

# Principles of computers

First stage

Lecture

## Computer Troubleshooting By

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# INTRODUCTION TO COMPUTER TROUBLESHOOTING

Definition: Process of identifying, diagnosing, and resolving issues in computer systems, both hardware and software.

Why It's Important :

- Keeps computers running smoothly.
- Saves time and money by avoiding repairs.
- Helps build skills you can use in tech jobs.

## TYPES OF COMPUTER PROBLEMS

Two Main Types:

- Hardware Problems: Physical parts like keyboard, mouse, or hard drive.
- Software Problems: Programs and apps not working correctly.

## GENERAL TROUBLESHOOTING TIPS

Write Down Your Steps:

- Track your troubleshooting steps to avoid repetition.

Note Error Messages:

- Document error messages for future reference.

Check Cables:

- Ensure all cables are connected properly.

Restart the Computer:

- Often resolves basic issues.

## THE PROCESS OF ELIMINATION

This means you'll make a list of things that could be causing the problem and then test them out one by one to eliminate them.

Example Scenario:

- Trying to print some documents but printer won't print.
- Steps taken to identify and solve the issue.

## SIMPLE SOLUTIONS TO COMMON PROBLEMS

Solution 1: If your computer does not start, begin by checking the power cord to confirm that it is plugged securely into the back of the computer case and the power outlet.

Solution 2: If it is plugged into an outlet, make sure it is a working outlet. To check your outlet, you can plug in another electrical device, such as a lamp.

Solution 3: If the computer is plugged in to a surge protector, verify that it is turned on. You may have to reset the surge protector by turning it off and then back on. You can also plug a lamp or other device into the surge protector to verify that it's working correctly.

Solution 4: If you are using a laptop, the battery may not be charged. Plug the AC adapter into the wall, then try to turn on the laptop.

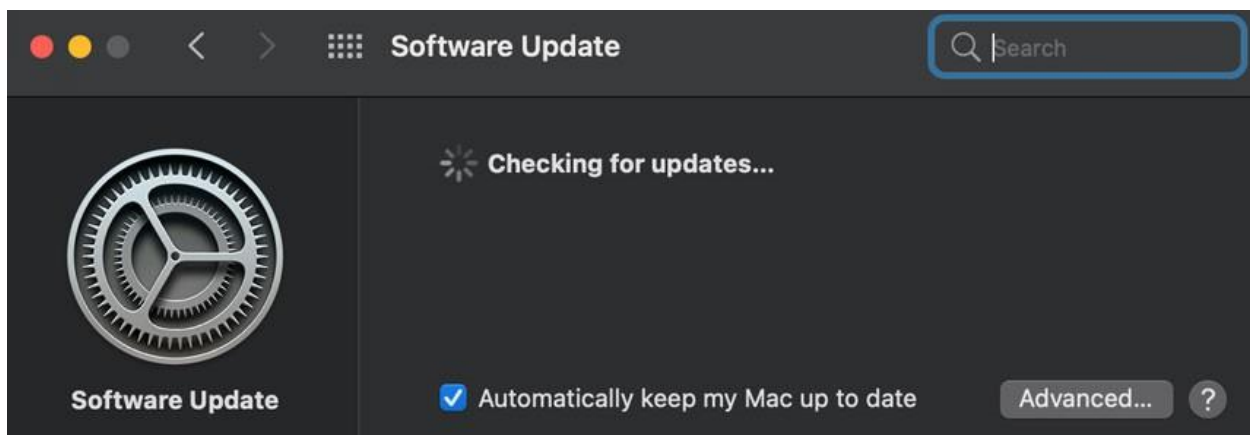
If it still doesn't start up, you may need to wait a few minutes and try again.

## **PROBLEM:**

### **AN APPLICATION IS RUNNING SLOWLY**

Solution 1: Close and reopen the application.

Solution 2: Update the application. To do this, click the Help menu and look for an option to check for Updates. If you don't find this option, another idea is to run an online search for application updates.



