

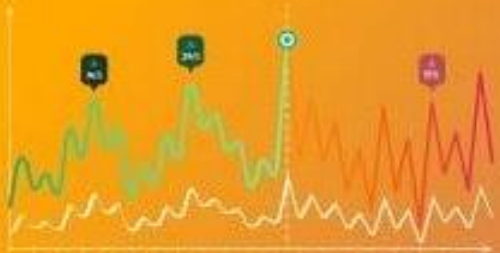
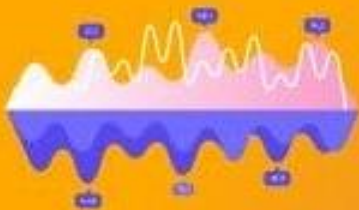
# CREATION OF WEBSITES

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# 1.1 BILLION

WEBSITES ON  
THE INTERNET



# 200 MILLION

WEBSITES ARE ACTIVE



# DIGITALSILK

We Grow Brands Online

# 252,000

NEW WEBSITES  
CREATED EVERY DAY



# 50 BILLION

WEB PAGES ARE  
INDEXED ON GOOGLE

# Website

## Web page

## Home

## page

- ✓ A **website** is a collection of web pages. You can access a website by typing the URL into your browser on your computer or smartphone. Websites can have a bunch of different pages, and each page usually contains different information.
- ✓ A **web page** is a single page that is part of the website. The page you are currently on is a web page. If you navigate to the home page, you are on a different web page, but still on the same website. The home page is also a web page.
- ✓ A **home page** is the top-level page of a website and is typically the first page that visitors will see when they arrive at a website. The home page usually contains an overview of the website, as well as links to the other pages within the website.

# Types of websites

(content generated and displayed)



*Static Website*



*Dynamic Website*

✓ **Static websites** – their content is generated exactly according to the source code and remains unchanged throughout the visitor's visit to the website. Static websites are easier to create and host.

✓ **Dynamic websites** – their content is generated on demand depending on the request parameters. The content may change dynamically over time due to various facts, which may be the state of the system, the status of the user (e.g. logged in/logged out) or due to other factors.

# Servers

# Web browser



- ✓ **Servers** are computer systems designed to provide content and services over the Internet so that they are accessible to online users. Servers can be in various locations around the world and are connected to the Internet.
- ✓ **Web browser** is software that allows a user to view and interact with web pages. Web browsers translate the code of web pages and display the content of web pages to the user in the form of text, images, videos, buttons, forms, etc.





# Components of a web address



# User Visitor



- ✓ **Website user** – we can understand this term as a broader term that includes all individuals or systems that access the website. This may include administrators, editors, but also visitors and others who have access to the website.

- ✓ **Website visitor** – is a specific type of website user who accesses the website as a guest. The visitor views the content of the website without necessarily being logged in or registered on the website.

# Hyperlink

# Hypertext

- ✓ **Hyperlink (or "link" for short)** – is an interactive element that refers to other data (text, web page). Enables navigation on websites. By clicking on it, the user goes from one part of the website to another. A hyperlink can be contained in a text, image, video, etc.

## Hyperlink and Hypertext

Hyperlink      Hypertext

```
<a href="hope.html">Computer Hope</a>
```

- ✓ **Hypertext** – is a text containing a hyperlink (link). The user is allowed to click on the hypertext to move to another part of the website or to another website. Hypertext provides a non-linear way of reading or viewing information.



# Website history

Tim Berners-Lee created the first website in August 1991

## World Wide Web

The WorldWideWeb (W3) is a wide-area [hypertext](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#), [Policy](#), November's [W3 news](#), [Frequently Asked Questions](#).

### What's out there?

Pointers to the world's online information, [subjects](#), [W3 servers](#), etc.

