



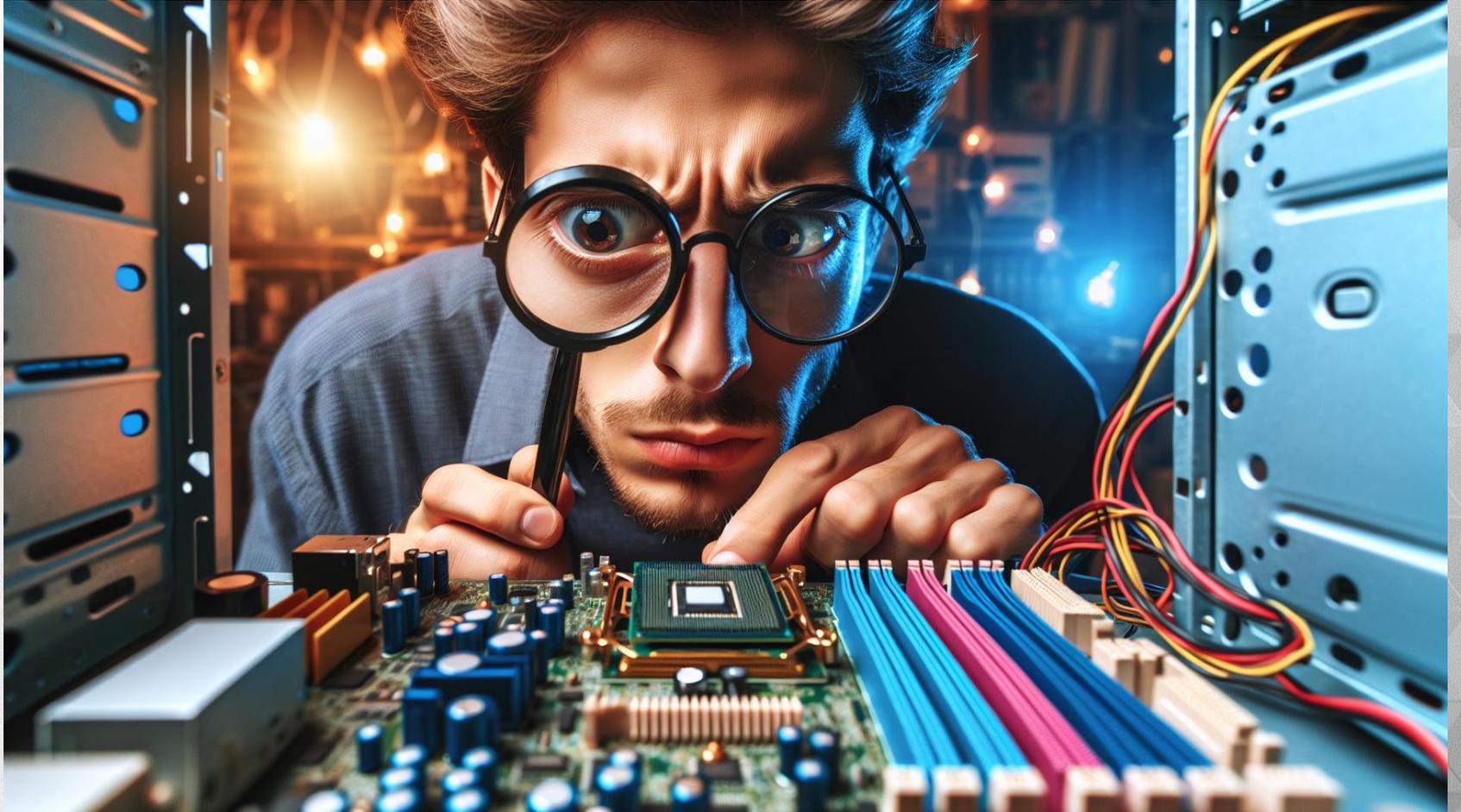
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Computer Troubleshooting

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Computer Troubleshooting

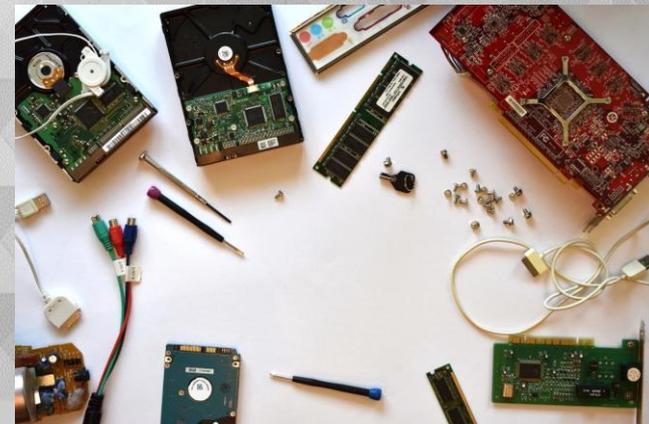
- Definition of troubleshooting: Troubleshooting means identifying, analyzing, and fixing computer problems to restore normal system function efficiently.
- Why troubleshooting is important: Troubleshooting prevents system downtime, reduces data loss, and keeps devices performing reliably for all users.
- Basic concepts: Troubleshooting relies on observation, systematic testing, and accurate problem isolation to reach effective solutions.

