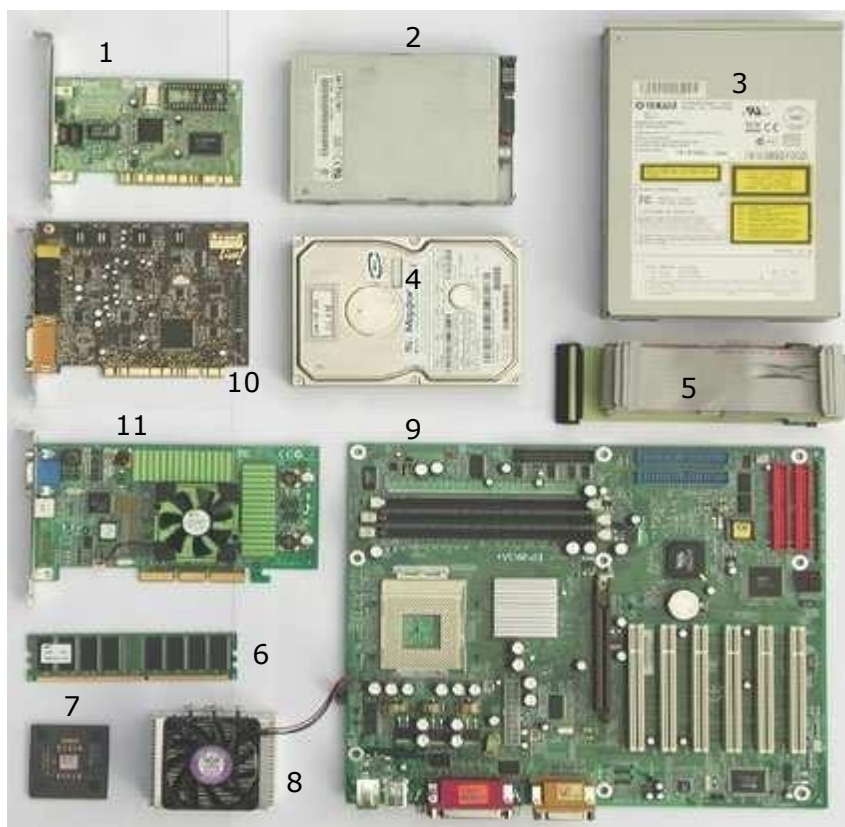
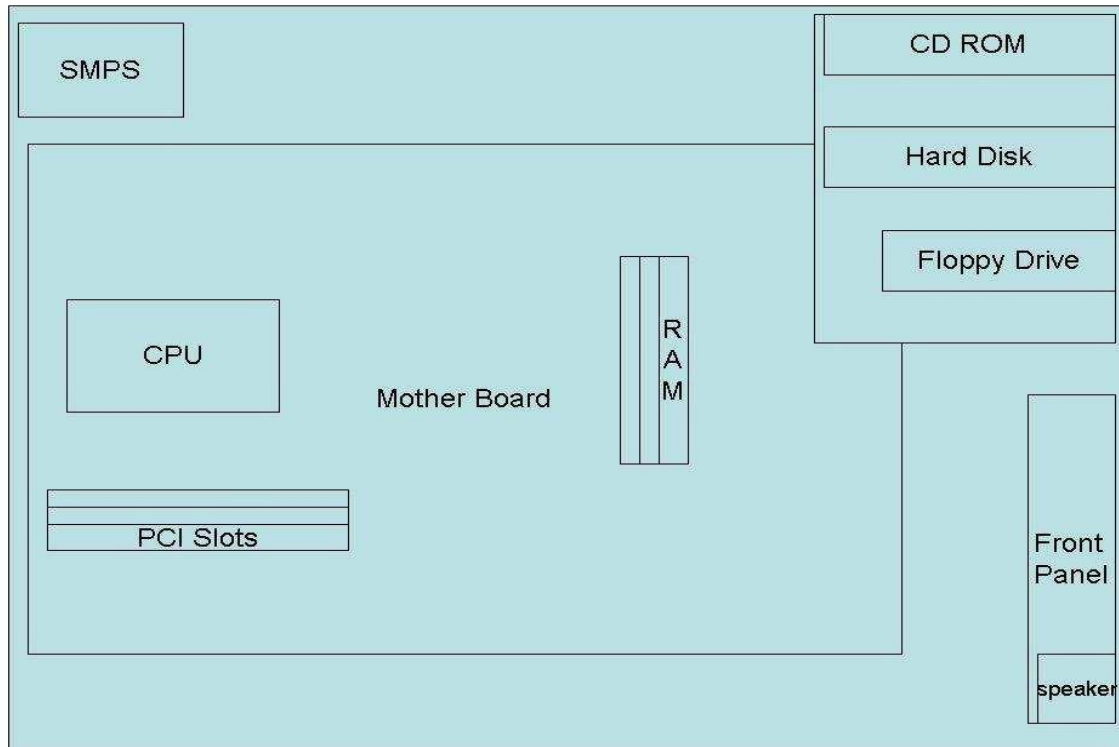


Task 1:

Identify the peripherals of a computer, components in a CPU and its functions.



1. Network Adapter Card
2. Floppy Disk Drive
3. CD-Rom Drive
4. Hard Disk
5. Ribbon Cables
6. RAM
7. CPU
8. Heat Sink/Cooler Fan
9. Mother Board
10. Sound Card
11. VGA Card

- **MOTHERBOARD**



The first thing you will need to purchase is called the motherboard. Motherboards come with variations such as the type of processor they can use. There are two types of standard processors. the first is the "socket" processor which fits directly on to the socket on the motherboard. The second is the slot type processor. This type of processor is seated within a special carriage which in turn sits in a slot in the motherboard. either one is acceptable, however the "slot type" processor requires a few extra setup steps. Try to find a mother board that will fit the standard ATX chassis.

