Inglese

Web Apps

Traditional applications are heavy programs that require a lot of memory and are used to perform general tasks (e.g., accounting or data processing).
Web apps, on the other hand, are much lighter and designed to perform a single, specific task.

A good example is **Google Maps**, which offers useful features directly in your browser. With it, you can:

- Zoom in or out of a map;
- Move around the map;
- Search for places like restaurants;
- Get directions from one point to another.

Main Advantages of Web Apps

1. **Access and Compatibility from Any Device** = Web apps store your data online, allowing you to access it from any device with an internet connection. Whether you're using a Windows PC, a Mac, a tablet, or a smartphone, all you need is a browser — no need to carry your personal computer or worry about compatibility. This makes your work more flexible and user-friendly;
2. **Always Updated** = Web apps don't need to be updated manually. Every time you open them, you're already using the latest version with new features and security improvements, unlike traditional software that requires frequent and often slow updates;
3. **More Secure** = Since web apps run inside a browser and store data on secure online servers, they're less exposed to malware or viruses. The separation between your device and the app's code provides an additional layer of protection.

Web Today

Since the 1990s (nineteen ninety) and the rise of **Web 2.0**, internet users are no longer just passive consumers: they now actively participate by creating and sharing content online.
Web usage has expanded into several main areas:

1. **Information Sharing** = Websites that allow users to share and update information collaboratively. For example Wikipedia provides general knowledge constantly updated by users, Wikitravel offers travel advice, and Wikileaks publishes confidential documents, often of political relevance;
2. **Social Networking** = Platforms such as **Facebook** and **Instagram**, allow users to create personal profiles, stay in touch with friends, share messages, music, videos, and photos, and make new connections with people around the world.
3. **Blogging** = A **blog** is a personal site, similar to a digital diary, where the blogger regularly posts thoughts, info, and links. Most popular microblog is Twitter where you can share shorter and frequent posts;
4. **Shopping** = Online shops like **Amazon** or **iTunes**, and auction sites like **eBay**, allow users to buy and sell items easily. This method is cheaper, faster, and more convenient, but it also involves risks such as fraud and scams;
5. **Virtual Worlds and Gaming** = Sites like **Second Life**, allow users to create avatars and interact with others in digital environments. These spaces offer a mix of social interaction, creativity, and entertainment, simulating aspects of real life in a virtual setting;
6. **Entertainment Sharing** = Sites like **YouTube** and **Spotify** give access to music and videos, usually through streaming. Some platforms also allow downloads. Instead, some illegal sites like CB01, distribute copyrighted material without permission.

E-Commerce

E-commerce means buying and selling goods or services using the Internet, it can happen through: email systems, websites, direct computer communication, smartphone apps. Payments are made via **EFT (Electronic Funds Transfer)**. To use EFT, you usually need a **credit card** or **smart card**.

Advantages of E-commerce

Online business offers advantages for both companies and customers: because
For businesses, it means **lower costs**, **faster transactions**, access to **global markets**, and **better customer data management**.
For customers, it provides **easy access** to many products, a **wide selection**, **lower prices**, and **quick access to information**.

Disadvantages of E-commerce

Online business also has some drawbacks.
For businesses, it can be **expensive to set up and manage**, and there's a **high risk of online fraud**.
For customers, there's no way to **physically check products**, and concerns about **scams**, **delivery delays**, or **difficult returns** are common.

Cryptography

Cryptography is the study and practice of protecting information so that only those with special knowledge can read or use it. It works by turning a **plaintext** into **ciphertext** through **encryption**, and then back to its original form through **decryption**.

- **Encryption** uses an algorithm (called a cipher) and a **key** to make data unreadable to unauthorised users;
- **Decryption** is the reverse process: it uses the key to restore the original data.

There are two main types of cryptography based on the type of key used:

- **Symmetrical cryptography** uses the **same key** for both encryption and decryption. A good example of an algorithm that works with symmetrical cryptography is RES or Triple DES;
- **Asymmetrical cryptography** uses **two related keys**: a **public key** to encrypt and a **private key** to decrypt. An example of asymmetrical cryptography is the **digital signature**: a message signed with the sender's private key can be verified by anyone using the public key.

Modern cryptography has four main goals:

1. **Confidentiality**: only the person who should receive the message can read it. Other people cannot understand it;
2. **Integrity**: the message must stay the same. It cannot be changed or damaged during transmission;
3. **Non-repudiation**: the sender cannot say later that they didn't send the message. There is proof of who sent it;
4. **Authentication**: the sender and the receiver can check each other's identity. This means they are sure they are talking to the right person.

How to Use Web Safety

Using the Internet is useful, but it can also be dangerous if we are not careful. Hackers, viruses, and other risks can damage our computer or steal our personal information. For this reason, it's important to follow some simple rules to stay safe online.

Install a Firewall

A firewall is a program or device that protects your computer. It checks the data coming from the Internet and blocks anything dangerous. This helps stop hackers and harmful software from entering your system.

Keep Software Up to Date

Hackers often use bugs in old software to attack computers. That's why it's important to update your programs, like your browser, antivirus, and operating system. Updates fix problems and make your computer safer.

Use Protection Programs

Antivirus software checks emails and files for viruses and removes them. Anti-spyware stops programs that try to follow your online activity. Because new threats appear every day, it's important to always use the latest versions.

Take Care with E-mail

Don't open email attachments from people you don't know. They can contain viruses. Avoid clicking on unknown links in emails they can be dangerous. Use a spam filter and never reply to spam messages, not even to unsubscribe.