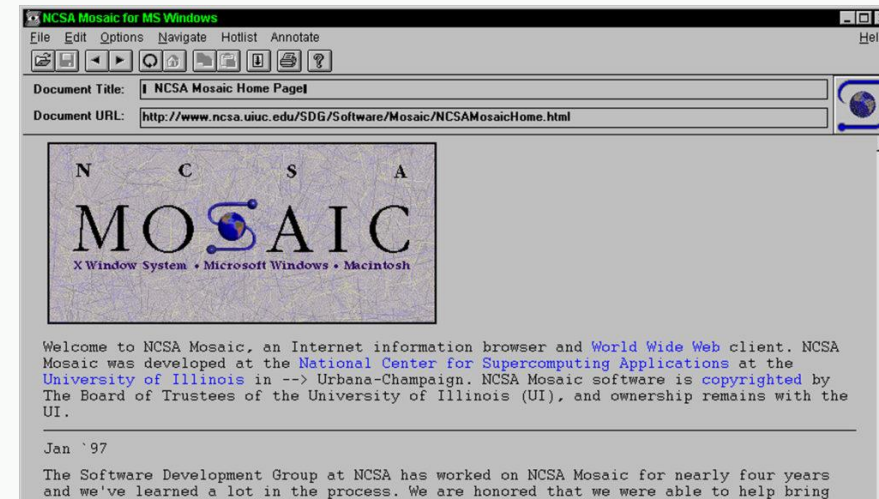
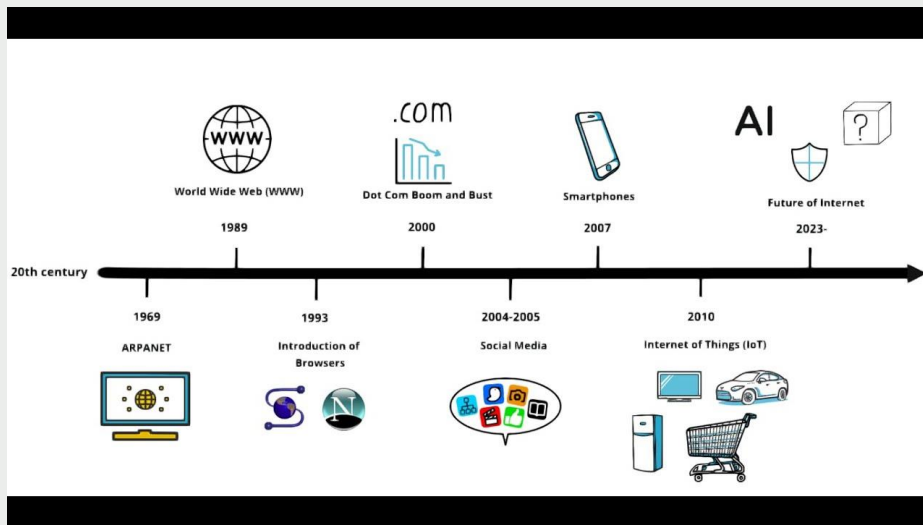
### Help

on the browser you are using

### Software Products

A list of W3 project components and their current state. (e.g. [Line Mode](#), [X11 Viola](#), [NeXTStep](#), [Servers](#), [Tools](#), [Mail robot](#), [Library](#))

