

A Pragmatic Approach to Carrying out Computer Systems Housekeeping Routines

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Abstract: *Many computer users use computer systems to carry out their daily activities without recourse to a good maintenance culture. Users do wait until their systems stopped working before they begin to run from one pole to another seeking for professional technical attention. Housekeeping is a set of routine tasks you should perform on a regular basis, which will help keep your computer system running smoothly and efficiently. This paper examined practical approach of carrying out computer system Housekeeping routines. The paper also justified why computer systems Housekeeping and how to perform Housekeeping routine on PC external components. There are two ways to performing housekeeping routine which were discussed in this paper. One is the external components of the computer system and two, the computer systems files. This paper also discussed some useful hints a computer user can follow to elongate the life span of their systems.*

Keywords: Computer systems, Housekeeping, routine and PC external components

1. Introduction

Computers have been with us for decades, in today's modern society, computers are used at all times, and everywhere. In the supermarket, they are used to keep a check on what has been sold. In the bank, they are used to keep records of customers. Computers have changed the way office jobs are carried out on daily basis. Computers are used by the secretaries to type and print out memos, letters, and proposals, just to mention few. The management's MIS is computer-based. Computer can be described as a tool that everyone can use to do certain work faster and more easily.

Since computers have become life wire of all businesses and everybody nowadays depends on computer usage then the computer that provides smooth running of our office activities needs to be properly taken care of to prevent it from being damaged as a result of poor maintenance culture or ignorance. The care we have for our cars, televisions, DVD players and all other household equipment should be extended to that electronic machine called computer system. Its advantages to the growing economy of our society are enormous and cannot be underrated by anybody.

2. Why Computer System Housekeeping?

Computers have a similar life to that of household equipment, the more you use them the more they get messy and dusty. Therefore, from time to time, your computer will require some form of housekeeping. Simply put, housekeeping is a set of routine tasks you should perform on a regular basis, which will help keep your computer running smoothly, efficiently, and help clear out all unwanted files, be it data file or program file. If they build up over time, that is the files may grow up, these files will slow down your computer's performance.

Your Personal Computers' (PCs) greatest enemies are heat and moisture. Excess heat accelerates the deterioration of the

delicate circuits in your systems motherboard. The moisture, in the other hand, causes bridging of circuits of the motherboard of your computer system as well as the peripheral components. The most common causes of overheating are dust and dirt which block vents and CPU cooling fan to keep heat, then dissipating air from moving through the case. It should be borne in mind that a thin coating of dust or dirt can raise the temperature of your computer components. Any dirt, but especially the residue or cigarette smoke, can corrode exposed metal of your computer system. That is why it pays to keep your system clean, inside and outside.

If your PC resides in a relatively clean and cool environment, a quarter-annual cleaning should have been said to be sufficient. But, as I discuss here, in most real-world locations, such as dusty offices and homes, your system may need a frequent cleaning.

3. Common Users Mistakes

Most users don't admit that they engineer the problems they often encounter on their computer systems. Imagine a computer user who after a while on the computer plugs in a cell phone to a USB port of a computer for charging with the blue tooth widely opened. Definitely such user stands the risk of infecting the computer with virus which could be transmitted through the cell phone, an implication of which might not be palatable with the computer system.

Other users don't know as well, perhaps for their ignorance, that when they leave their computer systems near places where it is directly exposed to rain, sun or high-humidity. The consequences are too detrimental to the computer components and treat to both software and data stored on such computer system. As a matter of fact, the components are damaged and become rust.

Some users convert their computer tables to dining table where they wine and dine. Not knowing that food remnants

do attract termites, cockroaches, mice, ants and rats that can damage the components of the computer machine. Not only that, take for instance, a sachet of pure water or uncovered bottled water is placed beside your computer, and unconsciously you make the water spill over any of the computer components, by nature, when water has its way into the computer machine, the water will definitely bridge the components' circuits and cause the computer system to cease working. Considering the vital and other pressing jobs you have on your computer system, the avoidable mistake could lead to total loss of the computer files especially when those files were not already on an external backup facility.

