網站介紹
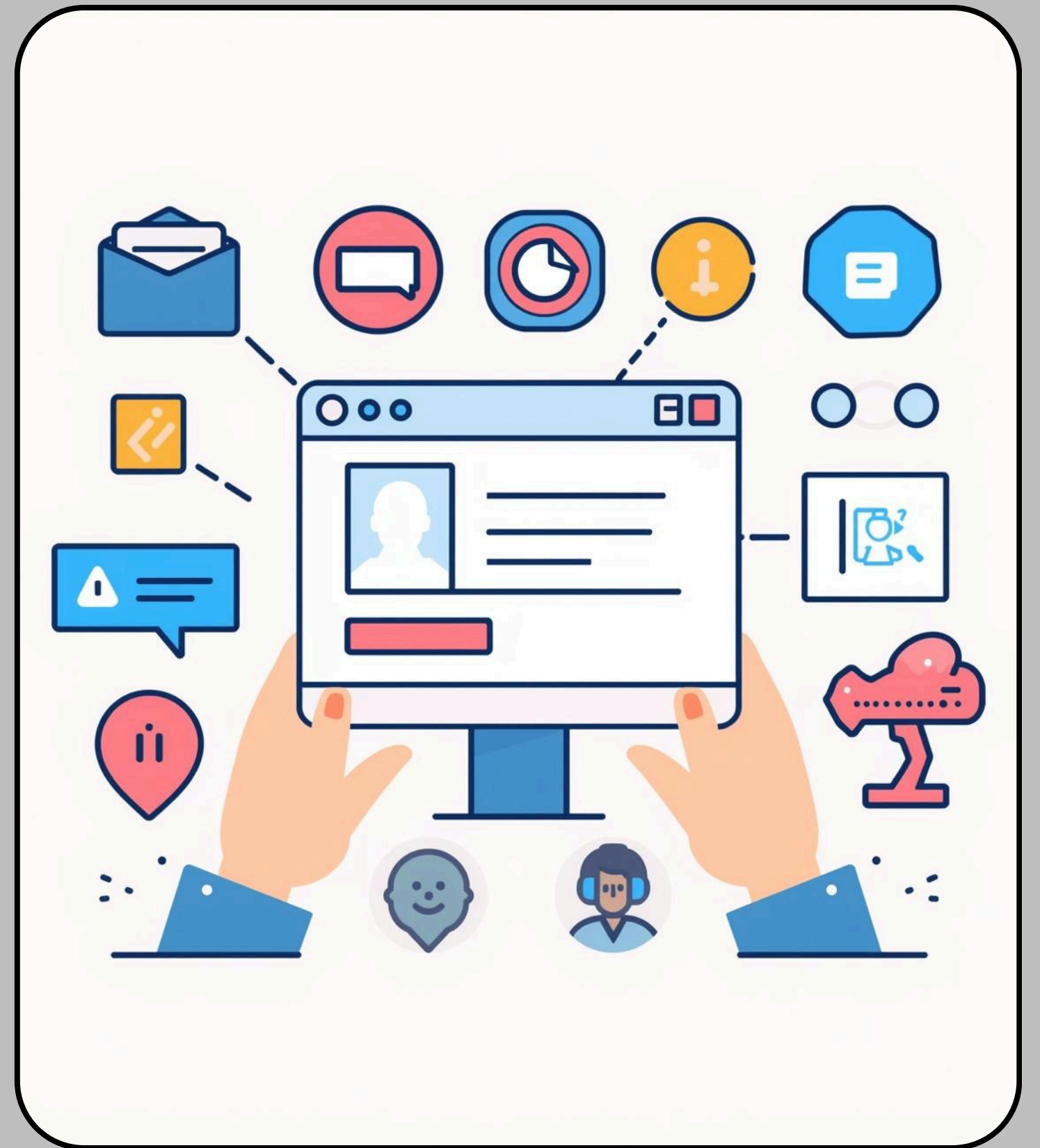