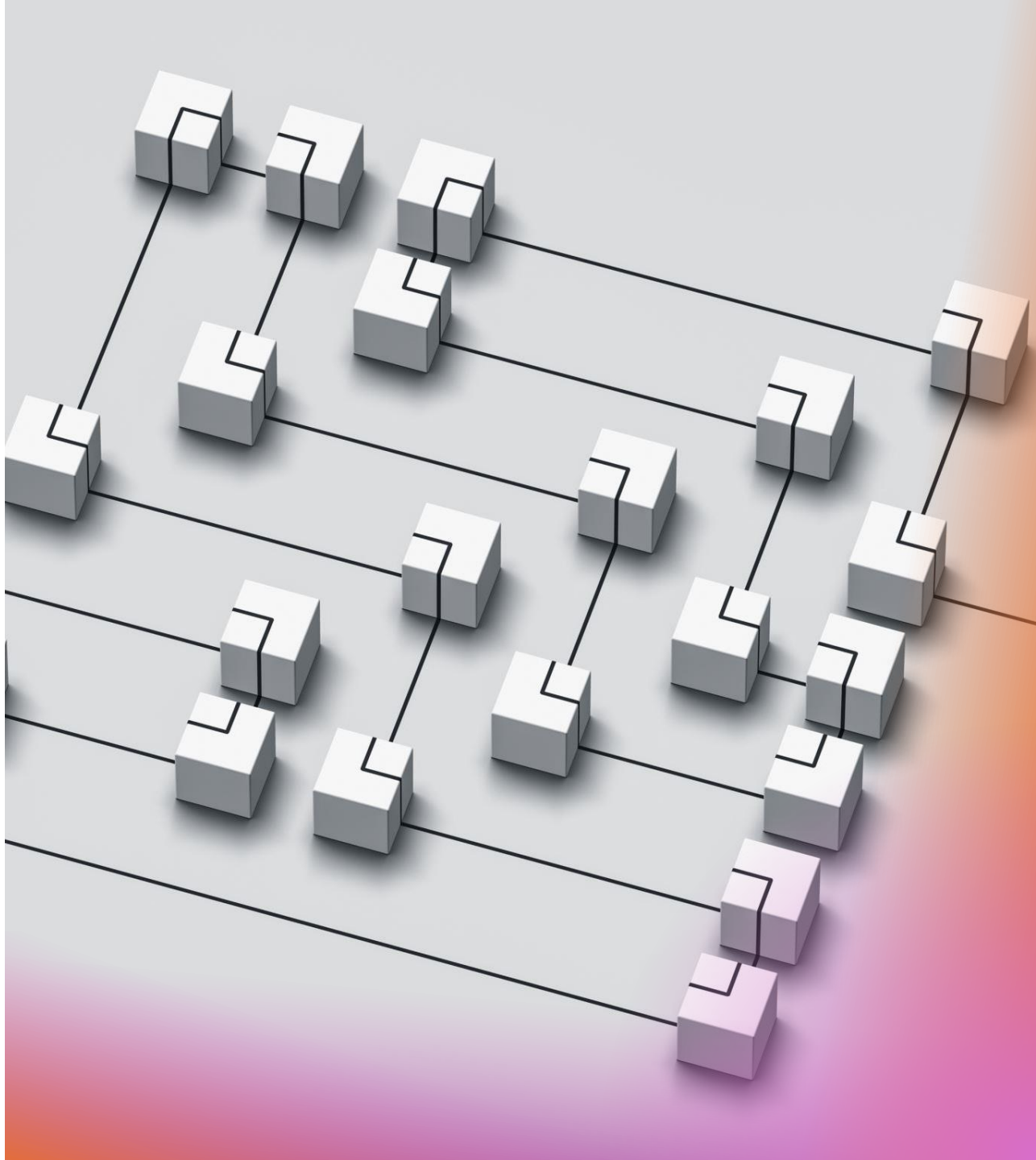
A3.2

Role of the operating system in managing:

A3.2.1 Networking

- The OS manages network connections and protocols.
- It allows devices to communicate safely.
- Example: Windows Server managing a company network.

