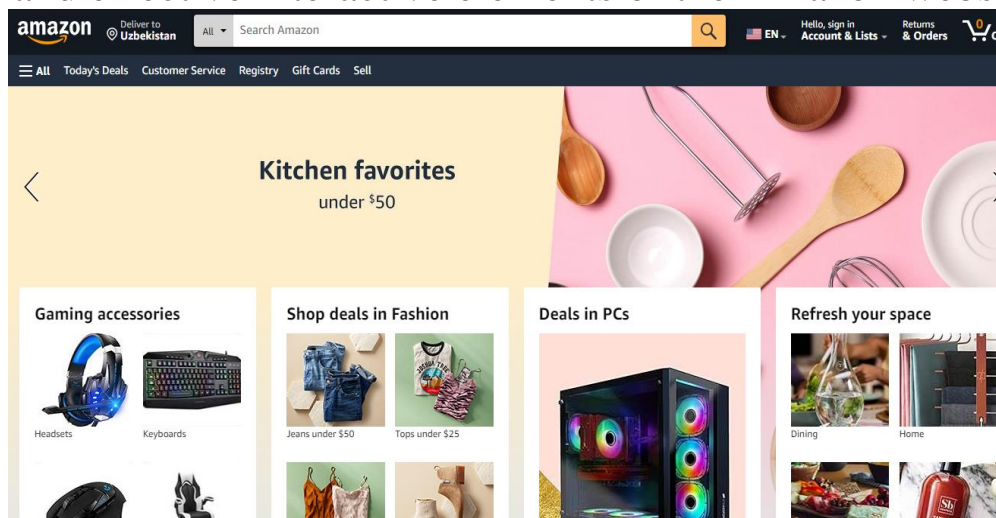# UNIT 12
WEB DESIGN VS. WEB DEVELOPMENT

Objectives: at the end of the lesson, students will be able to:

1. differentiate between web design and web development;

2. explain the collaborative process between designers and developers;

3. evaluate user-centered design principles.

Lead-in: Let's talk!

1. What makes a good business website?

2. What kind of websites do you like to use?

Activity: Showcasing the website to highlight interactive features and functionalities (e.g., forms, navigation menus). Here are some common and effective interactive elements of the Amazon website.

(www.amazon.com)

Features and functionalities of the website

Forms:

• Contact forms with fields for name, email, message, etc.

• Registration forms for signing up to a service or newsletter.

• Feedback forms to gather user opinions or reviews.

Navigation Menus:

• Responsive navigation menus that adapt to different screen sizes (mobile-friendly).

• Dropdown menus for hierarchical navigation.

• Mega menus for displaying a large number of options in an organized manner.

Search Functionality:
- Search bars with autocomplete suggestions.
- Advanced search filters (e.g., by date, category, location).

Sliders and Carousels:
- Image sliders showcasing products, services, or featured content.
- Testimonial carousels with quotes from customers or users.

Interactive Charts and Graphs:
- Data visualizations using charts (e.g., bar charts, pie charts, line graphs).
- Interactive elements like tooltips or drill-down options for deeper exploration.

Interactive Tables:
- Tables with sortable columns.
- Expandable rows for showing additional details or actions.

Video and Multimedia:
- Embedded videos with play controls.
- Audio players for podcasts or music.

What is web design?

Web design covers everything related to a website's visual aesthetics and usability. It involves the color scheme, layout, information flow, and all aspects of UI/UX (user interface and user experience). Essential tools and skills that set web designers apart include:

- Adobe Creative Cloud. Software like Photoshop and Illustrator help designers create design elements for web pages, such as graphics and logos.
- Graphic design. Graphic design involves crafting visuals and layouts to make the website visually appealing and enhance the overall web experience.
- UI/UX design. UI/UX design focuses on creating intuitive user interfaces and seamless user experiences by prioritizing ease of use and navigation.
- Figma. This browser-based design tool helps designers do collaborative design work and prototyping, as well as create high-fidelity mock-ups.