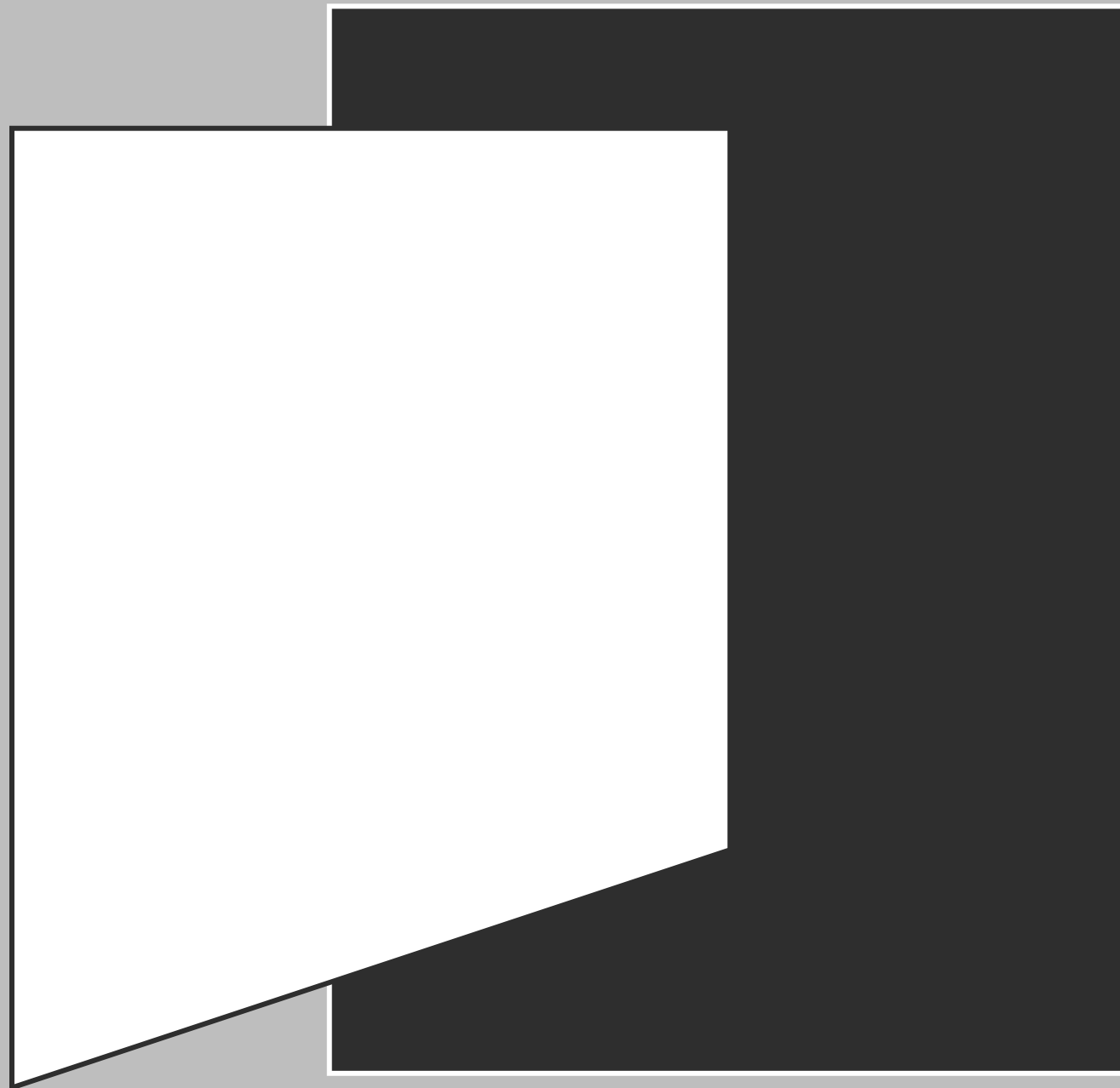
How Websites Work