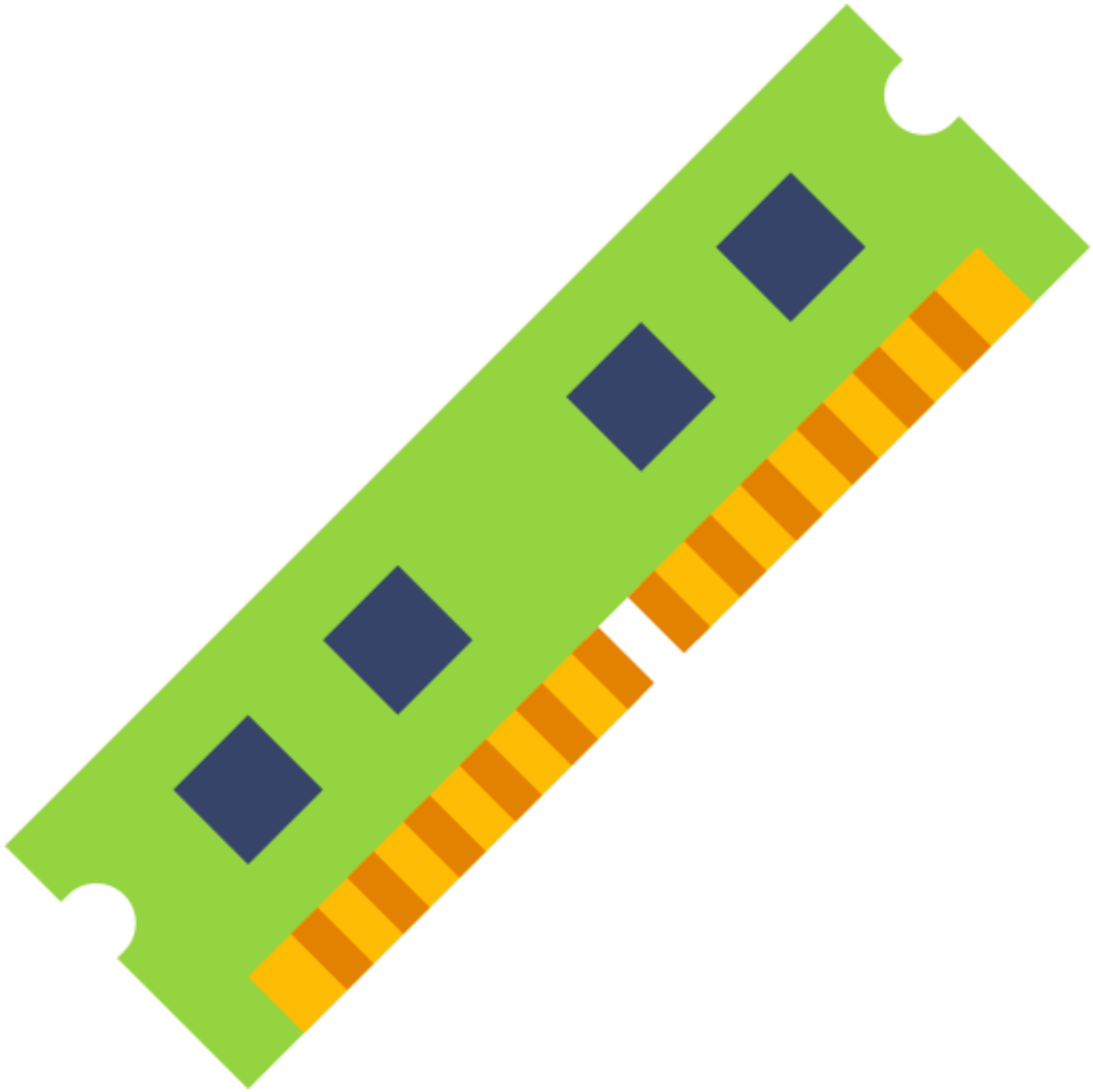


A3.2.2 Security

- The OS protects computers from viruses and hackers.
- It manages passwords and permissions.
- Example: macOS with built-in firewall and privacy features.