- **CPU (Central Processing Unit)**



Don't allow this to intimidate you. The CPU is the most vital component in the PC. This is the main calculator of the entire system. It tells other components what to do and when to do them. Basically the CPU is nothing more than an extremely fast, math calculator. The CPU is paired up with a heatsink (a piece of aluminum, milled with many deep peaks and valleys that disperse excess heat) and a CPU fan which pulls air across the peaks and valleys of the heat sink. The fan and heatsink are absolutely necessary to the operation of the computer you are going to build. Make sure you choose a processor that will fit the motherboard you are buying.

- **MEMORY**



Memory is vital to the operation of the computer. Memory comes in a lot of different forms. Here is an overview of the what kinds of memory are available.

✚ **RAM** (*Random Access Memory*)

This is the basic form of computer memory, which can be accessed randomly. In other words, data can be read from or written to any byte of RAM, regardless of its position.

✚ **DRAM** (*Dynamic Random Access Memory*)

This is the type of memory that is most widely used in PCs. DRAM must be continually refreshed or it will lose its state (on/off), making it slower than SRAM.

✚ **SRAM**(*Static Random Access Memory*)

This type of memory is faster and more reliable than DRAM because it needs to be refreshed less often, but it is more expensive and requires more power.

✚ **SDRAM** (*Synchronous Dynamic Random Access Memory*)

This type of memory brings about yet another speed improvement: it can be clocked at higher speeds than BEDO DRAM. SDRAM synchronizes itself with the processor to match bus speeds, but only up to about 100 MHz. PC-100 SDRAM refers to SDRAM running at 100-MHz bus speed; PC-133 SDRAM runs at 133MHz bus speed.

✚ **RDRAM** (*Rambus Dynamic Random Access Memory*)

This type of memory can deliver data at speeds of up to 600 MHz. Currently, RDRAM is only used in certain high-performance graphics workstations, and it is also used in the Nintendo64. Intel is licensing RDRAM technology for its future motherboards, but this type of memory requires a special motherboard architecture. Rambus DRAM is a type of memory that can run about three times faster than typical SDRAM. The most current versions support bus speeds between 600 and 800 MHz, which is why RDRAM is often identified as PC600, PC700, or PC800.

- **CHASSIS**



Choose a chassis with room for expansion such as an ATX Mid-Tower or ATX FullTower. Another important part of your chassis is the size or wattage of the power supply. The switching power supply runs on 230 volts AC (alternating current) and converts that voltage into 12 volts DC (direct current) and 5 volts DC. The power supply makes the voltage coming through your wall outlet usable for the components

inside. A power supply under 250 watts, is not recommended, however some power supplies can go up to 500 watts. Try to find a chassis with a power supply already installed. Computer chassis come in different colors and designs. Most newer cases have a sleek design on the front visible panel and easily removable side and top covers.

- **DATA STORAGE**



The Hard drive is vital due to the fact that it will contain your operating system and other files necessary to run your computer. Your hard disk drive (ATA hard drive) is an enclosed electronic device that stores randomly accessible data.

The "hard drive" gets its name from the part that actually stores information: a rigid disk called a platter, which is rotated by a motor. To increase storage, most hard drives feature two or more platters. Information is written to and read from the platter by a read/write head, located in the head stack assembly. An actuator arm holds this assembly in place. In turn, the actuator arm is positioned by upper and lower magnets, also known as mag plates. The mag plates control the movement of the actuator arm across the platter surface. This movement, along with the spinning of the platter, gives the read/write head access to specific locations on the platter.

- **PORTABLE DATA STORAGE**



Other types of data storage devices are also important. The Floppy Disk Drive is the means of quickly storing up to 1.44 Megabytes of information on a single removable disk.

The Basic CD-Rom drive can only read compact discs with data written on them. No information can be transferred to this type of device. The CD-ROM and CD-RW are Compact discs that data can be stored upon. The Difference between CD-R and CD-RW is that CD-R's can only have data written to them once per their life span. The CD-RW can be written almost an infinite amount of times during it's life span which is about 10 years before the date written on the disc becomes corrupted due to the elements.

- **EXPANSION CARDS**



Before we begin, check to see if your motherboard is equipped with integrated onboard video, audio, lan, or a modem. If your motherboard already has these features, you will not need to buy the expansion cards.

- **VIDEO CARD**



The computer video is the first thing that you can see when the computer boots. Choose a high quality video card with at least 32 Mb of video memory and a high refresh rate such as 100hz. There are essentially 2 types of video cards available. The first is AGP (advanced graphics port) which fits into the AGP expansion slot on the motherboard. By using an AGP video card, video performance is greatly increased due to the fact that the motherboard bypasses some processes that would slow the video speed down otherwise. The second is a PCI (Peripheral Component Interconnect). This type is usually sold, but not recommend. They cannot reach the pinnacle of the speed an AGP card can.

- **SOUND CARD**



The sound card is not a necessity but it is important if you plan on using your machine to listen to music, watch movies, or play games. Purchase a sound card that meets or exceeds your personal requirements. Creative Sound Blaster card offer great sounding audio and come with many features not available on cheaper cards.

- **NETWORKING and MODEMS**



If you have future plans on adding your new computer to a network, you will need a Network interface card (NIC). These cards are readily available from most electronic stores. They are generally inexpensive depending on the brand. Linksys or D-Link is a good reliable card.

Modems are means of connecting to the internet through a telephone line. Though the technology is nearly obsolete they are still the most popular means of connecting to the internet. Internal modems are also fairly inexpensive. Choose one to suit your needs.

- **OPERATING SYSTEMS**

Before building your new computer, you need to choose an operating system. Microsoft is the most popular, however there are others available, such as Linux Mandrake. Microsoft has been the leader in GUI (graphical user interface) operating systems since the 1990s. Take your pick from today's operating systems: Windows 98, Windows Millennium edition, Windows 2000, Windows XP (the most recent OS by Microsoft).