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1. Aims of this Presentation

Understand the fundamental Client-Server model. Identify the key roles of DNS, IP Addresses, and HTTP. Explain the step-by-step process of how a browser renders a webpage.

Key Websit Fuctions
網頁的主要功能

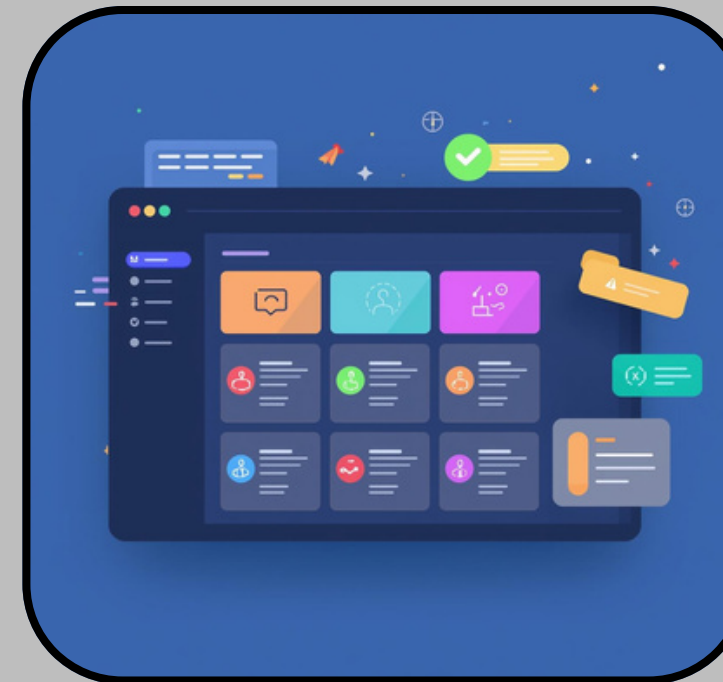# Key Website Functions

Displaying Information

Websites showcase text, images, and videos effectively.

User Interaction

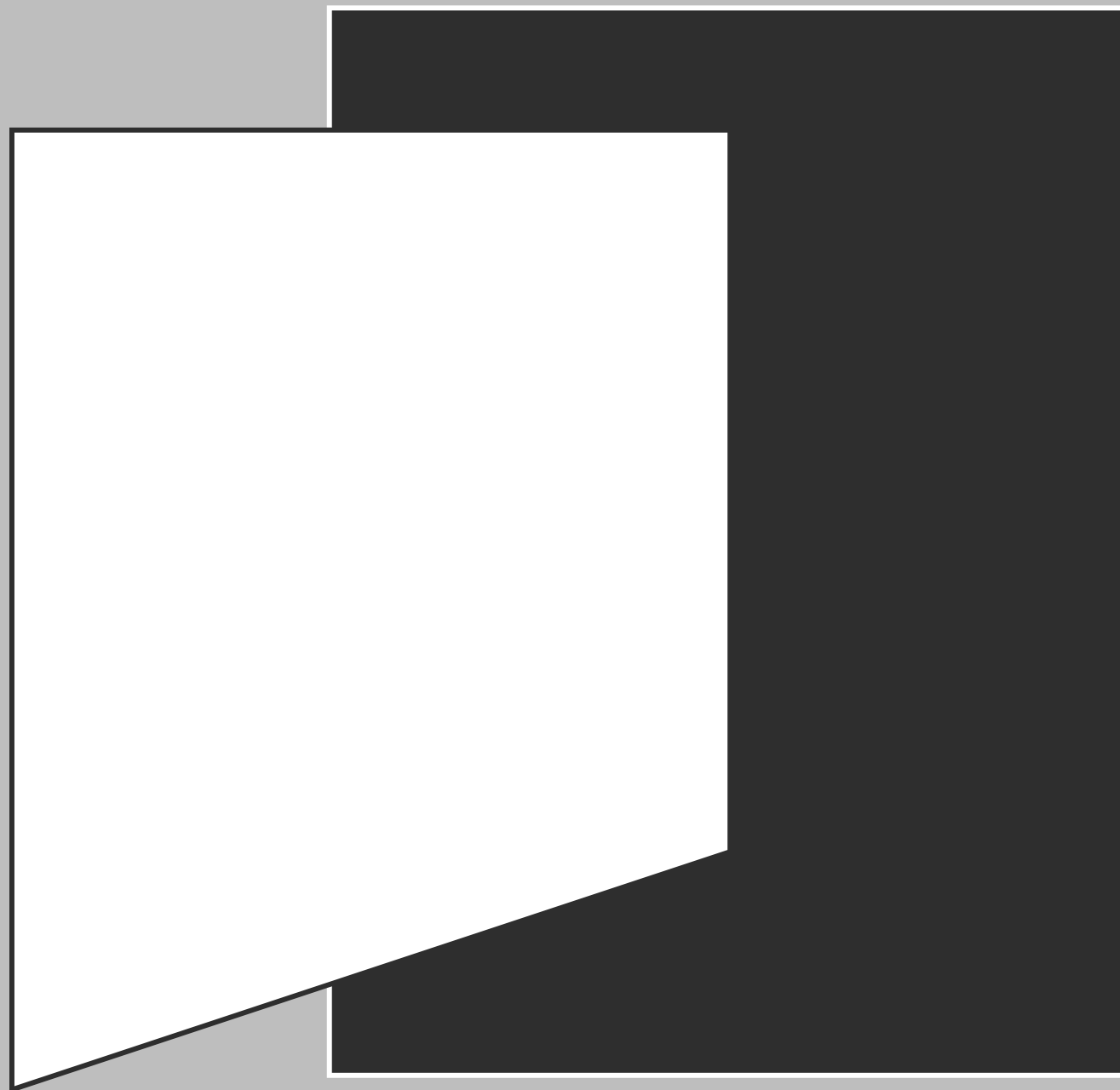Engaging elements like forms and buttons enhance experience.