4. Performing Housekeeping Routine on PC External Components

Before you begin cleaning, check around your PC for anything nearby that could raise its temperature, such as a heating channel or sunshine coming through a window. Always turn off and unplug the system before you clean any of its components. Never apply any liquid directly to any of the computer components. Use only recommended cleaning kits to clean your PC external components. Below are some common PC components and safety ways of cleaning them.

4.1 The case

The case is part of the computer components that holds all other parts of the computer system. At a regular time, you have to clean the case with very clean cloth especially the ventilation grill of any obstruction so as to keep your computer case sparkling. Compressed air is good for this, but one needs to be very careful so as not to end up blowing all the dust into the PC or its optical and floppy drives. Keep all cables firmly attached to their connectors on the case.

4.2 The Mouse

When a non-optical mouse gets dirty, the pointer moves erratically, this is noticed on the computer screen. When the erratic behavior of a mouse is confirmed, what you do is simple, unscrew the ring on the bottom of the unit with a screw-driver and remove the small ball. Then clean with care or scrape the accumulated dust off the two rollers in the ball's housing. After cleaning, put the ball back in its original position and screw it back and make sure that it is intact. Mind you, in case of optical mouse, contact your system engineer because they are all sealed up to hardly get in contact with any gunk.

4.3 The keyboard

As a regular cleaning routine which is good for the smooth running of your computer system, just turn the keyboard of your desktop computer system upside down and shake it well to clear the mess from between the keys. If the keys are noticed to be very dirty, use cotton-bud to clean in-between the keys until you are satisfied. You can as well clean your laptop keyboard using the latter method.

4.4 The Monitor

To keep your computer monitors clean all the time, do regularly wipe the monitor case and clear its vents of obstructions, without pushing dust into the unit. Clean the screen with a standard glass cleaner and a lint-free cloth. Many LCDs can be cleaned with isopropyl alcohol; check with your LCD manufacturer. Wipe your LCD lightly because the underlying glass is fragile.

4.5 The Printer

Just as you do in case of the monitor above, make sure that you clean your printers with clean cloth and probably with a recommended liquid, these components don't like accumulated dust. Apart from the physical neatness of the printer box, if your computer is having problems printing, try using the Printer troubleshooter to fix the problem. Make sure that your printer is connected to your computer, and it checks for common issues such as whether the printer has enough paper and toner to complete your print job.

To troubleshoot a printer, follow the steps below:

Start button=>Control Panel=>Find and Fix problems=>Use a printer.

Choose "Next" from the displayed dialog box, then click on the attached printer from the list of available printers from the displayed box. Although troubleshooters aren't designed to fix every problem, they are a useful thing to try first, as they can often save you time and effort.

5. Performing Housekeeping Routine on PC Files

Windows stores computer files on hard disk drive in rows of adjoining segments, but over time, the disk fills up and the segments become scattered making the files slower to be accessed by the users. In order to avert the delay in accessing your files and keep your hard drive tidy, there are numbers of system software tools built-in already that can assist you with your routine housekeeping. Software tools such as Disk Defragmenter and Disk Cleanup can be found from Start Menu=>Programs=>Accessories=>System Tools.

6. Disk Defragmenter

If you use your computer daily, your hard disk will have many number of files written to it, from when you add, change or delete a document to when you install or remove an application. This data has to reside on the hard disk, and these files are not always written closely, making the job of your hard disk to read the files, less efficient. Disk Defragmenter tool, when run on the system, checks on your hard disk and sorts all the data into contiguous blocks, making it easier and more efficient to read, thus speeding up overall access time of files and applications. Therefore, Disk Defragmenter tool should be run at least once in a month as a matter of headway to improving the efficiency of your computer system.

7. Procedures for Running Disk Defragmenter Program

StartMenu => Programs => Accessories => System Tools.

1. Under Current status, select the disk you want to defragment.
2. To determine if the disk needs to be defragmented or not, click Analyze disk. If you are prompted for an administrator password or confirmation, type the password or provide confirmation. Once Windows finished analyzing the disk, you can check the percentage of fragmentation on the disk in the Last Run column. If the number is above 10%, you should defragment the disk.
3. Disk Defragmenter might take from several minutes to a few hours to finish, depending on the size and degree of fragmentation of your hard disk. You can still use your computer during the defragmentation process.