In 1993, one of the first modern web browsers, Mosaic, was created



Stage 1  
Launch  
first website



1993

Stage 2  
First dynamic  
websites



Stage 3  
First Flash  
websites



2000

Stage 4  
CMS and  
web editors



Stage 5  
Era of responsive  
websites



2009

Stage 6  
Websites templates  
explosion

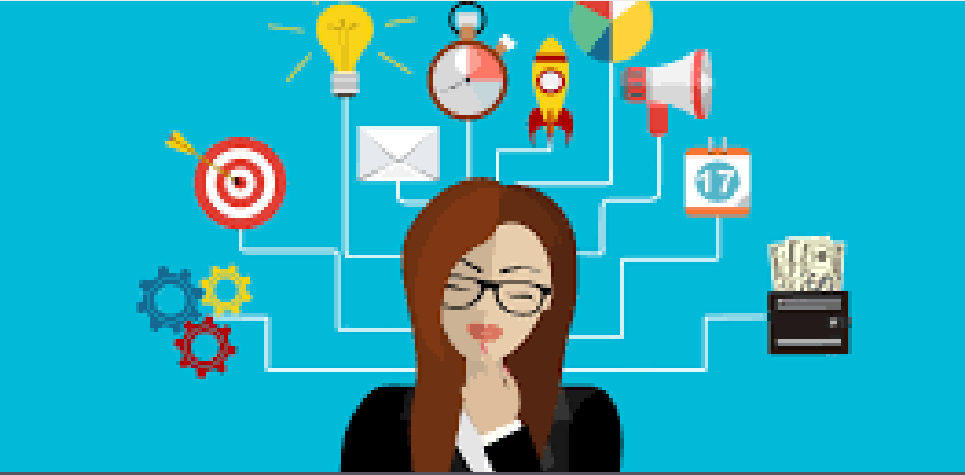


Stage 7  
Website  
page builders



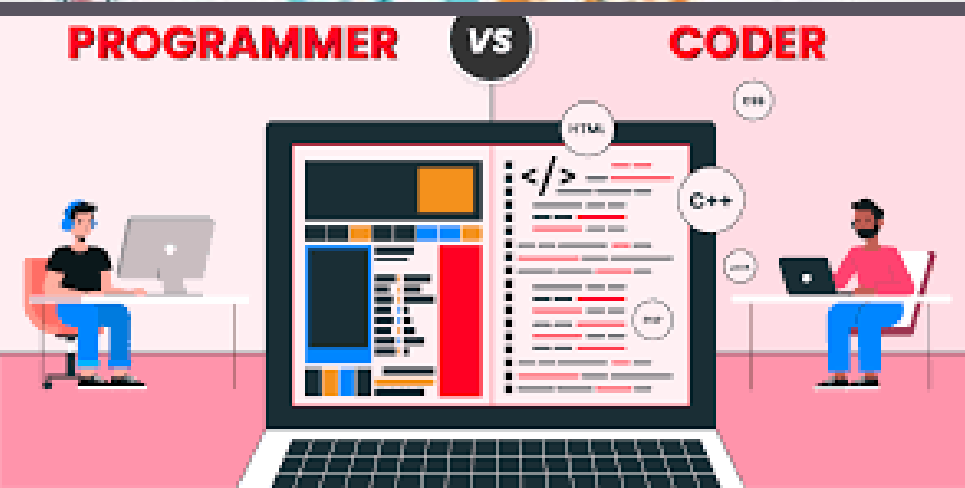
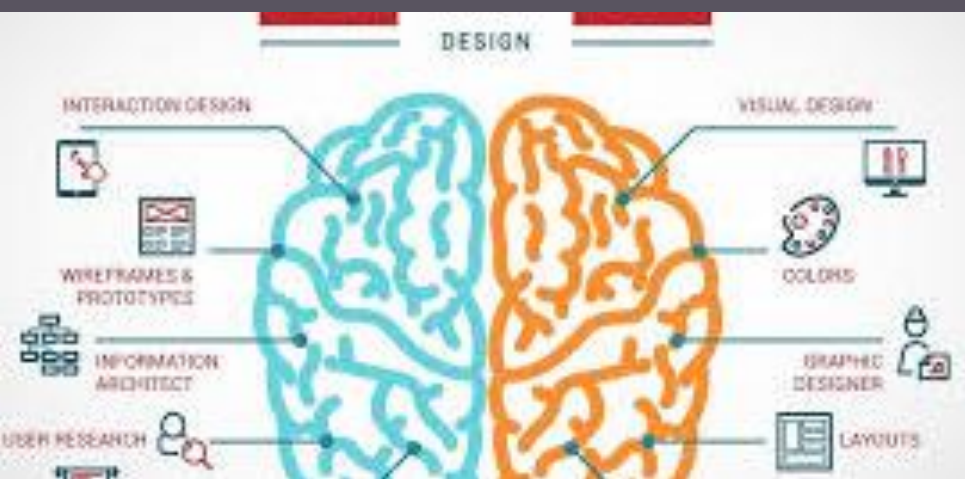
Stage Now  
Create and design  
websites content





