# Shell

A shell is a [user interface](https://en.wikipedia.org/wiki/User_interface) for access to an [operating system](https://en.wikipedia.org/wiki/Operating_system)'s services. In general, operating system shells use either a [command-line interface](https://en.wikipedia.org/wiki/Command-line_interface) (CLI) or [graphical user interface](https://en.wikipedia.org/wiki/Graphical_user_interface) (GUI). It is named a shell because it is the outermost layer around the operating system.

Sometimes, a shell means just a command interpreter, and there comes terminals that provide user interface. So users type commands on terminal, and then terminal call shell to interpret user commands to system calls to the OS.

Bash shell is a popular Unix shell. It is used also on MAC.

# SSH (= secure shell)

“Secure Shell (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network.”

This definition has 2 parts:

* SSH is a shell (i.e. a user interface) to operate network services. Bash shell is a user interface for controlling OS’s service, and now Secure Shell is a user interface for controlling network services.
* SSH is secured. It uses public key cryptography

# Fingerprint key

In public-key cryptography, a public key fingerprint is a short sequence of bytes used to identify a longer public key. Fingerprints are created by applying a cryptographic hash function to a public key.

# Installing software in Ubuntu