Introduction to Troubleshooting

- Identify symptoms: Identifying symptoms helps determine what is wrong by observing error messages, noises, and unusual system behavior.
- Isolate the problem: Isolating the problem narrows down the possible causes by testing components and eliminating unrelated factors.
- Test and confirm: Testing confirms the issue and ensures the chosen solution actually resolves the problem without side effects.

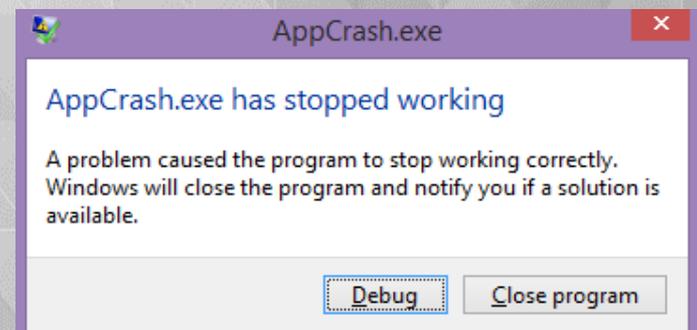
Common Hardware Issues

- Faulty cables: Damaged or loose cables cause connection problems, device failure, and inconsistent performance across hardware components.
- Overheating: Overheating slows performance, causes shutdowns, and occurs when cooling systems fail or airflow becomes obstructed.
- Power supply issues: Power supply issues lead to boot failures, sudden restarts, and hardware instability due to insufficient electricity.



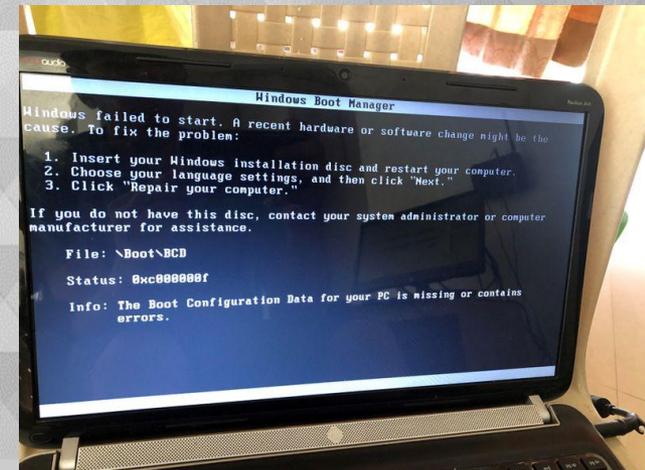
Common Software Issues

- Application crashes: Applications may crash when software is outdated, corrupted, or conflicts with system settings or other installed programs.
- OS errors: Operating system errors arise from corrupted files, incompatible updates, or misconfigured system components and settings.
- Corrupted files: Corrupted files occur due to improper shutdowns, malware infections, or failing storage devices over time.



Boot Problems

- No display: A no-display issue may result from GPU problems, loose monitor cables, or incorrect input source configurations.
- Boot loop: Boot loops happen when system files are damaged or updates fail, causing the computer to restart repeatedly.
- Missing OS: Missing OS appears when the system cannot locate boot files due to disk errors or incorrect BIOS settings.



Blue Screen Errors (BSOD)

- Causes of BSOD: Blue Screen of Death (BSOD) errors are caused by driver failures, hardware conflicts, or memory problems that stop Windows from functioning.
- How to read error codes: Error codes on BSOD screens help diagnose the issue by identifying the specific failing driver or hardware component.
- Fixing BSOD: Fixing BSOD involves updating drivers, testing RAM, checking hardware, and removing recently installed software.

Blue Screen Errors (BSOD)



Your PC ran into a problem and needs to restart. We're just collecting some error info, and then we'll restart for you.

0% complete



For more information about this issue and possible fixes, visit

<http://windows.com/stopcode>

If you call a support person, give them this info:

Stop code: **MANUALLY_INITIATED_CRASH**

Slow Performance Causes

- Too many startup apps: Too many startup applications slow system boot time and consume RAM and CPU resources, reducing overall performance.
- Low RAM: Low RAM limits multitasking, causing programs to freeze, crash, or run extremely slowly during heavy operations.
- Fragmented disk: Fragmented disks store data inefficiently, increasing load times and slowing file access across the system.



Activity Group

- Each group chooses a common problem in our mobile or computer (overheating, corrupted files, no display) and explains:

1. Why it happens
2. How to diagnose it
3. How to fix it



Homework Assignment

1. Define computer troubleshooting in your own words.
2. List three common hardware issues and explain their effects.
3. Give two differences between hardware issues and software issues.

Lecture Summary

Computer troubleshooting is the process of identifying, analyzing, and fixing hardware or software problems. It involves observing symptoms, isolating the cause, and applying the correct solution. Common issues include overheating, faulty cables, corrupted files, and boot errors. Effective troubleshooting improves system performance and prevents data loss.

A wooden easel with three legs holds a rectangular sign. The sign is light-colored and has the text "Thank you for your attention" written in a black, cursive font. The background is a light blue wall with a darker blue horizontal band across the middle.

Thank you
for your
attention