## Role in the website development team

- ✓ **Project manager** – ensures the management and coordination of the entire process of creating a website. Responsible for setting goals, their control and planning activities, budget, and time schedule management.
- ✓ **Consultant** – provides expert advice to a client who requests the creation of a website. His job is to help the client achieve their goals and website requirements. Mediates communication between the client and other team members.
- ✓ **Web designer** – deals with the visual aspect of a website and its user interface. He is responsible for the creation of graphic design, the selection of used colours, the appropriate choice of typography and the layout of individual elements of the website.

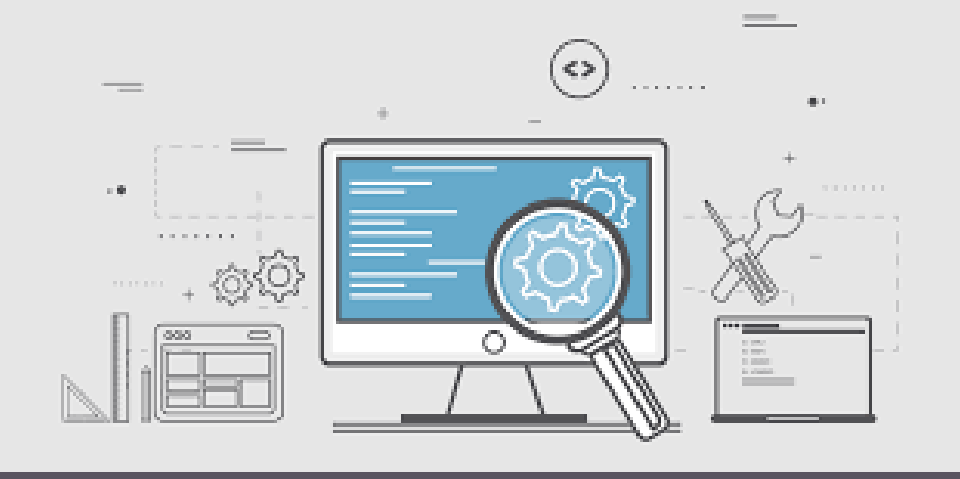


# Role in the website development team – cont.

- ✓ **Graphic designer** – deals with the creation of graphic elements for the website, which include the logo, icons used on the website, images, and other visual elements. Works with the web designer to create the overall visual style of the website.
- ✓ **UX/UI designer** – deals with usability (user experience - UX) and user environment (user interface - UI) of the website. He is responsible for designing and testing the usability of the website and the intuitiveness of its control.
- ✓ **Coder and programmer** – responsible for implementing the design and functionality of the website through coding and programming. For this purpose, it uses markup, scripting, and programming languages.

# Role in the website development team – cont.

- ✓ **Tester** – is responsible for testing the functionality, usability, performance, and security of websites before they are put into operation. His job is to identify errors, flaws, and potential problems in various aspects of the website. The tester gives feedback to the developers to eliminate identified problem areas.
- ✓ **Copywriter** – deals with the creation of content for the website. His activities include writing articles, product descriptions and other content elements of the website, mainly of a textual nature.
- ✓ **SEO specialist** – his task is to optimize the website to improve its position within the search results of web search engines and thus increase the traffic of the website by visitors.



# Steps of the website creation process



1) Analysis of client requirements and proposal



2) Implementation



3) Testing



4) Publication of the website



5) Maintenance, content editing

# 1) Analysis of client requirements and website design



- ✓ What is the purpose of the website?
- ✓ What are the needs of its users?
- ✓ Who is the target group of visitors for whom the website is being created?
- ✓ Administration of website content via the admin interface is required.
- ✓ What are the website content requirements?
- ✓ What functions should the website have?
- ✓ What should be the structure of the website?
- ✓ What different subpages should the website contain?