- **DEVICE DRIVERS**



After you install or add hardware to your system, your operating system needs to know how to run your devices. By installing device drivers, your hardware will work properly and functionally. I will go into more detail on installing device drivers later in the Steps of building, but it is important to know what they are and do. After purchasing your hardware, make sure it has the drivers disk or CD-Rom with it. If it does not, you aren't totally out of luck. Visit the Hardware manufacturers website and search for a drivers support or downloads section. Many reputable hardware manufacturers have these files available online.

Task 2

Assembling and disassembling of PC

ATX motherboards, AGP video graphics ports, USB Universal Serial Bus, RAM memory, CD-ROMs, sound cards, optical scanners, and modems/faxes.

PREPARATION

Computer motherboards and expansion cards contain very delicate integrated circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded anti-static pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power cord.

Assembling A Computer

After buying all the computer components they must be put together. This process is called assembling. It usually takes about fifteen minutes (installing not included). Although easy, it must be done carefully so as to avoid unnecessary damage to the system.

Materials Required

Make sure that you have all the below materials before starting.

1. All the necessary components (Although the all the below components are preferable, not all are necessary. Then necessary ones are marked with a *)
 - Processors
 - Motherboard
 - Hard disk
 - RAM
 - Cabinet
 - Floppy Drive
 - CD Drive
 - Cards
 - Display Card (Not needed if On-board display is available on Motherboard)
 - Sound Card (Not needed if On-board sound is available on Motherboard)

- Modem
 - Other Cards (If Any)
 - Monitors
 - Keyboard
 - Mouse
 - Speaker
 - UPS
 - Also keep the cables that came with the components close by
2. Philips head Screwdriver (also known as Star Screwdriver)
 3. Flat head Screwdriver
 4. Forceps (for pulling out jumpers and screws)
 5. Magnetized Screwdriver
 6. Multi meter (Testing)

Required Environment

Make sure that the following things are true of the room in which the computer is assembled/kept.

- Make sure that a flat surface of a good area is available when the system is assembled. Make sure that the room has enough space to move.
- See that the place where the Computer is kept is dust free as dust can harm the system.
- Make sure that the room has good ventilation and won't be very hot.
- Check the grounding in the plug to make sure that earthing is done properly.

Precautions

Before starting the actual assembly of the PC System, the following precautions would help you to avoid any mishap during the assembly process:

- While the motherboard has to be fitted at a fixed place inside the PC cabinet, the locations of add-on cards (as and when used) and the drives (hard disk drive, floppy disk drive, and CD-ROM drive) within the drives bay of the cabinet can be changed within certain limits. But it is better to place them far away from each other. (The length of the cable provided for interconnections to the motherboard has to be taken into account, as there must be some slack after these are installed and connected.) This will improve the cooling and reduce the chance of electro-magnetic interference between them.
- The motherboard contains sensitive components, which can be easily damaged by static electricity. Therefore the motherboard should remain in its original anti static envelope until required for installation. The person taking it out should wear an anti static wrist strap that is properly grounded. In the absence of a proper wrist strap,

you must make one on your own, using a peeled of multi-stranded copper cable and ground it properly. Similar handling precaution are also required for cards.

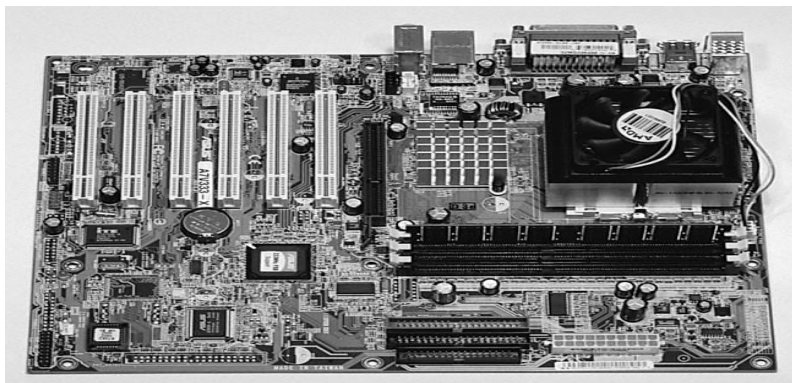
- Be sure to handle all the components with great care. If a small thing like a screw is dropped on the MB, it can damage the delicate circuitry, rendering the Main Board useless.

Procedure

Installing Motherboard

You need to determine if the case has the appropriate risers installed. Risers, or spacers, keep the motherboard from touching the metal surfaces of the case after it is installed, avoiding a short-circuit and a wrecked computer. Any new case will include some form of riser, metal or plastic. See the picture on Side for typical examples. They may or may not be pre-installed into the case.

Keep the cabinet panel on the table and fix the motherboard on it. A gentle pressure is enough to mount the Motherboard on it. There will be a mechanism to lock the motherboard in place. Identify its working and mount the motherboard accordingly. Tighten the screws on the motherboard to the panel.