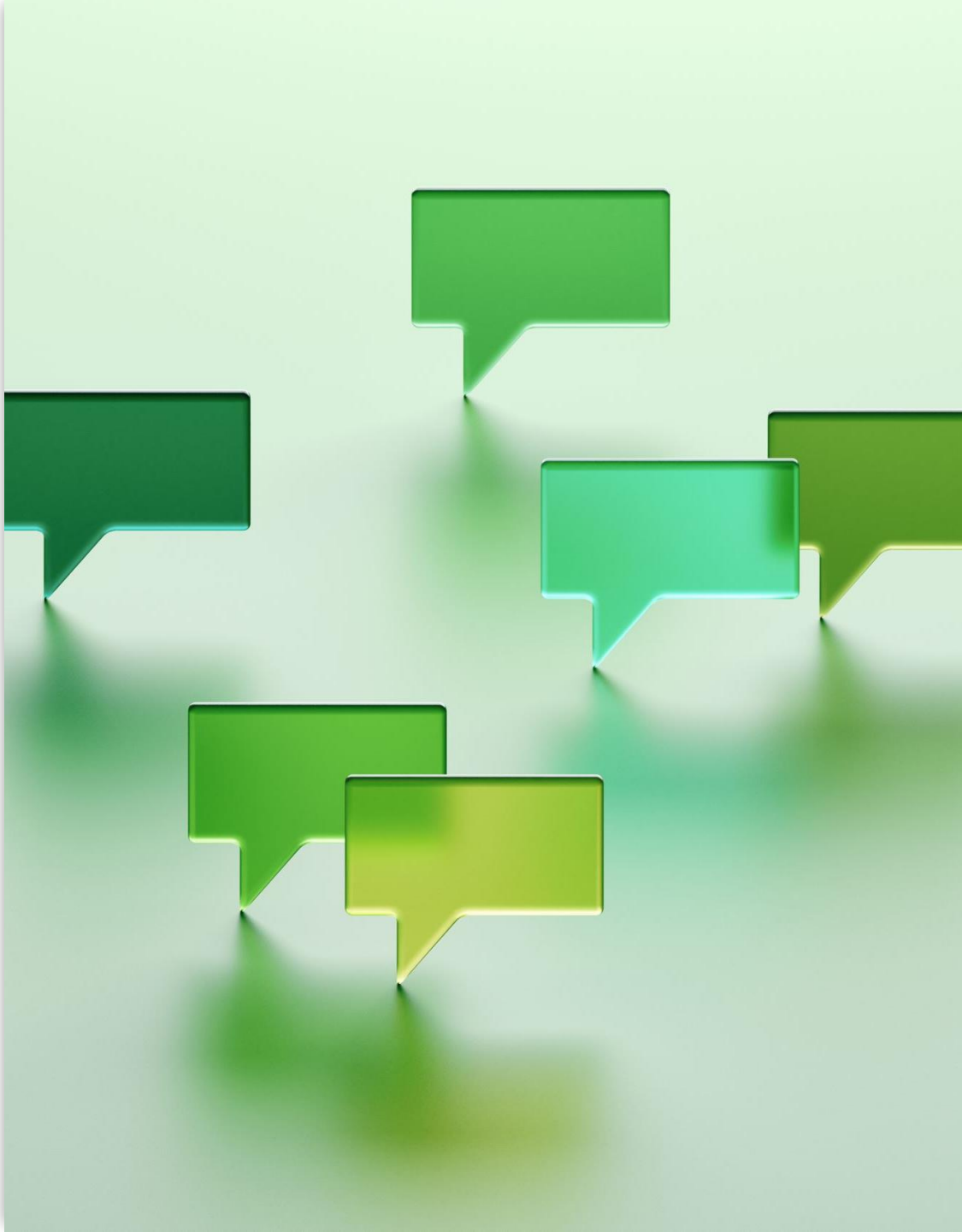
A3.2.3 Memory Management

- The OS assigns memory to programs and apps.
- It tracks free and used space.
- Example: Windows 10 efficiently managing RAM for apps.



