

Module 3:

Software Installation and Troubleshooting

Overview

- Installing Device Drivers
- Installing Application Software
- Troubleshooting Common Software Issues

Lesson 3.1

Installing Device Drivers



What are the signs when the drivers are missing or outdated?

- The device is not working (eg. no sound, no internet)
- Yellow exclamation marks in the Device Manager
- Error messages or limited functionality



To solve the missing drivers, users can do the following:

- Open Device Manager
- Look for devices with yellow warning icons
- Check the device status in the Properties panel



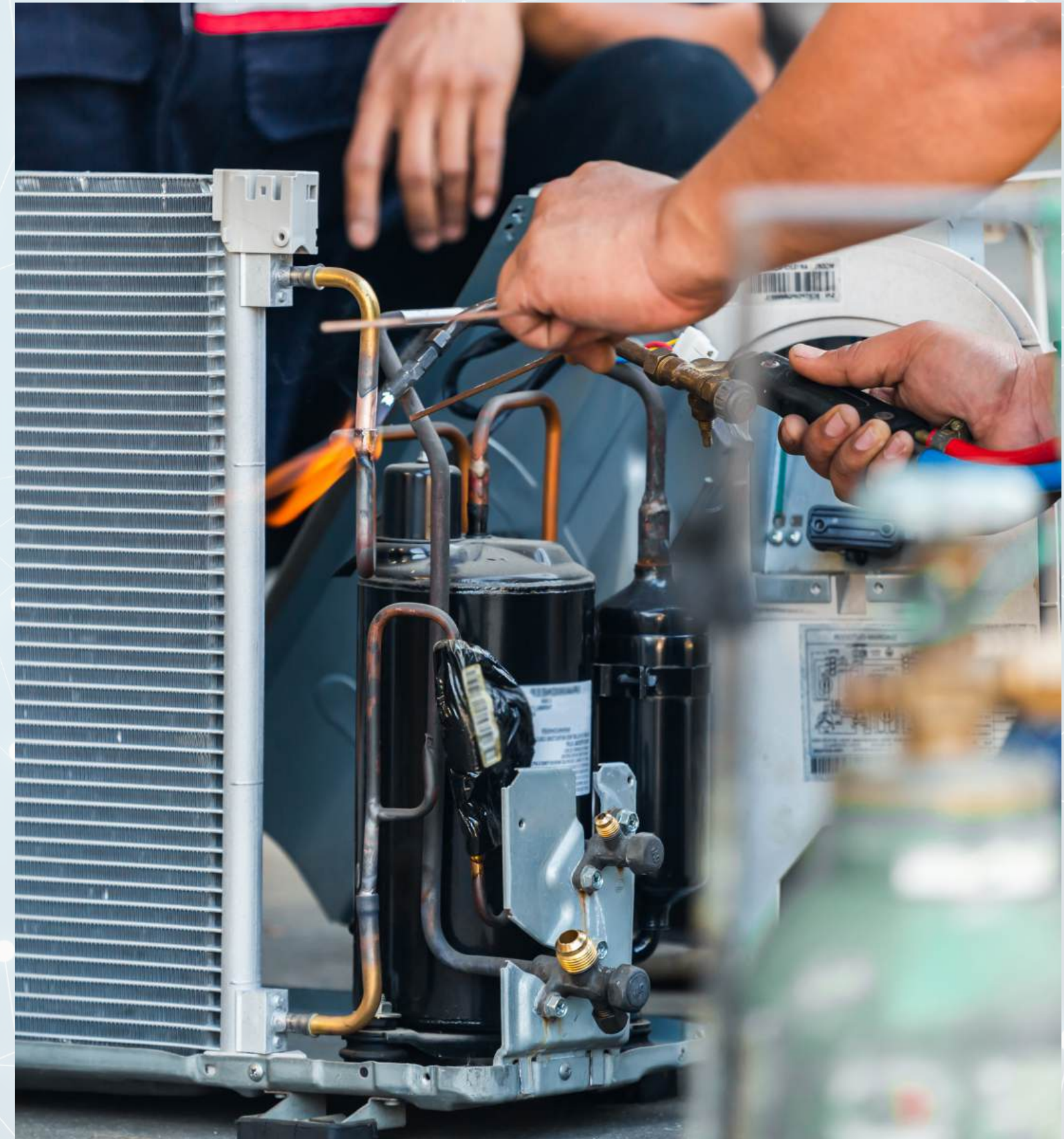
Automatic Installation

- Windows can automatically detect and install many drivers through Windows Update
- Pros: Easy and fast
- Cons: Sometimes outdated or generic drivers