## **PROBLEM:**

### **AN APPLICATION IS FROZEN**

Sometimes an application may become stuck, or frozen. When this happens, you won't be

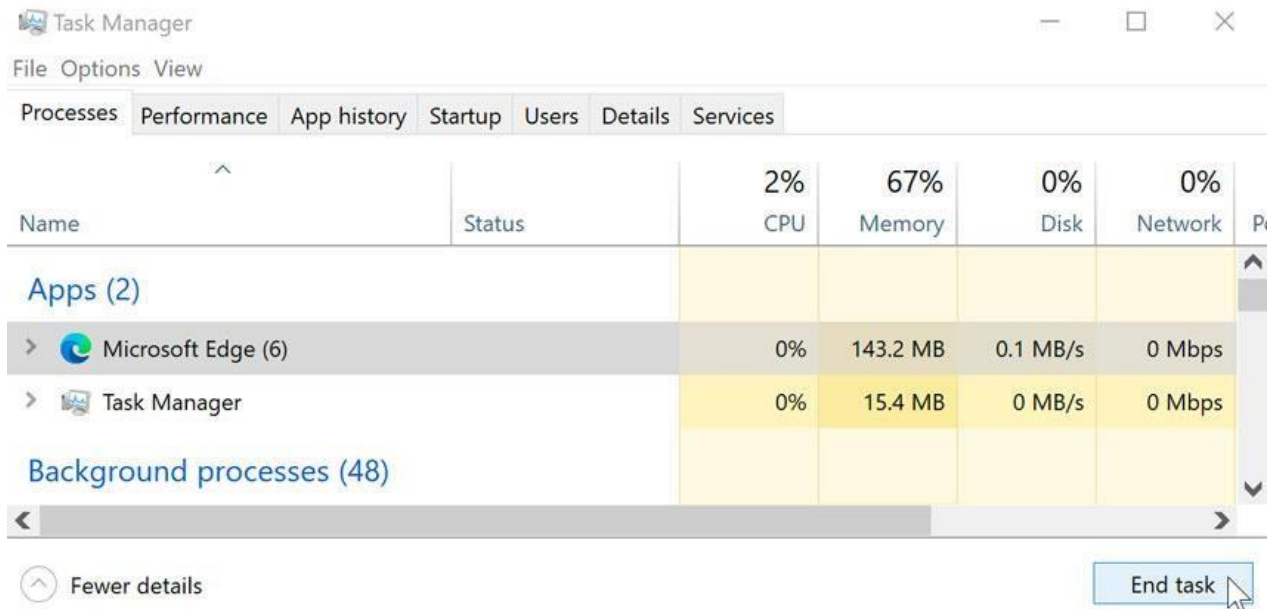
able to close the window or click any buttons within the application.

Solution 1: Force quit the application.

you can press (and hold) Ctrl+Alt+Delete (the Control, Alt, and Delete keys) on your

keyboard to open the Task Manager.

You can then select the unresponsive application and click End task to close it



## PROBLEM:

### ALL PROGRAMS ON THE COMPUTER RUN SLOWLY

Solution 1: Run a virus scanner.

You may have malware running in the background that is slowing things down.

Solution 2: Your computer may be running out of hard drive space. Try deleting any files or programs you don't need.

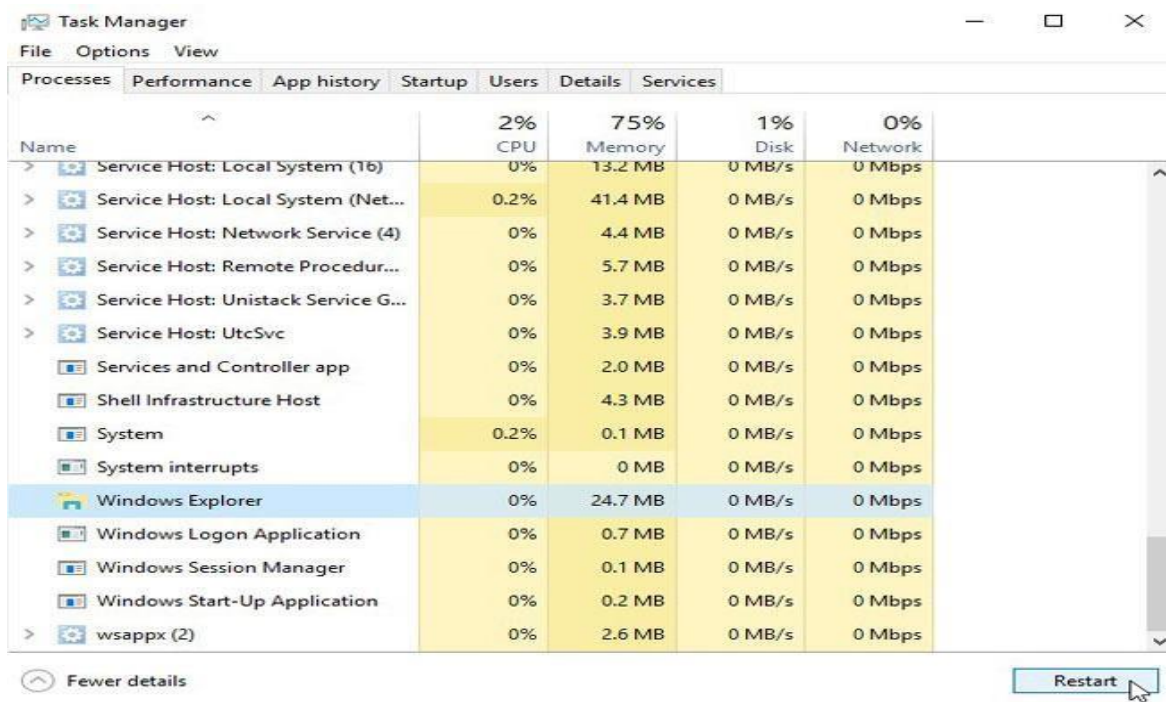
Solution 3: If you're using a PC, you can run Disk Defragmenter

