

***Suitable Work Environment:***

The working environment to work in while operating on a computer system should have enough room, light, clear work desk space, enough room space and dust free inside of the computer system, which all of these were met when we did the task. We also turned the computer system off when operating inside the computer system, to avoid any dangers of electric shocks and to any damage to the computer components. The only tool we used as a group was the screwdriver when operating, unscrewing and screwing the screws of the components. We wore ESD wrist bands and connect the clip to a metal object that is related to the inside of the computer system to avoid self-damage on the components. The environment was suitable for carrying out the work.

***Repair of Faults:***

After operating but failing to get the computer system to work when turned on with a blank screen a beeping sound, the beeping sound was informing us of errors and needed RAM to work the system, as the old RAM that has been used has been damaged and needed replacing with an undamaged one and facing the right way. After installing RAM, the issues had been resolved which allowed the computer to work the next time. We also fixed an unplugged cable to the CD/DVD drive, which the plug wasn't connected to the component when we first entered inside the system and first operated.

***Installation of Hardware:***

As a group we installed two sets of RAM to resolve an issue were the computer showed up with a blank screen and beeping sound when turned on and when the old component appeared to be damaged. Hard drive installed for more memory to be stored in storage.

***External Device:***

A printer installed as a peripheral device, setting up the printer in printer settings in control panel and then test the device by printing, resulting the device being successful when we managed to print a piece of paper out.

**Test Table:**

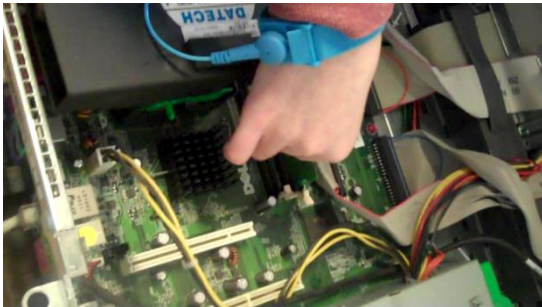
<b>What You Are Doing?</b>	<b>Method?</b>	<b>Expected Outcome?</b>	<b>Actual Results:</b>	<b>Corrective Action:</b>
RAM	Listen to number of beeps. Check device.	To hear no beeps, no repeated errors and amount of RAM increased.	Computer system not working, still beeping.	The RAM used is damaged and needed replacing with an undamaged one and facing the right way.
Hard Drive	Installing a higher memory and newest technology.	More memory to store.	Hard drive installed and more storage.	N/A
Printer	To actually use the printer when the cables are plugged in place.	That the printer in printer settings in control panel is there. To have the printer to function correctly.	Printer setup up and working.	N/A
Installing a Restore Point	In the control panel pop up, then into the System and Security category and then click onto System to a pop up which will then carry you through the process of installing a restore point.	Restore point to appear to be installed in the control panel.	Restore point viewed as installed in the control panel.	By view the control panel to see if the restore point you have installed is there.
Installing CD Software	Double click on disc in computer going through the process of installing with success, with no errors.	The software to be viewed installed as an icon in the desktop or in a folder.	Software already installed.	Check by opening the software and seeing if it runs by itself.

**Back-Up of data:**

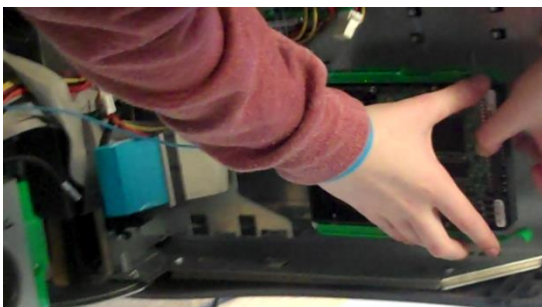
Backing up data by copying files from your computer onto a device such as: USB sticks, USB hard drives, portable hard drives, solid-state drives, etc. It is important to backup before you start the operation of installing devices. To avoid files being lost, as the data would be lost if the computer is broken or interfering with the inner components and never get the data back without setting up the backup. The sort of data would need backing up is any important files and software, as the software comes with the files. The sort of files that estate agents would backup is letters to clients, informative documents, photographs of properties, excel documents of values of properties and sales.

**Restore Points:**

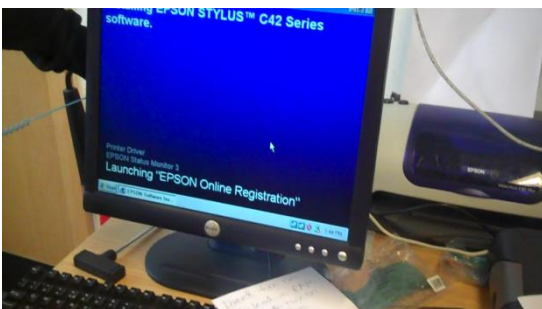
Restore points are stored states of a computer's system files. Using restore points to restore a computer's system files to an earlier point in time. It is important to set restore points before you make any changes to a computer that could cause problems or make the system unstable. The settings needed in restore points are the recommended restore and the different types of restore points when creating a restore points. Selecting 'Recommended restore' and selecting 'Choose a different restore point' while creating a restore point.