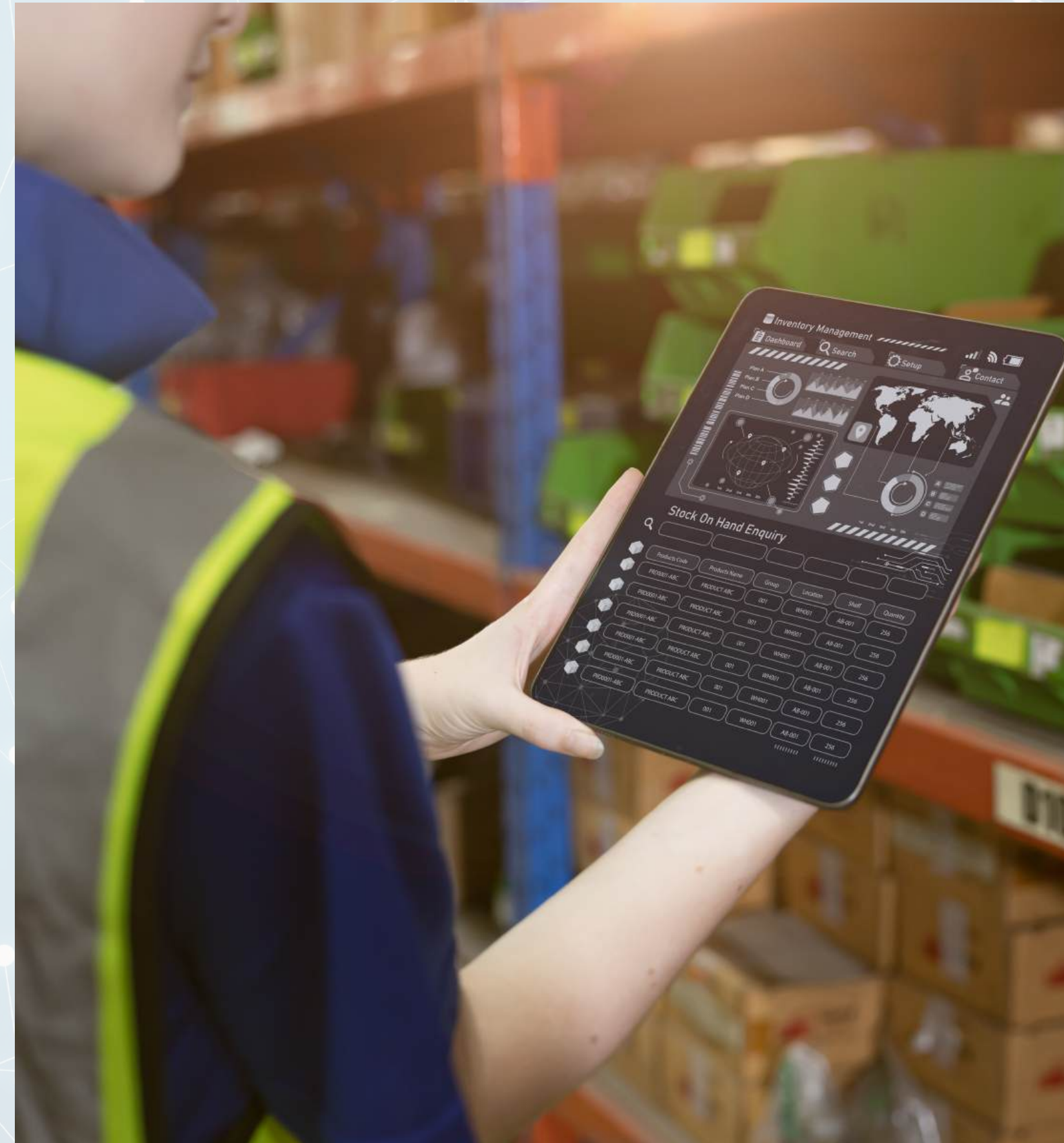
Manual Installation

- Download drivers directly from the manufacturer's website
- Allows installation of the latest and most compatible versions
- Often required for specialized hardware (e.g., gaming GPUs, chipsets)



What is Device Manager?

- it is a built-in Windows tool for managing drivers
- used to update a driver
- used to uninstall/reinstall
- used to view driver details



Lesson 3.2

Installing Application Software



Office Suites

- Used for productivity: word processing, spreadsheets, presentations.
- Installation may be from a physical disc, a download, or via cloud deployment.
- e.g., Microsoft Office, LibreOffice, Google Workspace



Antivirus Software

- Protects systems from viruses, malware, ransomware, and phishing.
- Often runs in the background and updates automatically.
- e.g., Windows Defender, Norton, Bitdefender



Utilities

- Provide system maintenance, file compression, or optimization.
- Often lightweight and run-on-demand.
- e.g., CCleaner, 7-Zip, WinRAR



Licensing and Activation

Types of licenses

- OEM (tied to hardware)
- Retail (can be transferred)
- Volume Licensing (for businesses)
- Open-source (free to use and modify)



Activation

- Confirms the license is valid.
- May involve entering a product key, signing into an account, or connecting to a licensing server.



Best Practices for Software Installation

- Check system requirements before installing.
- Always download from official or verified sources.
- Update software after installation to patch bugs or vulnerabilities.
- Avoid installing unnecessary add-ons or toolbars.
- Keep a record of product keys and licenses for future use.



