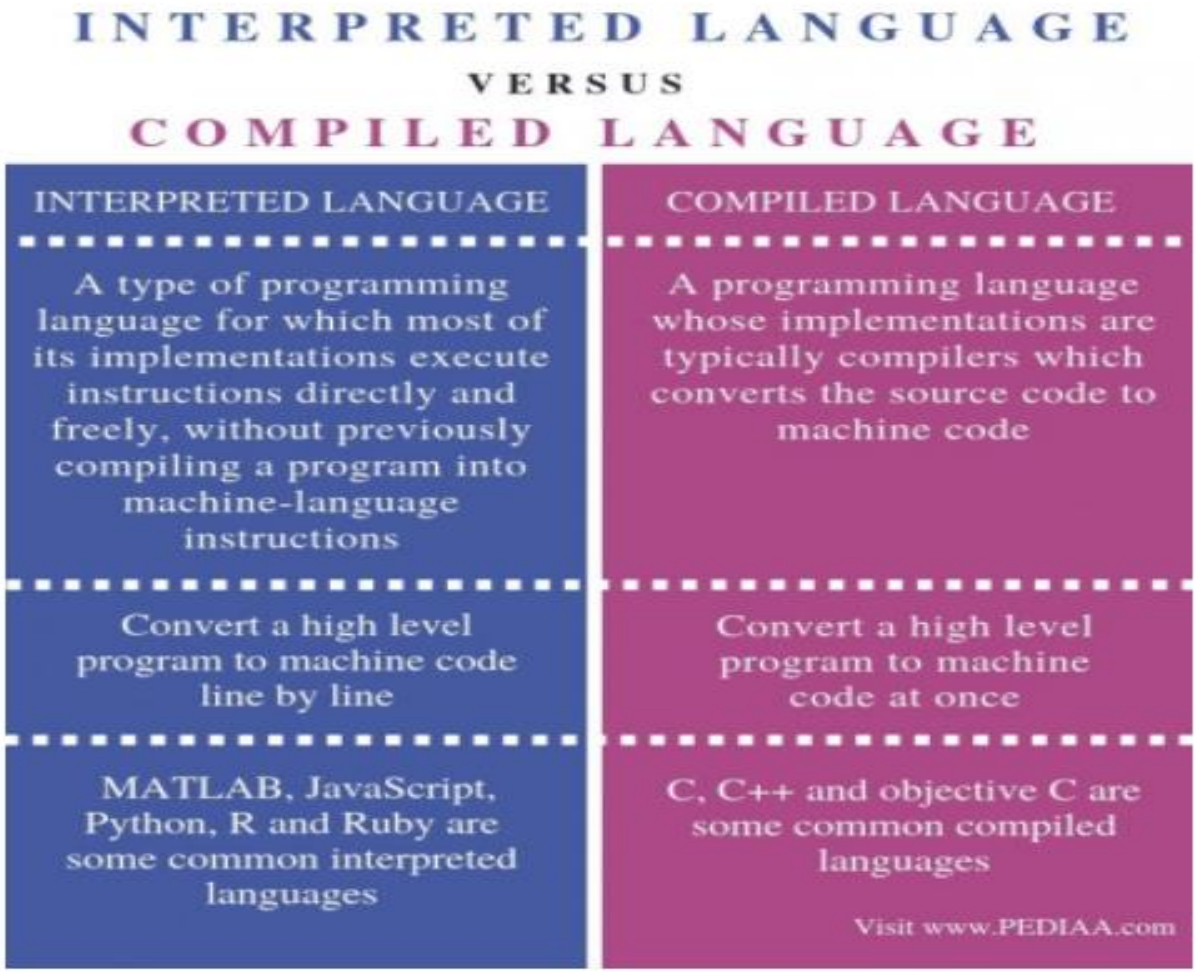
JavaScript is an open source & most popular client side scripting language supported by all browsers.

JavaScript is used mainly for enhancing the interaction of a user with the webpage.

JavaScript executes in the user's browser.

JavaScript interact with html elements (DOM elements) in order to make interactive web user interface.

Compiler Vs Interpreter



Compiler Vs Interpreter

Interpreted vs. Compiled refers to the way in which a **programming language** is transferred **from** the written code **to** what a computer reads

this transfer or translation of code is performed by compilers and interpreters.

In short, JavaScript is an interpreted language because every time a program runs, an interpreted language is translated (or interpreted) line by line.

JavaScript History

- Created by **Brendan Eich** at **Netscape**.
- Before JavaScript take this name its name was **Mocha**.
- Then became **LiveScript** then with the name that we know now **JavaScript**.
- Name changed to **JavaScript** as a result of an agreement with **Sun**, the developer of **Java**.
- In November 1996, Netscape submitted JavaScript to **European Computer Manufacturers Association (ECMA)** International to carve out a standard specification.
- In 1997, **ECMAScript** (Official name of JavaScript) was introduced by ECMA International as an attempt at standardization.

What can JavaScript do?

- JavaScript Can Change HTML Content
- JavaScript Can Change HTML Attribute Values
- JavaScript Can Change HTML Styles (CSS)
- JavaScript Can Hide HTML Elements
- JavaScript Can Show HTML Elements
- Performing simple computations on the client side.
- Validating the user's input.
- It validates the data on the user’s machine before it is forwarded to the server.

- .