8. Disk Cleanup

Each time you install an application, download something from the Internet or received a software update, files are copied to a temporary directory on your hard disk. This can use up valuable space with data you no longer need. Disk Cleanup helps to remove this unwanted data by scanning your hard disk and providing you with a list of items to remove.

It is strongly recommended that Disk Cleanup be run also once in a month, or whenever you have installed a number of new applications. This will definitely go a long way preventing file redundancy on the Disk.

9. Running the Disk Cleanup Program

There are two approaches to cleaning unwanted files from the disk. These are tagged: Manual Disk Cleanup and Automatic Disk Cleanup. Only the former one shall be necessarily treated here.

Manual Disk Cleanup Approach

Follow the steps below to cleanup your disk so as to enjoy good performance on your system.

Click Start => All Programs => Accessories => System Tools => click cleanup.

When selected, Disk cleanup searches for files to be deleted and calculates how much disk space that can be saved/ freed. Choose the files to delete by placing a check mark in the check box next to the file types listed

Click OK, and then YES to finish deleting the selected files.

10. Housekeeping Hints

The following are some housekeeping hints which if taken into practice shall go long way optimizing the good performance of your computer system as well as increasing its life span.

- Don't charge cell phone on the computer USB port.
- Don't eat food on the same table where your computer system is placed.
- Don't put cup-full of water, sachet of pure water or bottled water close to where your computer is placed.

- Don't smoke cigarette when you work on your computer system. (although nobody smokes in the office, but in case you are on your laptop at home or an hotel).
- Don't expose your computer system to direct sunlight or heat channel.
- If by location, your computer is placed very close to your office window, make sure you close the window each time you close at work.
- Use recommended dust-cover to cover your system before leaving the office every day.
- Don't move your computer system around indiscriminately while the system is powered on.
- Empty your recycle-bin periodically to get rid of trashes.
- Don't allow foreign CDs or flash disks as a means of transferring files to your computer.
- Always close your blue tooth after use.
- Don't receive from untrusted computer through blue tooth.
- Don't open untrusted e-mail attachment.
- Don't down load just any junks from the website.
- Remember to shut down your system and unplug from main electric socket before closing at work.
- Don't practice the operation you are not sure of on your system, instead request the quick response of the College maintenance crew.
- In case of laptop, don't wait until the battery goes flat before you shut the system down especially when there is power outage.
- Don't put heavy load on your laptop.

11. Conclusion

Housekeeping routine, just as the name suggests, when performed on a regular basis will no doubt enhance the optimal performance of your computer systems and make your computer components appear neat and tidy always. By discarding trash that might constitute redundancy on your precious hard drive and even program folders you no longer run, you are relieving your computer of junks which could cause your computer an access time delay.

By this paper, you would have had your orientation changed about the old fact that you cannot attend to teething problems you often encounter on your computer system without necessarily calling on the maintenance crew. And that you would take precautions against common mistakes you often undermine which had in the past caused a lot of havocs ranging from viral infection to loss of voluminous data on your computer system.

Prevention, they say, is better than cure. Therefore, preventive maintenance approach is much cheaper than corrective measure. Consequently, let us all rise up to prevent our office equipment with which we earn our livelihood. When you allow your computer to get spoilt as a result of poor preventive maintenance, then you should be prepared to face the costly down-time it will take to bring it back to live.

References

- [1] Computer Care and Housekeeping Tasks.
<http://Support.microsoft.com/kb/305478>. Retrieved on 15/06/2012.
<http://www.1computer care.co.uk/housekeeping.html>
- [2] Deborah Morley & Charles S. Parker: "Understanding Computers – Today and Tomorrow" USA. Thomson Course Technology. 2007.
- [3] George Beekman . "Computer Confluence – Exploring Tomorrow's Technology". (Standard Edition). USA. Prentice Hall NJ. 2002.
- [4] Gary B. Shelly, Thomas J. Cashman & Misty E. Vermaat . "Discovering Computers Fundamentals". (fourth edition). USA. Thomson Course Technology. 2008.
- [5] Hewlett-Packard Company: PC Trouble Shooting and Maintenance, USA, Cupertino, CA 95015-4010. 2005.
Kyle MacRae: Haynes Computer Manual – The step-by-step guide to Upgrading, repairing and maintaining a PC. UK, Haynes Publishing 2004. 2006.