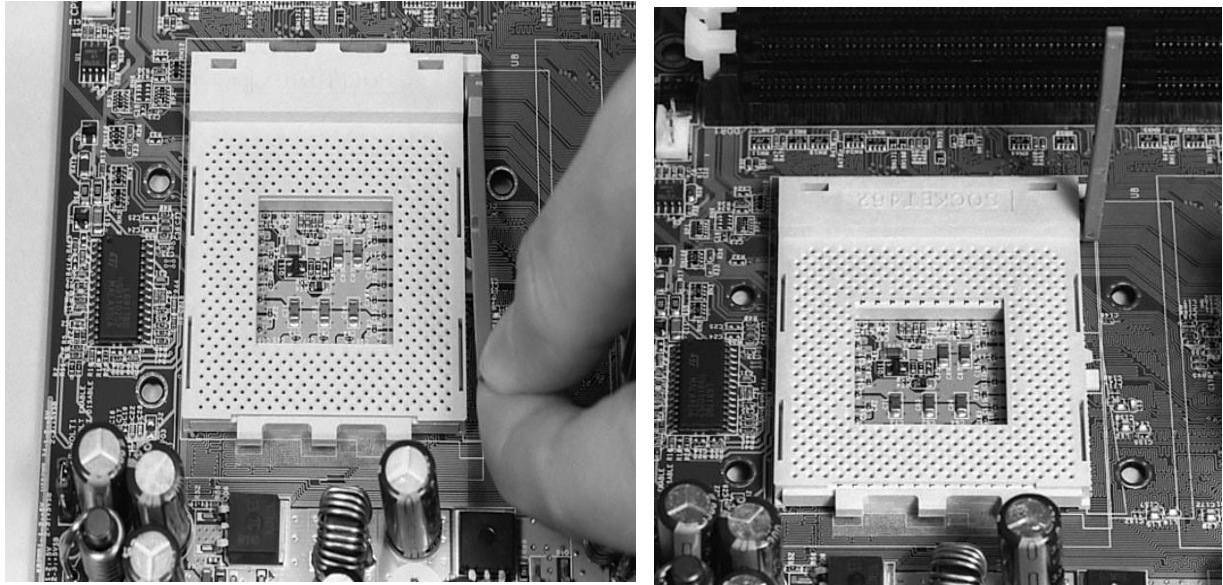


Placing the main board in the case

Handle the mainboard by the edges.

Fixing the Processor

Now gently lower the CPU into the ZIF (Zero Insertion Force) Socket. No pressure is required. If the CPU is placed properly, it will slide into the socket. Make sure that the Number 1 pin is placed correctly. If you cannot get the CPU to sit evenly DO NOT force it. After placing the CPU, lock the socket using the Locking lever.

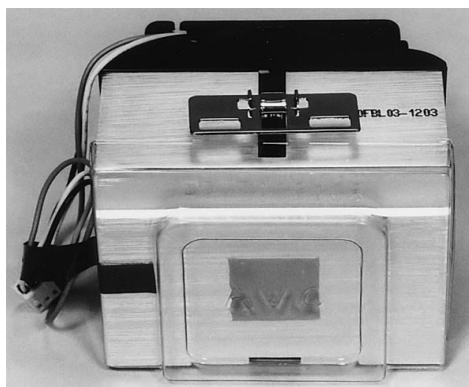


- ✓ **Raising the lift lever on the CPU socket:** There is a notch at the side of the lever. Pull the lever gently away from the socket to clear the notch. Notice that the pin holes at the top on each side lack a hole for the corner pin. This configuration prevents the CPU from being inserted in the wrong orientation.
- ✓ **The socket lever is fully raised:** You can now place the CPU into the socket. You just need to set the CPU into the socket and close the lever

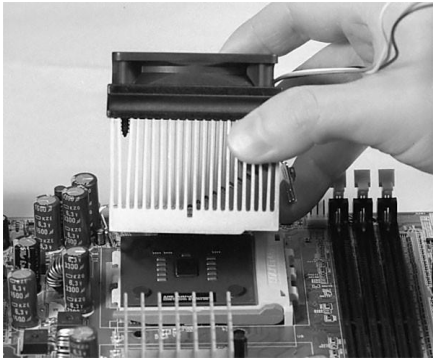
Now gently lower the CPU into the ZIF (Zero Insertion Force) Socket. No pressure is required. If the CPU is placed properly, it will slide into the socket. Make sure that the Number 1 pin is placed correctly. If you cannot get the CPU to sit

Installing the Heatsink/Fan

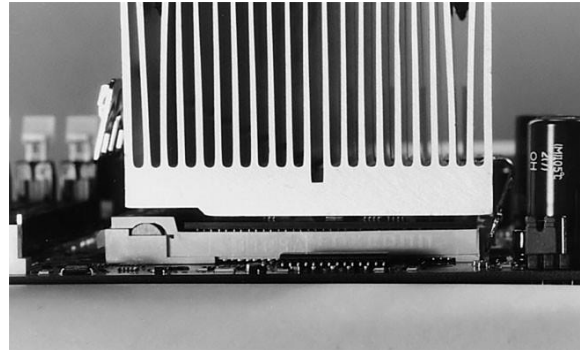
The next step is to install the heatsink/fan combination (a typical heatsink and fan are shown in Figure).



Apply the IC paste that comes with the processor to the bottom of the heatsink. Only a thin layer is necessary. This lets the heat that is produced in the processor to be conducted to the heatsink, which cools it. After applying the paste, fix the heatsink on the processor. Make sure that the locks of the heat sink are in place.



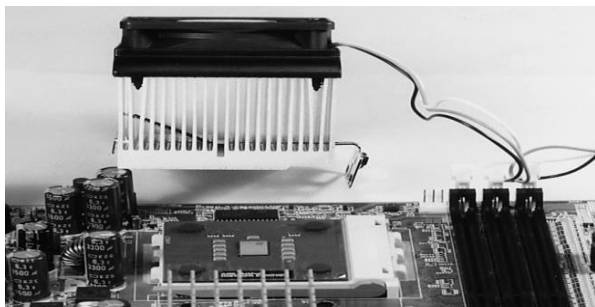
Placing the heatsink



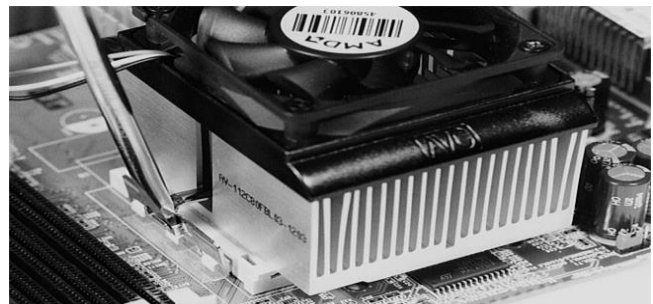
Heatsink sitting on CPU

Notice the notch in the heatsink at the the heatsink that matches up with the high left, which fits the raised portion of the end of the CPU socket. Be sure to install CPU socket. the heatsink in the proper orientation.