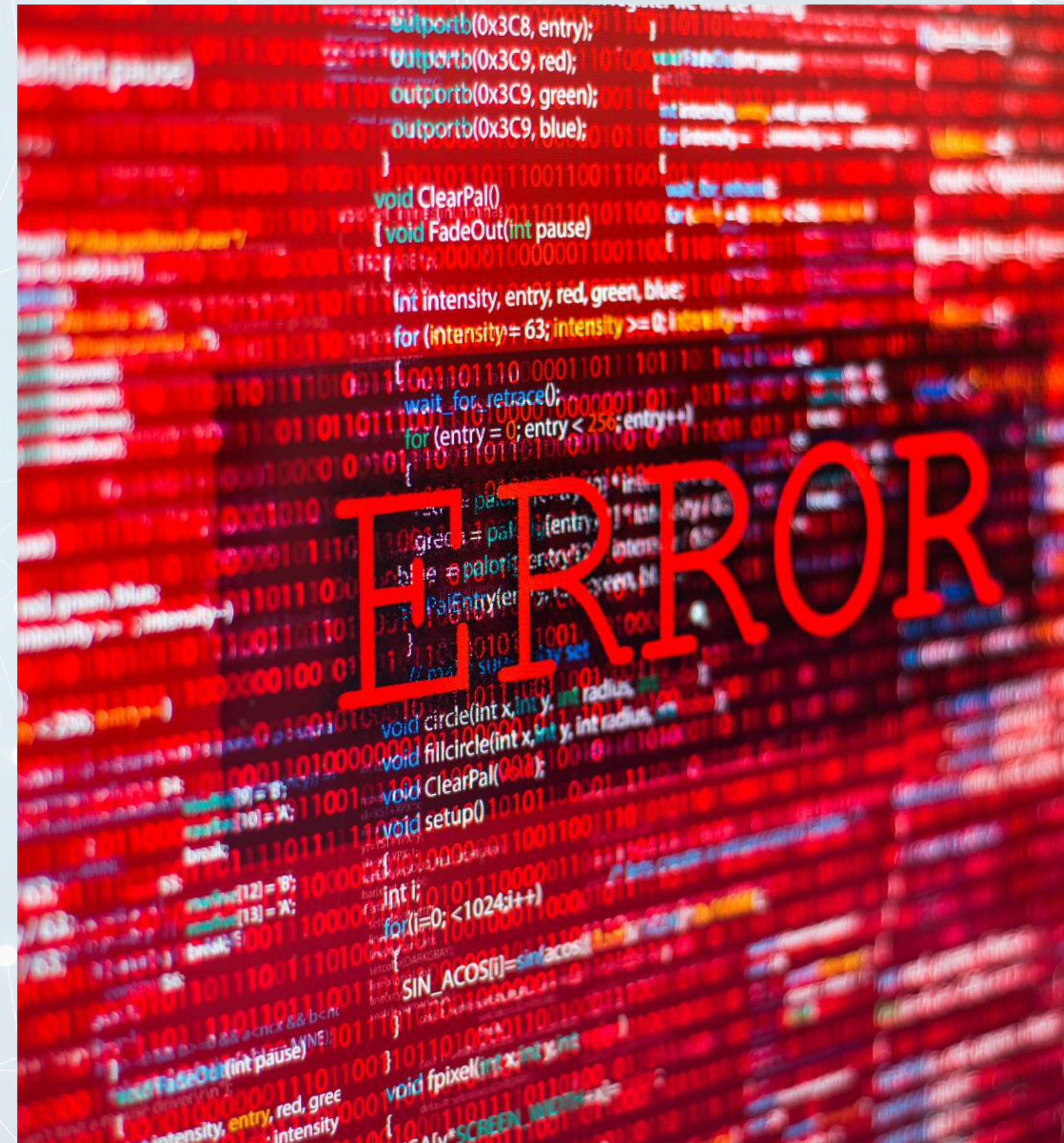
Lesson 3.3

Troubleshooting Common Software Issues



Boot Errors

- Common causes:
 - Corrupted OS files
 - Missing boot loader
 - Faulty updates or driver installations
- Solutions:
 - Use Startup Repair (Windows Recovery Environment)
 - Restore from a System Restore Point
 - Rebuild the boot configuration using commands



Application Crashes

- Causes:
 - Incompatible OS or hardware
 - Missing files or corrupted registry entries
 - Conflicts with other software
- Fixes:
 - Run in compatibility mode
 - Reinstall the application
 - Check Event Viewer for crash logs
 - Check for updates or patches
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Virus and Malware Removal

- Symptoms:
 - Slow performance, pop-ups, unauthorized access, unknown processes
- Tools:
 - Windows Defender, Malwarebytes, ESET, or other reputable scanners



Virus and Malware Removal

- Best practices:
 - Boot into Safe Mode to scan
 - Isolate the network to prevent spread
 - Remove temporary files and reset browser settings
 - Educate the user about safe browsing habits