RAM- Installing the second set of RAM after I installed the first one, to replace the old damaged ones. Connecting my ESD wrist band to the metal outline of the inside of the computer.

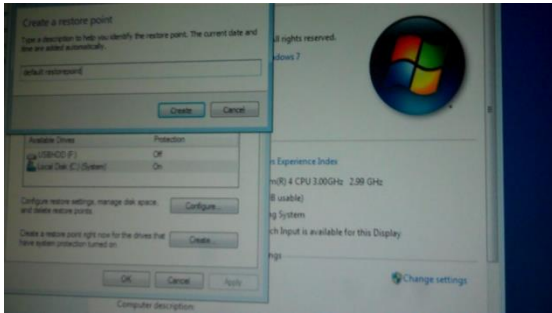


Hard Drive – Still wearing an ESD wrist band while installing a hard drive.

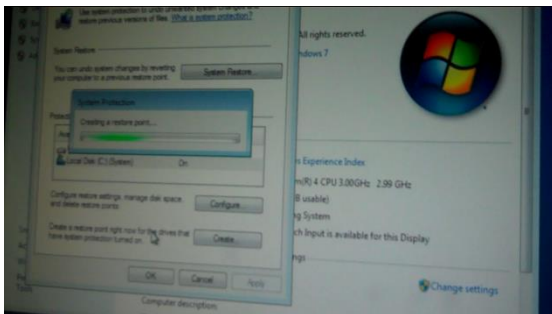


Printer – An external device installed, as the printer is shown on the right hand side by the computer monitor.

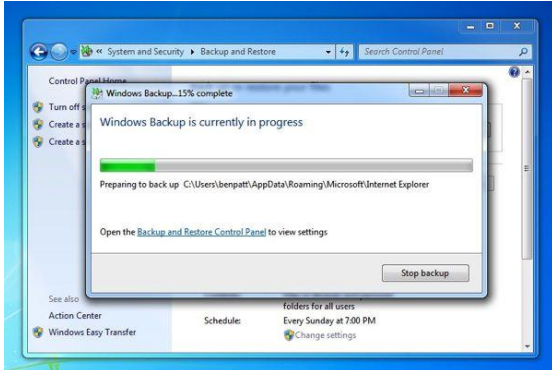
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Assignment 3 Installing, maintaining and testing hardware



Restore Point – Creating a restore point.



Restore Point – Restoring a point. The restore point's feature should be used as if the computer systems changes, you can use a restore point to restore files saved from the last restore point back to the computer system. If you were to reinstall the computer system and no restore points have been made, all of your files would be lost.



Backing up data – Backing up data in process, onto a device. It is important to have a backup, in case the computer system changes or breaks down. To save your files, especially work files.

**Feedback:**

The computer system that we have installed, the two components, the external component, installing a restore point, installing CD software and backing up data. Installing a higher capacity hard drive to require more memory, more storage for files. Replacing the two damaged sets of RAM with new ones to run videos, to multi-task between using the programs including word processor, spread sheet, movie maker, virus software and other Microsoft office programs, to improve performance in graphics and software programs, used for long periods of working and to improve the speed for certain applications. Installing CD software to edit videos, pictures and sound for multimedia presentation purposes, producing large number of documents. Creating a backup so the employees don't fall behind their work scheme. Creating a restore point to restore employees' files if any computer systems has changed and broken down. A printer to print their work out for business purposes, being able to provide the customers' needs through leaflets, posters, letters, flyers and business cards. So the system does meet nearly all of their requirements apart possible internet problems, as we didn't test the internet fully, but have tested the functionality of the internet. As the employees require resources from the internet for their work projects.

The installation and maintenance has improved performance, greatly. The system wouldn't boot up, it had error messages. We installed RAM to solve the error messages, installed a hard drive to boot up the computer system, installed the CD software for office programs; restore points and backup to save files from occasionally losing them to any changes or damages to the computer systems. After we installed the CD software, we went on one of the office programs: movie maker after downloading videos from the internet and played the videos and editing them, the CPU system performance was between 44%% while playing 6 seconds to 29 seconds videos and between 0% and 4% while the videos aren't playing.