The heatsink clip is made of spring steel and its tension holds the heatsink firmly against the CPU



Heatsink Clip



Securing the heatsink

Looking through the fins of the heatsink, Be gentle and avoid putting unnecessary we see that the clip isn't symmetrical. force on the clip and the CPU socket. The point of the clip will push down on the CPU die when properly installed.

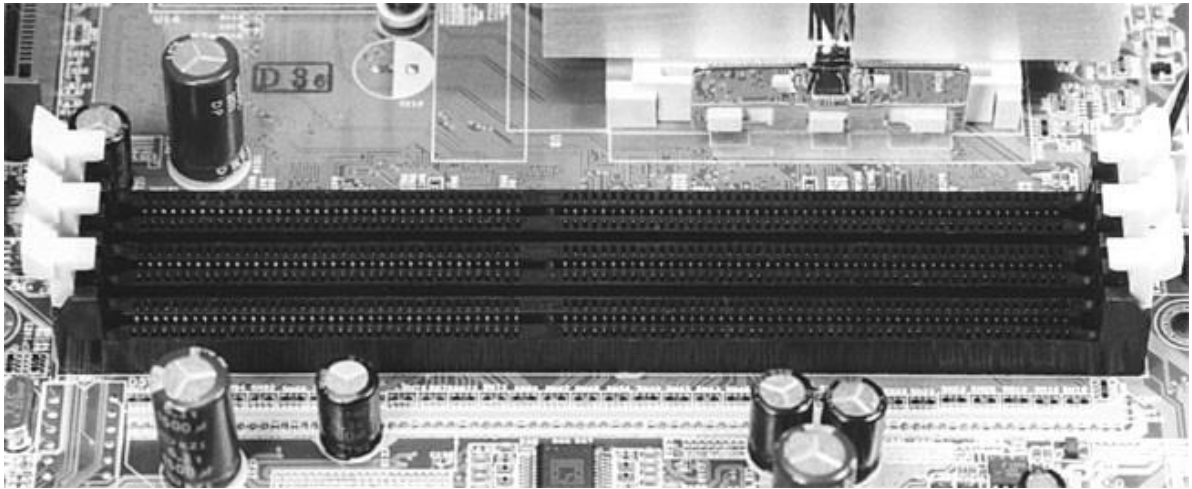
Use a flat-head screwdriver or "other appropriate tool" to secure the clip to the other side of the CPU socket. Place the screwdriver into the clip opening for it and gently push down and slightly away from the CPU socket, allowing the clip to clear the three notches of the CPU socket. Then, push the clip back toward the socket, engaging the three notches.

Installing RAM

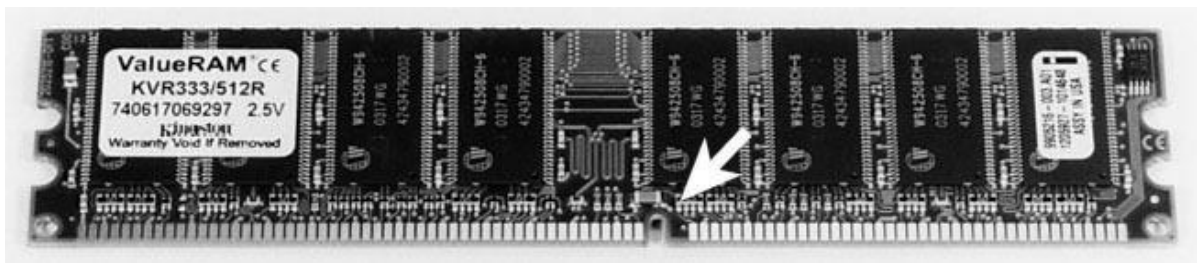
Keep the RAM module in the slot in the proper way and press downwards. Be careful not to jerk the RAM while pushing it down. See that the lock get hold of the RAM and stay in the locked position.

The ways of inserting the RAM will vary with different kinds of RAM. There are differentvary with different kinds of RAM. There are different

kinds of RAM like SDRAM, DDRAM, RDRAM, etc. Please refer to the section on RAMS for more details.



RAM slots (or sockets) on mainboard



RAM module notch

The RAM chip has a notch (indicated by the white arrow) to prevent inserting it in the wrong orientation.

Fully open the locking levers of the RAM socket. Each bank will have a lever at each side. Push the lever gently away from the RAM socket and down until it is fully open. it is fully open.

Now, pick up the RAM chip and place it over the RAM socket. Be sure that it's aligned in the proper direction. Press the chip straight down into the socket. If it sticks, you might find it useful to allow one side of the RAM chip to enter first, but try to keep the chip as nearly level as possible as you push it into place.



Inserting the memory chip into its slot

Align the chip and press straight down. Be sure to touch the metal of the PC power supply before picking up the chip to draw off any static electricity that may have built up on your hands.

When the RAM chip seats itself, the levers at the side should pop into position themselves, “locking” the memory chip in place. You shouldn’t need to touch these levers after opening them to insert the memory.

Connections

These are the list of cables that needed to be connected to the motherboard.

NAME OF CABLE	DEVICE CONNECTOR OF	NO OF PINS
IDE	Hardisk, CD-ROM	40
Floppy IDE	Floppy Drive	34
Power Cable For Motherboard	From SMPS to Motherboard	6x2 in AT and 20 in ATX
Front Panel Display	Speaker, HDD Indicator LED, Power LED, Restart	Different for each
Backside Connections	PS/2, USB, LPT, COM 1, COM 2, etc.	Different for each
Card Connectors	CDROM Audio cable, Onboard display to backside cable, etc	Different for each

Besides the cables that are shown here there are other cables like Processor Fan power supply, Power supply for devices like HDD, FDD, CD-ROM etc which are not connected to Motherboard, etc. All must be connected properly.