## PROBLEM:

### The Computer Is Frozen

Sometimes your computer may become completely unresponsive, or frozen. When this happens, you won't be able to click anywhere on the screen, open or close applications, or access shut-down options.

**Solution 1: Restart Windows Explorer.** To do this, press and hold Ctrl+Alt+Delete on your keyboard to open the Task Manager. Next, locate and select Windows Explorer from the Processes tab and click Restart. If you're using Windows 8, you may need to click More Details at the bottom of the window to see the Processes tab.





## PROBLEM:

### The Computer Is Frozen

- Solution 2: Press and hold the Power button for 5-10 seconds. This will force the computer to shut down.
- Solution 3: If the computer still won't shut down, you can unplug the power cable from the electrical outlet. If you're using a laptop, you may be able to remove the battery to force the computer to turn off. Note: This solution should be your last resort after trying the other suggestions above.

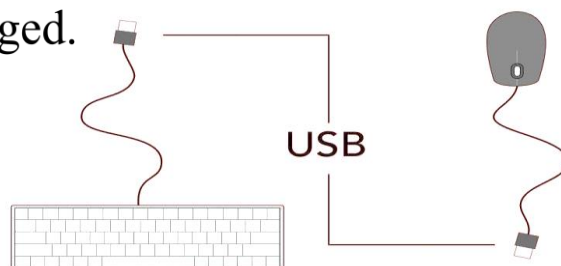
## PROBLEM:

### The Mouse/Keyboard Has Stopped Working

Solution 1: If you're using a wired mouse or keyboard, make sure it's correctly plugged in to the computer.

Solution 2: If you're using

a wireless mouse or keyboard, make sure it is turned on and that its batteries are charged.



## PROBLEM:

### The Screen Is Blank

Solution 1: The computer may just be in Sleep mode. Simply click the mouse or press any key on the keyboard to wake it.

Solution 2: Make sure the monitor is plugged in and turned on.

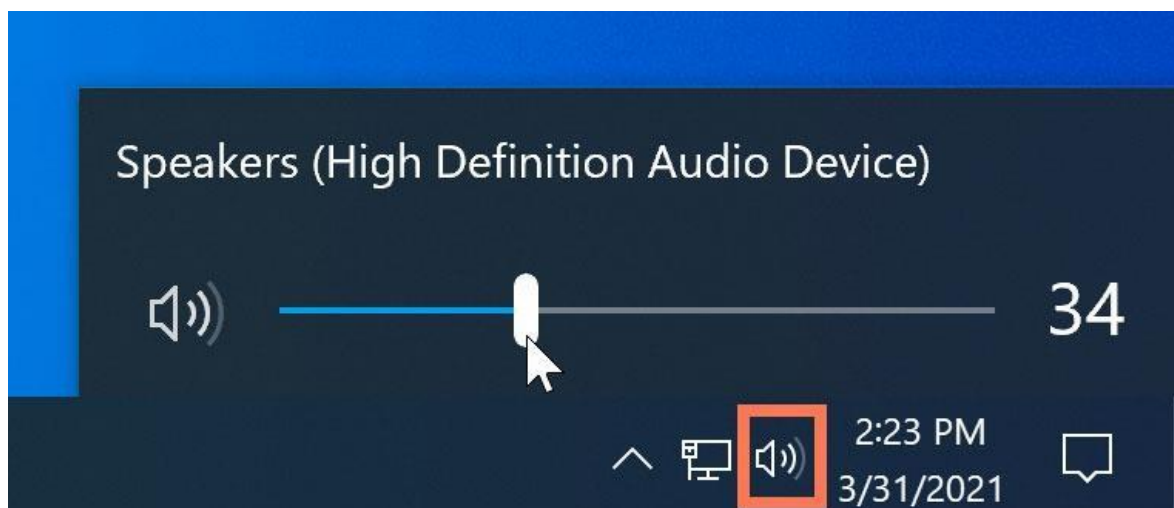
Solution 3: Make sure the computer is plugged in and turned on.