Content Management

Websites allow easy updating and organizing of content.

Communication Features

Contact forms and chat enable user feedback and interaction.
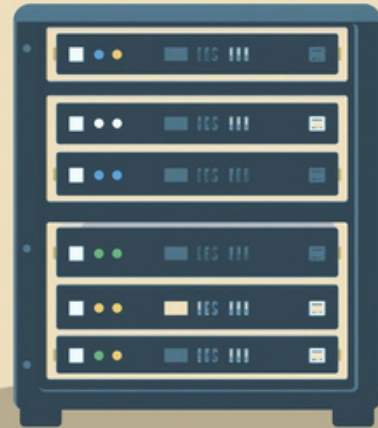
Website Workflow

網頁工作流程

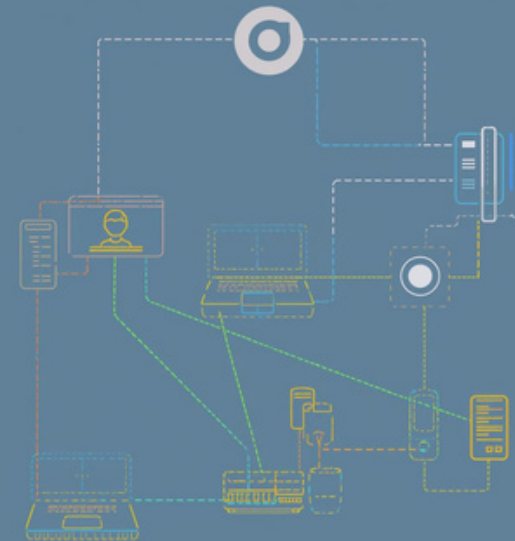# Understanding Website Components

User Device

The computer or phone used for access

Web Server

Hosts the website files and information

Internet

Connects the user and the server

Browser

Displays the website content on screen

Understanding the backbone of web applications

The backend of a website is essential for functionality and performance. It consists of the server-side processing that handles business logic and data management. Key elements include:
Programming Languages: Common languages include Python, PHP, and Node.js, each offering unique advantages for web development.
Database Interaction: Databases store and retrieve data, allowing for dynamic content generation.
APIs: Application Programming Interfaces enable communication between different software components, facilitating data exchange and integration with third-party services.
Understanding these components helps in grasping how websites operate beyond the user interface.

Technologies Behind Websites

Web Development

HTML, CSS, and JavaScript power websites.

Understanding HTTP and its significance

The HTTP (Hypertext Transfer Protocol) is the fundamental protocol used for communication on the web.
It enables the transfer of data between clients and servers, allowing users to access web content seamlessly.
Key HTTP methods include:

- **GET**: Retrieves data from a server
- POST: Sends data to a server for processing
- PUT: Updates existing data on a server
- DELETE: Removes data from a server

Each method has its specific use case,
 contributing to the overall functionality
and user experience of websites in a dynamic
 digital landscape.

Understanding CSS and Its Importance

The CSS (Cascading Style Sheets) is the fundamental language used for styling and designing web pages.
It enables the separation of content from presentation, allowing developers to control layout, colors, fonts, and animations seamlessly.
Key CSS features include:

- Typography: Defines text size, font, and spacing
- Colors & Backgrounds: Sets text colors, gradients, and images
- Box Model: Controls margins, borders, and padding of elements
- Layout Systems: Uses Flexbox and Grid for responsive design
- Animations & Transitions: Adds interactive effects and smooth

Each feature has its specific role, contributing to the overall visual appeal and user experience of websites in a modern digital environment.