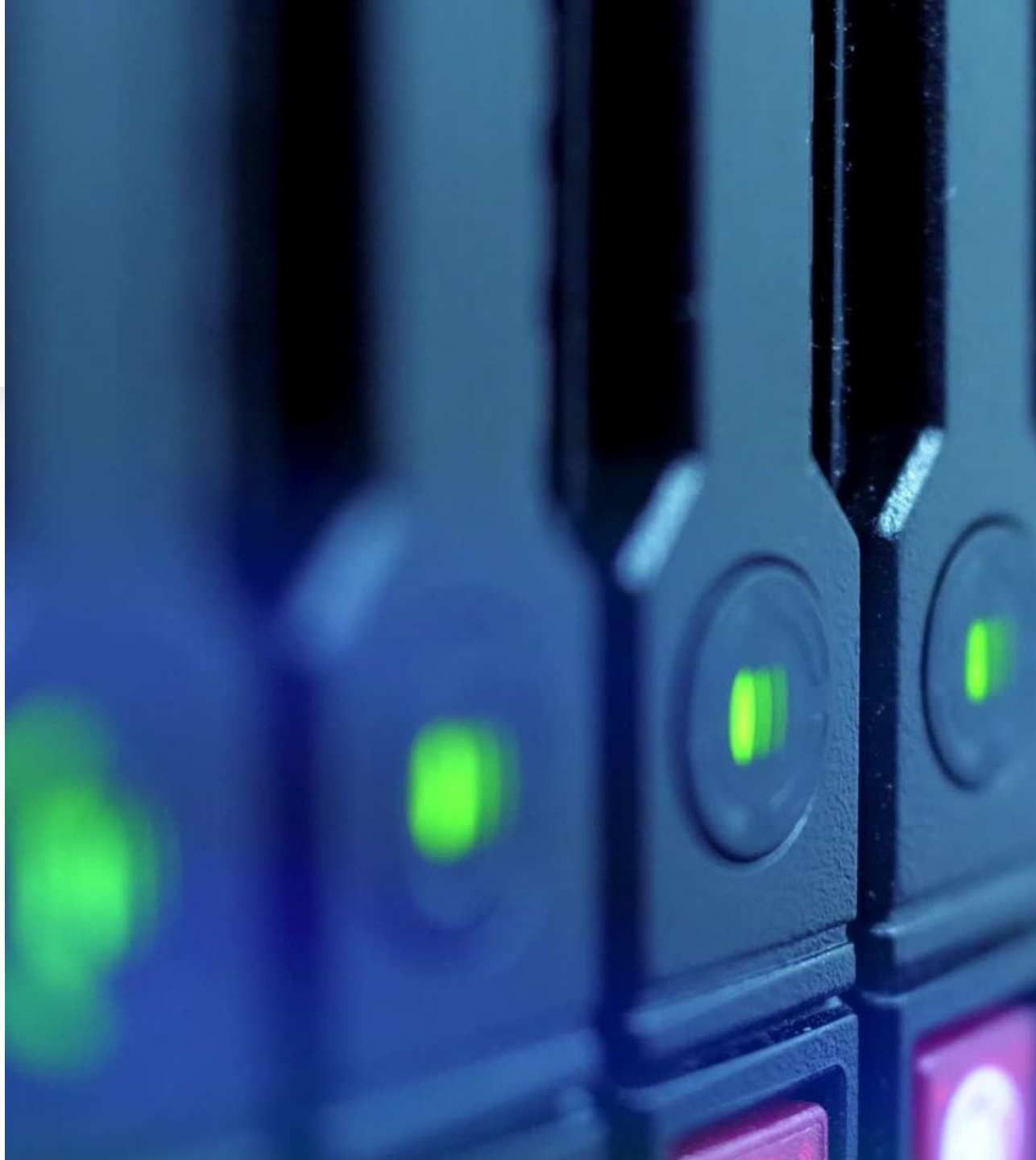
A3.2.4 Multi-tasking

- The OS runs multiple programs at once.
- It schedules tasks efficiently.
- Example: Ubuntu Linux allowing multiple apps to run smoothly.



A3.2.5 Device Drivers

- The OS uses drivers to control hardware.
- Drivers allow programs to communicate with printers, keyboards, and screens.
- Example: Windows installing printer drivers automatically.



A3.2.6 User Accounts

- The OS creates separate profiles for each user.
- It controls access to files and settings.
- Example: macOS managing multiple user accounts on a MacBook.