- Wireframes and mock-ups. Wireframes and mock-ups help designers plan layouts and the visual structure of a website before any coding begins.
- Typography and color palettes. Carefully choosing fonts and color palettes helps shape the site's visual identity and align the website design with branding goals.

Web design focuses on what users see on their computer screens or mobile devices. They bring the digital experience to life through images, typography, and layout. Designers are adapting to new trends like voice UI design, where interfaces need to account for spoken interactions.

What is web development?

Web development is the engineering supporting a website that makes sure everything functions smoothly behind the scenes. It's typically divided into two main areas: front-end (client-side) and back-end (server-side).

Front-end developers focus on what users interact with on the website. They use HTML, CSS, and JavaScript to bring web designs to life. Key tools and technologies include:

- CSS preprocessors like LESS or Sass for efficient style management.
- JavaScript frameworks such as AngularJS, React, Ember.js, and Vue.js have revolutionized how developers build dynamic and responsive web applications.
- Libraries like jQuery.
- Git and GitHub for version control.

They also use on-site search engine optimization (SEO) to make sure the website ranks high in search engine results. While designers provide the visual assets, front-end developers are responsible for integrating these elements into the web pages.

Back-end developers handle the data and server-side functions of web applications. Essential tools and skills include:

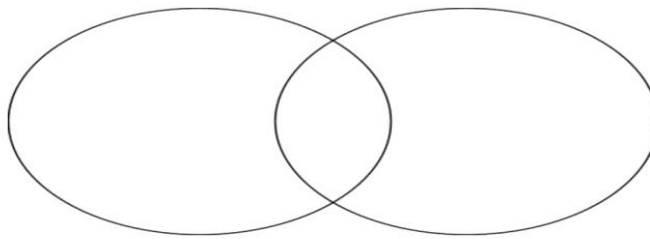- Programming languages like PHP, Python, Java, and C#.
- Frameworks such as Ruby on Rails, Symfony, and .NET that streamline building robust server-side applications.
- Database management systems, including MySQL, MongoDB, and PostgreSQL.

• Security and authentication technologies such as OAuth and Passport for protecting data integrity and user privacy.

Web developers proficient in both back-end and front-end web development are known as full-stack developers. They can handle all aspects of web development, from user interface design to complex server management, making them highly versatile in the tech industry.

Activity: Comparing and analyzing using Venn diagram. What's the difference between a web designer and a web developer?

Similarity: Web designers and web developers both require soft skills to complement their technical abilities. Key soft skills they share include:
• Communication.
• Problem-solving.
• Teamwork.
• Adaptability.
• Time management.
• Attention to detail.

Differences:
• Web Design: Includes layout design, color schemes, typography, and graphic elements.
• Web Development: Involves coding, databases, server-side scripting, and client-side scripting.

Vocabulary Building
Key Terms
Web design – is the act or practice of determining how a website looks
Example: The new company focused on web design.
Visibility – is how easily people find a website using search engines, based on how many other websites link to it

Example: *Learn ways to increase a website's visibility.*

Coding – is a programming language that makes up a website

Example: *The reason for this was to protect sensitive Javascript coding from launching unnecessary actions.*

Navigation – is the act of using and finding things on a website

Example*: As its name implies, structural navigation follows the structure of a website.*

Usability – is how easy it is for a person to use a website

Example: *Usability is one of the most important factors that affects the user experience of any application, website, or any other piece of software.*

Content – is the material on a web page, including text and graphics

Example: *Create attractive content to catch a user's attention.*

CSS – (Cascading Style Sheets) is a simple language that decides how a web page looks

Example: *Use CSS to change a website's style.*

Group working and Speaking

Activity: Web Design Task

Divide students into groups and assign them to create a simple webpage layout using paper and markers. Emphasize elements like header, navigation bar, content area, and footer. Discuss design principles such as alignment, contrast, and consistency.

Home assignment

Highlight skills and qualifications needed for each role and the importance of collaboration between designers and developers in real-world projects. Write your findings as a summary.