Floppy Drive

Ensure that one of the 3.5--inch bays in your case is open. If your cinch bays in your case is open. If your case came with rails e came with rails for the floppy drive, attach them to the sides of the drive and slide the drive into the them to the sides of the drive and slide the drive into the front of the computer until it clicks into place. Rails are small metal pieces that clip or screw on to the sides of the drive and allow it to be inserted and removed from the case with minimal effort.

Otherwise, slide the drive into the front of the computer until the faceplate of the floppy drive is flush with the front bezel of the case and the screw holes along the side of the drive line up with the case. When everything lines up, screw the floppy drive in securely on both sides.

Plug in the power cable (see picture to left) carefully, since it is quite possible to miss one of the connectors, which will quite possibly cause some damage when the computer is powered on. Floppy drive power connectors are keyed in most cases, but if tors are keyed in most cases, but if not, the red wire should be connected to the pin designated as 1 on the surrounding PCB.



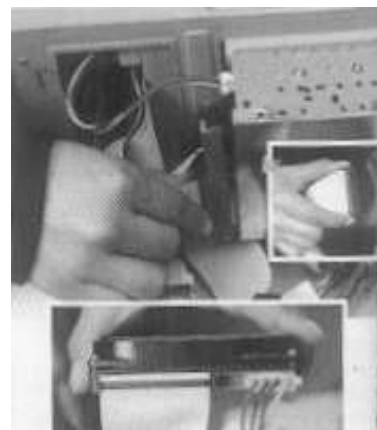
Ensure that the power connector is correctly lined up with all 4 connectors. The floppy(data) cable is keyed to only fit one-way.

Note that it is keyed the oppositeway to the IDE hard drive and CD drive, so that the red stripe on the cable should be facing the floppy drive power cable.

Floppy drive cables (IDE) are solid ribbon on one end, and the other has a small section of the ribbon cut and twisted around. Ensure you only attach the floppy cable as shown in the picture to the right.

Installing Hard disk

Ensure that the hard drive is set up to be the master drive on its IDE cable. Each IDE cable can support up to two IDE devices, such as hard-drives, CD-drives, Zipdrives, Zip Drives, Drives, etc., but in order for this to work, one IDE device must be designated as a master device, and one must be designated as a slave device. You cannot have two master devices or two slave devices on a single cable. This must be later configured in the BIOS.



Examine the top of your hard-drive. There should be a chart there depicting the necessary jumper settings to make the drive a master or slave device. Otherwise, the chart will be somewhere on the body of the drive. The set of jumpers will be on the the body of the drive. The set of jumpers will be on the back end of the drive. Ensure that they are set correctly to enable the drive as a master. You may need a set of tweezers to move the jumpers. Insert the hard drive into the 3.5" drive-tray and screw it in securely on both sides.

Installing Optical Drive (DVD/CDROM)

Ensure that at least one full sized 5.25" bay is open in the case. Examine the jumper settings on the top of the drive, as you did with the hard-drive. Ensure that drive. Ensure that the drive is set to 'master'. If your case came with rails, screw them to the sides of the CD drive and insert it into the front of the case until it clicks into place. Otherwise, slide the drive into the front of the computer until the faceplate of the drive is flush with the front bezel of the case and the screw holes along the side of the drive line up with the case. Then, screw it in securely on both sides. Attach the power cable (same as the hard-drive power cable) to the drive.. Attach your secondary IDE cable to each your secondary IDE cable to the drive. Note that generally this should be a regular 40-wire IDE cable, not wire IDE cable, not the 80wire UDMA IDE cable that is used for the hard-drive. Some DVD drives will use the 80drive. Some DVD drives will use the 80wire cable, however.

Set the jumper on the CD-ROM drive. Here you have a choice. You can either:

- Attach the CD-ROM to IDE connector 1 and make the CD-ROM a slave. In this case, you will set the jumper on the CD-ROM to "Slave" and attach the CD-ROM drive to the same IDE cable as the hard drive. Or,
- Attach the CD-ROM to IDE connector 2 and make the CD-ROM a master. In this case you will set the jumper on the CD-ROM to "Master" and attach the CD-ROM drive with a separate cable to IDE slot 2. In order to use this method, you will need a second IDE cable.

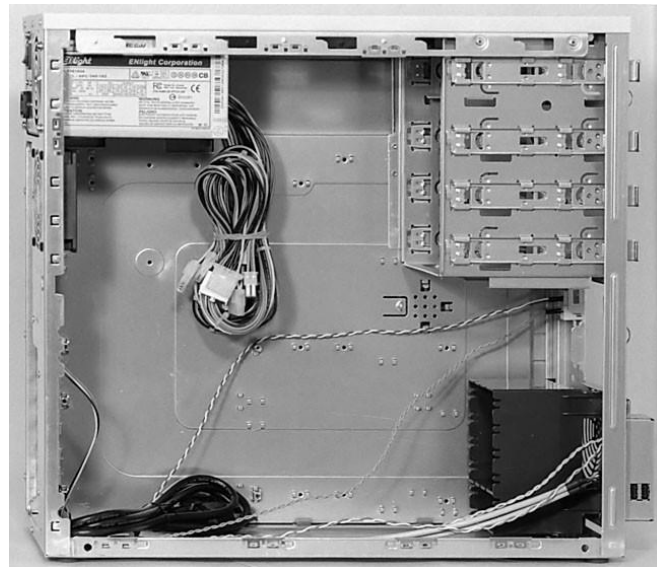
Connect the Sound Cable of the CDROM to the Sound Card so that the Audio CDs can work properly.



Front of case next to bezel

Power Supply

There are two main kinds of motherboards and Cabinets available today with reference to Power Supply - AT and ATX. They have different connectors. They are shown below. These wires come from the SMPS of the Cabinet. The figure on the right shows the Power cables coming out of the SMPS.



Inside of a new PC case

Power Connections

Identify the type of power supply and insert it into the right place. The AT cables must be connected in such a way that the black cables of both plugs with come together (See Figure to the left.)