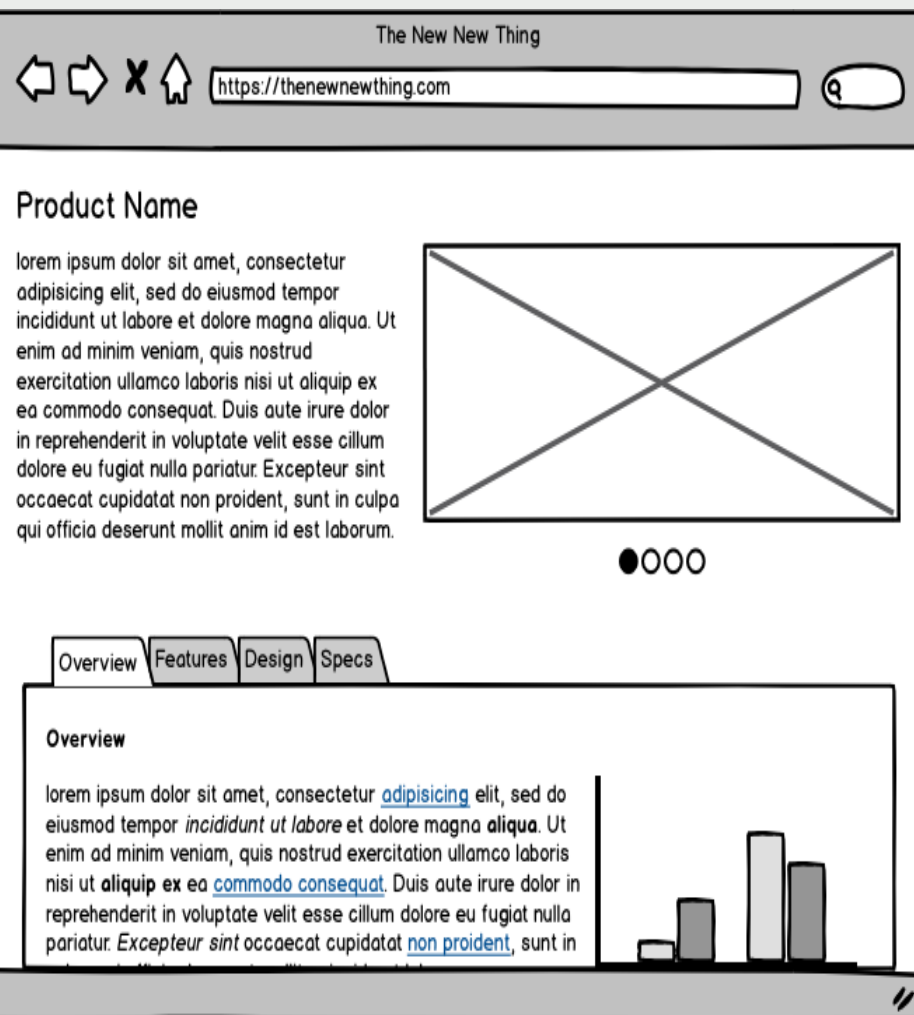


## 1) Analysis of client requirements and website design –

### **Website technical specification**

- ✓ technological requirements
- ✓ architecture
- ✓ functions
- ✓ design and layout of elements
- ✓ safety
- ✓ optimization and performance
- ✓ maintenance





## 1) Analysis of client requirements and website design – **Wireframe**

- ✓ A wireframe is a simplified graphical version of a web page.
- ✓ It is a sketch that is used to visualize the structure, layout of content, layout of website elements.
- ✓ This is only a rough sketch without detailed graphic processing.
- ✓ It is used to visualize and plan a website before developing and designing it.
- ✓ It also serves as a basis for graphics.

