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Basic Troubleshooting Techniques

Restarting the Computer -1

Many issues can be resolved simply by restarting the system.

Clears temporary files and refreshes system processes.

Checking for Updates -2

Ensures the operating system and software are up to date.

Helps fix bugs and security vulnerabilities.

Running Built-in Troubleshooters-3

Windows and macOS provide built-in tools for diagnosing hardware and software issues.

Examples: Windows Troubleshooter, macOS Disk Utility.

Checking Connections-4

Ensure all cables and peripherals are properly connected.

Faulty or loose connections can cause display, input, or network issues.

Booting in Safe Mode -5

Helps diagnose problems caused by third-party applications.

Loads only essential drivers and services.

Monitoring System Performance-6

Task Manager (Windows) or Activity Monitor (macOS) can identify resource-heavy applications.

Helps detect CPU, RAM, or disk usage issues.

Tools for Computer Troubleshooting

Software Tools-1

Task Manager/Activity Monitor: Monitors running applications and resource usage.

Antivirus Software: Detects and removes malware that may cause system instability.

Event Viewer (Windows): Logs system errors and warnings for diagnostics.

Command Prompt/Terminal: Useful for network and system troubleshooting

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Hardware Diagnostic Tools-2

BIOS/UEFI Diagnostics: Performs hardware tests before OS boots.

Multimeter: Measures power supply voltages and identifies electrical issues.

Memory Testing Tools (MemTest86): Checks for faulty RAM.

Network Troubleshooting Tools-3

Ping and Traceroute: Diagnoses network connectivity issues.

IPConfig (Windows) / Ifconfig (Linux/Mac): Checks network configurations.

Wi-Fi Analyzer: Detects weak signal areas and interference.

Resolving Common Issues

Slow Computer Performance-1

Close unnecessary programs and background processes.

Run disk cleanup and defragmentation.

Upgrade RAM or switch to an SSD for better performance.

Internet Connectivity Issues-2

Restart the router and modem.

Use wired connection if Wi-Fi is unstable.

Reset network settings.

System Crashes and Blue Screen Errors-3

Check error codes in Event Viewer.

Run memory and disk diagnostics.

Update drivers and remove recently installed software.

Unresponsive Applications-4

Force close and restart the application.

Check for software updates.

Run the application in compatibility mode