Final Connections in the Cabinet

Connect the wires coming out from behind the face of your computer case to your motherboard. They control the on, off, reset, hard disk activity, and power switch. Every motherboard is different (See picture to the right).

Refer the manual with your motherboard. Most specify with 2 or 3 character paraphrases like "PWR SWT" which means Power Switch and "RST SWT" which means Reset Switch, etc.

Power Cables

After all these connections, connect the power cable of the Monitor to its place. Then plug in the power cable into its jack. Give the other end to a plug nearby. If a UPS is available, plug the power cable to the UPS and the power cable of the UPS to the Power plug.

Powering the System

Plug in the power cord and switch the power supply switch to the on position. Press the power button. If everything is connected as it should be, all system fans should start spinning, you should hear a single beep, and after about 2-5 seconds the computer start to boot.

Depending on the manufacturer of the Motherboard, you may get a splash screen, or just a memory check. The system will then halt with an error because we have yet to install an operation system. Now check the front LEDs to see if you plugged them in correctly. Also test the reset button. Power off and fix the LEDS if there are any problems.

I/O, I/O (In or Out of the Computer)

When placing the main board inside the case, it will be necessary to push the main board toward what's called the I/O shield (input/output shield) of the case.

The I/O shield usually has several metal fins sticking out toward the main board. Various connectors that are permanently attached to the main board will protrude from the I/O shield.

- The serial ports
- Parallel port
- PS/2 keyboard connector and
- PS/2 mouse connector
- USB ports and Firewire IEEE 1394 connectors are other connectors
- If you're big into video editing, you might want to select a mainboard with a Firewire port. Otherwise, you can purchase a PCI card that gives your system a Firewire connection.



The main board sits behind the I/O shield

The keyboard and other devices will attach through this I/O shield at the back of the case.

Closing the Cabinet

After all the connections are made inside the Cabinet, double-check all connections are secure inside the Cabinet, double-check all the wiring. Make sure all connections are firmly attached, and ensure that no wires are running close to connections are firmly attached, and ensure that no wires are running close to the top of the CPU heat sink fan. Then close the cabinet and screw it tight. Set it in an upright position (assuming it is a tower type cabinet).

Configurations

At the first screen press the Delete key to enter the BIOS setup. Review the BIOS settings. Here are a few that you may want to pay attention to:

- Time and date.
- IDE devices - Hardisk and Floppy Drive.Hardisk and Floppy Drive.
- Boot Order.

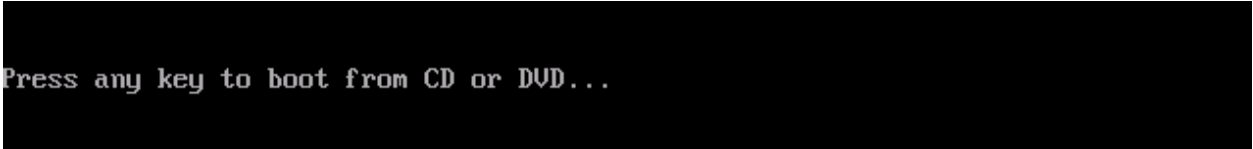
Finished

If there are no troubles, the system is ready. The operating system can be installed now. If some problems have appeared, read the troubleshooting guide for instructions to solve the problem.

Task 3

How to Install Windows 7

Step 1: Insert a DVD of Windows 7 Pro in your machine and restart it. When you are prompted to press any key, click Enter from your keyboard



Press any key to boot from CD or DVD...

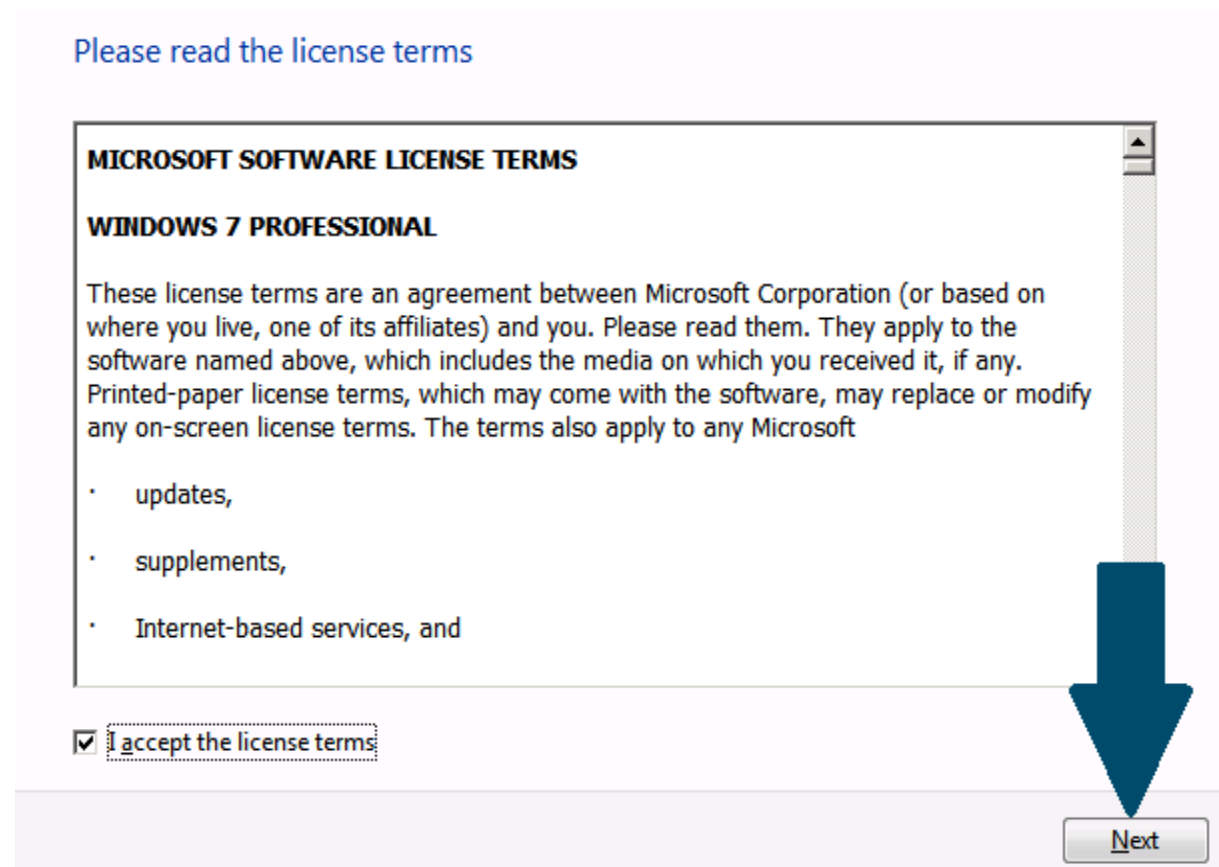
Step 2: Choose language, time and currency format, keyboard or input method and click Next to continue



