

The background of the slide is a dense field of 3D-rendered numbers (0-9) in various shades of blue and white, creating a sense of depth and data. A solid black rectangular box is positioned on the right side of the slide, containing the text.

Encryption

Data Security

Encryption

Encryption is a process for transforming a message so that the original is “hidden” from anyone who is not the intended recipient.

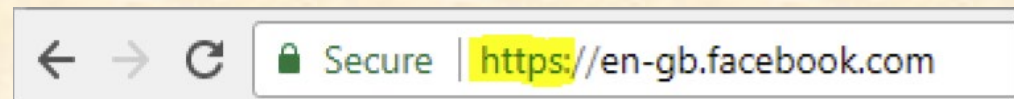
Encryption is not just for the military and spies anymore.

We use encryption every day on the internet, primarily to conduct commercial transactions, and without it, our economy might grind to a halt.

http versus https



HTTP (Hypertext Transfer Protocol) is the set of rules for transferring files (text, graphic images, sound, video, and other multimedia files) on the World Wide Web. As soon as a web user opens their web browser, the user is indirectly making use of HTTP. This is considered a non-secure way of browsing the internet today, as credentials entered into a site, such as usernames and passwords are not encrypted.



HTTPS (Hyper Text Transfer Protocol Secure) is the secure version of HTTP, the protocol over which data is sent between your browser and the website to which you are connected.

The 'S' at the end of HTTPS stands for 'Secure'. It means all communications between your browser and the website are encrypted.

Examples, Exercises, Games

- ◆ Some encryption examples, exercises and games can be found on the code.org website.
- ◆ The URL is: <https://studio.code.org/s/hoc-encryption>
- ◆ Enjoy and come back!



Task

Now do Task 12