## 2) Implementation



- ✓ When creating a website design, it is important to consider the correct choice of colours used, so that they have sufficient contrast and that the colours that characterize the given company are used.
- ✓ At the same time, website graphics are created, which consist of logos, images, icons, and other visual elements that make up the appearance of the website.
- ✓ At this stage, the type of font that will be used on the website is also chosen.
- ✓ Equally important is the creation of content that brings the visitor to the website and keeps the visitor on the website.

## 2) Implementation

### - Responsiveness



**Responsiveness** makes it possible to recognize the parameters (screen size) of the device (computer, tablet, smartphone) on which the web page is displayed and adapt the layout of its elements to it, so that the page is as easy to use as possible.



More convenient viewing (layout of elements, size of text, images...).



Clearer control (simple menu navigation).



Adapted for finger control (size of space for touch).



Fewer elements and reduced content.

```
webpage - Notepad
File Edit Format View Help

<!doctype html>
<html>
<head>
<title>document title</title>
</head>
<body style="background-color:black;">
<center>

<a href="https://www.mywebsite.com/home"><img src=
"https://www.mywebsite.com/home_button.jpg"
<a href="https://www.mywebsite.com/page2"><img src=
"https://www.mywebsite.com/next_button.jpg"
</center>
<br>
<h1 style="color:white;">About us</ht
<br>
<p style='color:white;'>A little about us...</p>
<br>
</body>
</html>
```

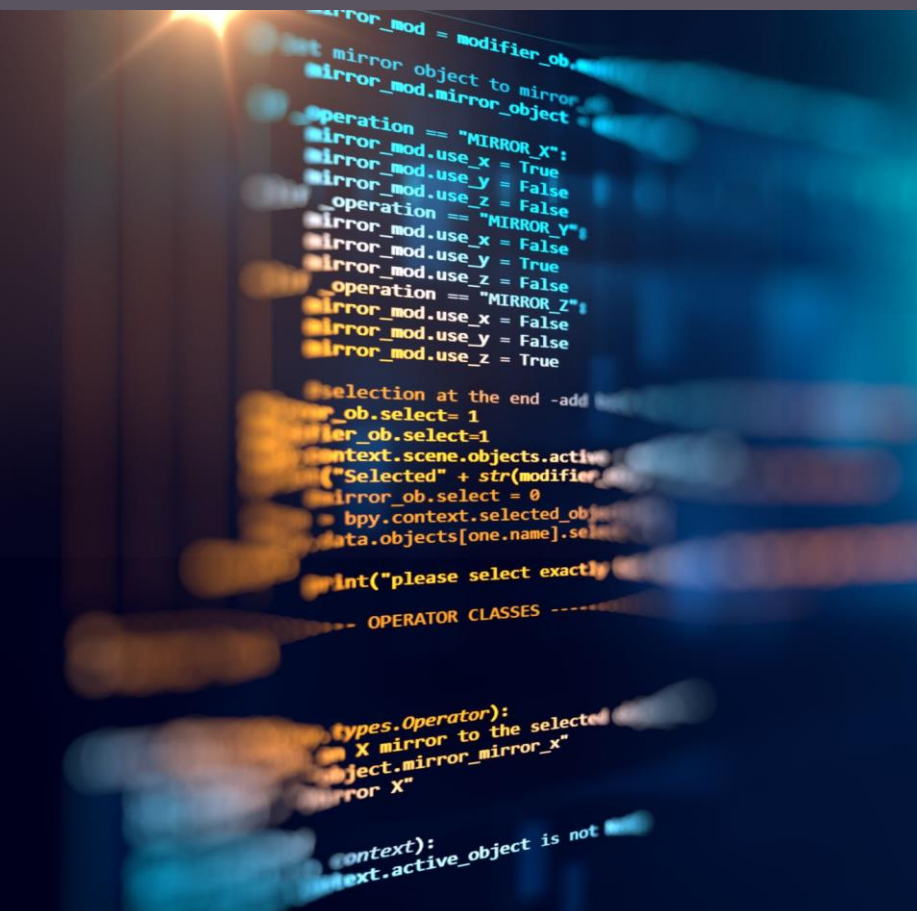


## 2) Implementation - options that can be used to create a website

- a) writing code
- b) using the editorial system for managing the content of the website
- c) using an online service