The tasks were carried out efficiently, we able to run and edit pictures, videos and sound in movie maker, typing in word documents including excel, word, presentation, publisher and many more. After we installed the restore point the restore point was there in the computer settings folder, after backing up data on a USB stick we saw the files on our USB stick, the computer is functioning well after we installed the components, managing to print out paper after we installed the printer and the internet is working decently after testing it. There were a software problem in movie maker as you had to wait for the bottom green bar to load, waiting an extra while longer for the videos to function without lagging. The system performed at a fast enough speed to multi-task.

#### ***Further Refinements:***

Further improvements could be carried out to the system in the CPU system performance, specialist cards, virus software and de-fragmentation. Improving the CPU usage performance and increasing its speed by installing specialist cards for higher quality, installing virus software to contain and protect the computer's data and running de-fragmentation for faster performance, less boot times, less random crashes and less freeze ups and being able to access files easier.

These refinements solve the viruses that would inflict on the computer, certain files that can be hard to access to, rapidly boot times, random crashes, freeze ups. You could also install another set of RAM chips to increase the speed, the memory and to solve errors messages more frequently. The specialist cards solve the speed and quality of the graphics, sound and the network. Creating a higher graphic standard for videos, pictures, animation and in computer appearance, sound for audios, especially in movie maker and the network is especially important for the best of resources for work purposes. Also replacing the spindle motor rotation with the actuator motor rotation to pick up more data and improve the quality of video, sound and graphics when a DVD or a CD is placed into the device. Replacing the motherboard to collect more power and data to function more accurately. Replacing the printer with a new modern one for higher quality printouts to improve their business's promotion.

#### ***Review of Installation and Recommendations for Further Improvements:***

Client Requirements:

- Run and edit videos and pictures. Sound for website and presentation purposes.
- Loads of storage for files.
- Require access to a printer and print out work.
- Produce large number of documents such as word processor and spread sheet. Produce records of customers within the company database.
- Protect computer data.
- Easier access to files, less boot times, less random crashes and less freeze ups.

- Dusting components including fan and cleaning for no faulty problems with the computer system.
- Cables plugged to meet the computer working standard.

Nearly all, except from two of the requirements that haven't been met. An anti-virus program to protect the data and the de-fragmentation for easier access to files hasn't been setup to run on the computer system. An example of how the work has been completed is the RAM being replaced and installed after beeped errors for the computer system to operate and function and to install and set up the printer and managed to print out a paper sheet.

The evidence that all the requirements apart from the protecting computer data and easier access to files, etc, have been met is the Microsoft programs and movie maker for editing videos, pictures, sound, and produce. RAM has been installed for storage of files of large number of documents. The printer has also been installed and setup for printing. All components have been cleaned and the cables all plugged in.

The two requirements that weren't met: Anti-virus program and de-fragmentation. The plan was designed to protect computer data and easier access to files, to have less boot time, less random crashes and less freeze ups for work purposes and to multitask while working. To have no viruses to inflict on the employees' data of work and no viruses to inflict on the computer system, as it can make an impact on employees falling behind their work schedule.

***Evaluation:***

The plan met the Microsoft office programs from an installation of a software CD such as word processor, spread sheet which would produce records of customers within the company database, movie maker to run and edit videos and pictures and power point for presentation purposes, setup printer and access to the printer to print out work based paperwork, replacing and inserting RAM and a hard drive to require loads of storage for files and a network specialist card for sound on the internet. The client requirements against the modification which all has been met.

The aspects of the original plan that were altered were to install specialist cards, virus software, cleaning and de-fragmentise the computer system to speed the computer up and to have the data more readable but wasn't included in the final stage. We were meant to use these tools: nut drivers, pliers, cutters, strippers and head-mounted lamp/adjustable clip-on light when operating on the computer system to replace and install components but it was altered only a screwdriver and an electrostatic discharge (ESD) wristband.

These changes were made because of time limit that we had to install RAM, hard drive, printer, restore point, CD software and check cables. We didn't have any time left to install specialist cards, virus software and de-fragmentation. We didn't clean inside the components because we didn't felt that it would be needing cleaning and we only used a screwdriver and electrostatic discharge (ESD) wristbands as there was no need for other equipment for replacing and installing components.

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The plan could be effective with a longer time period to install specialist cards, virus software and de-fragmentation by extending the operating hours and speeding up the whole process.

The improvements I would recommend is the specialist cards to improve the video, sound and network quality so you are able to run videos, edit videos, edit pictures and edit sound for website and presentation in a clearer vision and sound. Virus software as a benefit for work purposes so that virus doesn't evade their data which could effect and possibility destroy their work data, especially loads of storage of files and large records of customers within the company database. De-fragmentation would also have improved the speed of the computer system and improve the readability of data.