Solution 4: If you're using a desktop computer, make sure the monitor cable is properly connected to the computer tower and the monitor.

## PROBLEM:

### I Can't Hear The Sound On My Computer

Solution 1: Check the volume level. Click the audio button in the bottom-right corner of the screen to make sure the sound is turned on and the volume is up.





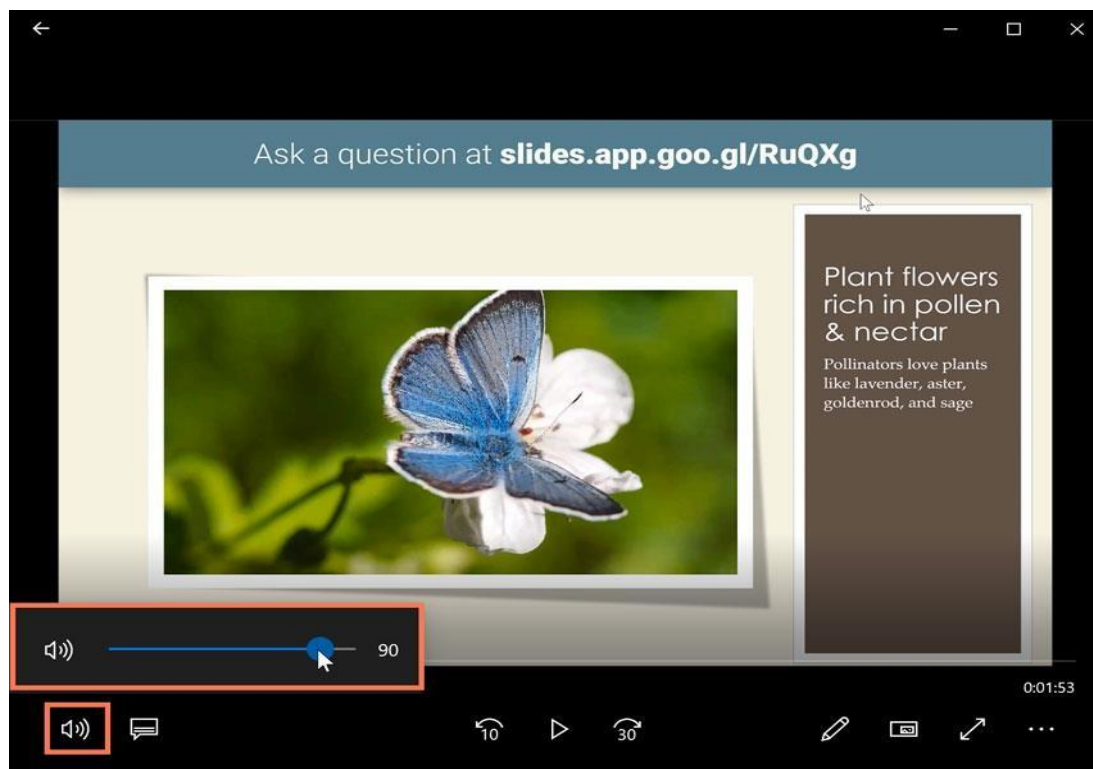
## PROBLEM:

### I Can't Hear The Sound On My Computer

Solution 2: Check the audio player controls. Many audio and video players will have their own separate audio controls. Make sure the sound is turned on and the volume is up in the player.

Solution 3: Check the cables. Make sure external speakers are plugged in, turned on, and connected to the correct audio port or a USB port. If your computer has color-coded ports, the audio output port will usually be green.

Solution 4: Connect headphones to the computer to determine if you can hear sound from the headphones.



## **SOLVING MORE DIFFICULT PROBLEMS**

If you still haven't found a solution to your problem, you may need to ask someone else for help.

As an easy starting point, we'd recommend searching the Web. It's possible that other users have had similar problems, and solutions to these problems are often posted online. Also, if you have a friend or family member who knows a lot about computers, they may be able to help you.

Thank You!