## 2) Implementation - options that can be used to create a website - writing code

- ✓ Creating a website by writing code allows you to create a website that is precisely tailored and modified to the greatest possible detail.
- ✓ This way of creating a website involves coding and programming the website.
- ✓ Website coding and programming is the process of creating the source code that forms the structure, design, and functionality of a website.



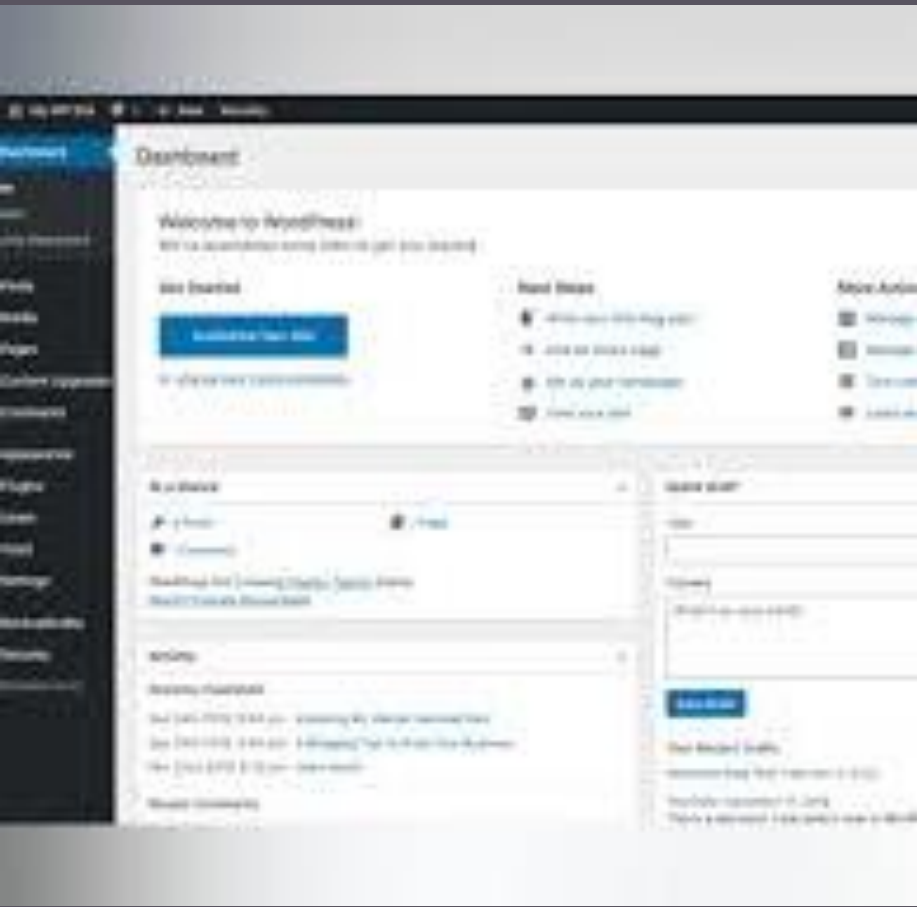
## 2) Implementation - options that can be used to create a website - writing code

- ✓ **Frontend** – is the part of a website that is displayed and interacts directly with the visitor. The languages HTML, CSS, and JavaScript are used for the creation of the frontend.
- ✓ **Backend** – is the part of the website that is responsible for calculations and operations in the background of the website - data processing, communication with the database, processing of requests from the front end, etc. Languages such as PHP, Python, Java, Ruby are used.



## 2) Implementation - options that can be used to create a website - editorial system for website content management

- ✓ Suitable way of creating websites for creators without technical knowledge.
- ✓ The editorial systems thus make it possible to create websites without the need to write code, also thanks to the fact that they have a graphical administrator interface.
- ✓ Editorial systems make it possible to create dynamic websites, including the possibility of registering visitors, generating content, or using various other functions, such as forms, calendars, image presentations, and the like.



## 2) Implementation - options that can be used to create a website - using an online service

- ✓ Creating a website using an online service is the easiest way to create a website.
- ✓ The user of such an online service usually chooses one of the available templates offered by the given online service/platform.
- ✓ Editing of the website takes place through the graphical interface and the editor located in it.
- ✓ These online services often offer a free version with limited options, or with the display of advertisements on the website, or a paid version with a more extensive group of setting options





### 3) Website testing



- ✓ **Functionality testing** – verifies that all website functions are working properly.
- ✓ **Usability testing** - it is determined whether the website is sufficiently intuitive, whether it is easy to use and whether users know how to work with the given website.
- ✓ **Responsiveness testing** - focuses on verifying whether the website is responsive (smartphone, tablet, monitor).
- ✓ **Security testing** – helps identify security vulnerabilities on a website.
- ✓ **Performance testing** - the loading speed of the website is tested, as well as the response speed to various actions that can be performed on the website.
- ✓ **Compatibility testing** - it is verified whether the website works and whether it is displayed correctly on different web browsers and on different devices (computer, smartphone, tablet).

## 4) Publishing a website on the web



- ✓ **A domain** is a text label for a website address on the Internet. It usually consists of specific words that describe the content and focus of the website.
- ✓ **Hosting** is a service of providing space on a server that is connected to the Internet. This service can be rented from one of the hosting providers.
- ✓ Once the domain is registered and hosting is secured, the website can be accessed via a web browser either by searching for the website through a search engine (Google, Bing, Yahoo, etc.) or by entering the URL of the website into a web browser (Google Chrome, Mozilla Firefox, Microsoft Edge, Safari, etc.).

# http://www.domain-name.sk/web-content/file.html

**http (Hypertext Transfer Protocol)** – is a protocol that makes it possible to display web pages. It is used to transfer data over the Internet. The https protocol is used for a secure/encrypted connection (Hypertext Transfer Protocol Secure).

**www (World Wide Web)** – is a designation for a set of web pages accessible via the Internet. The abbreviation web is also used. In the website address, www indicates that it is a website accessible via the Internet.

**domain-name.sk** – represents the domain that has been registered for the website. There are several levels of domains - they are separated by dots in the address:

- first level domains = TLD (Top Level Domain)

- generic: .com, .edu, .org,

- national: .sk, .cz, .eu,

- second level domains

- for example: uniag.sk,

- third-level domains

- for example: fem.uniag.sk.

**file path**, for example: /web-content/file.html – represents path information to a subpage or file within the directory structure. Each directory is separated by a slash (/).

## 5) Website optimization for search engines

- ✓ Optimizing a website for search engines (Search Engine Optimization, SEO) is a process that helps a website in its searchability by search engines such as Google, Bing, Yahoo, etc.
- ✓ The goal is to achieve the best possible placement of the website in the search results.
- ✓ Proper optimization of a website for search engines can thus lead to an increase in organic website traffic.





# Website maintenance and editing

- ✓ Publishing a website on the web does not end its life cycle.
- ✓ The website still needs to be managed, edited, and updated.
- ✓ New content may continue to be added to the website or existing content may be modified to ensure that the website is always up to date.
- ✓ The technologies used on the website also evolve over time.
- ✓ These are also recommended to be updated regularly so that the website is properly functional and secure.
- ✓ SEO optimization is also not just a one-time thing, but it is necessary to work on the optimization of the website constantly so that it is searchable by search engines.

THANK YOU  
FOR YOUR  
ATTENTION!