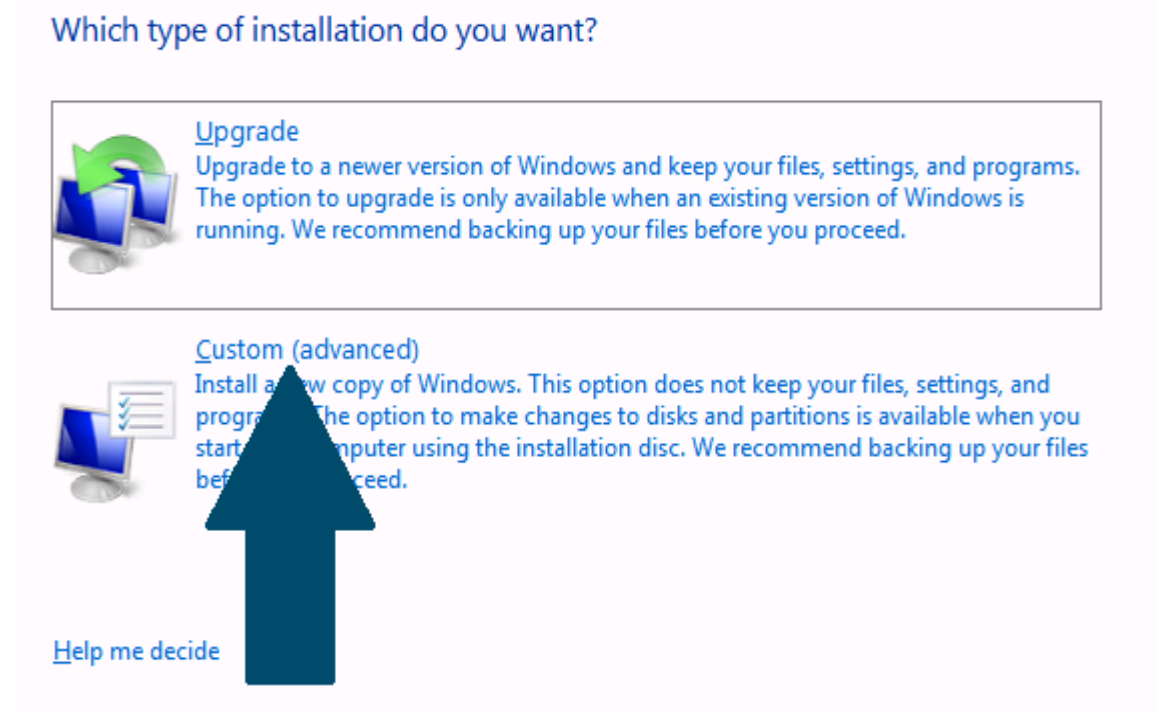
Step 3: Click **Install now** to start the installation.



Step 4: Read the EULA (End User License Agreement) and accept it. Click Next



Step 5: Click Custom (advanced) to install a fresh Windows operating system.



Step 6: At this point, you can create the partitions for your Windows installation. When you are done, choose the desired partition as target and click Next.

Where do you want to install Windows?

	Name	Total Size	Free Space	Type
	Disk 0 Partition 1: System Reserved	100.0 MB	86.0 MB	System
	Disk 0 Partition 2	19.9 GB	19.8 GB	Primary

 Refresh  Delete  Format  New

 Load Driver  Extend



Next

Step 7: Provide user name for your account and a computer name and click Next.

 **Windows 7 Professional**

Choose a user name for your [account](#) and name your computer to distinguish it on the network.

Type a user name (for example, John):

Type a [computer name](#):



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Next

Step 8: Provide a strong password and a password hint to be used in case you forgot your password and click Next to continue

Set a password for your account

Creating a password is a smart security precaution that helps protect your user account from unwanted users. Be sure to remember your password or keep it in a safe place.

Type a password (recommended):

••••••••

Retype your password:

••••••••

Type a password hint (required):

Client

Choose a word or phrase that helps you remember your password.
If you forget your password, Windows will show you your hint.



Next

Step 9: Click Use recommended settings.

Help protect your computer and improve Windows automatically



Use recommended settings

Install important and recommended updates, help make Internet browsing safer, check online for solutions to problems, and help Microsoft improve Windows.



Install important updates only

Only install security updates and other important updates for Windows.



Ask me

Until you choose, your computer might be vulnerable to security threats.

[Learn more about each option](#)

When you use recommended settings or install updates only, some information is sent to Microsoft. The information is not used to identify you or contact you. To turn off these settings later, search for 'Turn off recommended setting' in Help and Support. [Read the privacy statement](#)



Step 10: Choose the correct date, time and timezone according to your location and click Next

Review your time and date settings

Time zone:

(UTC-08:00) Pacific Time (US & Canada) ▼

☒ Automatically adjust clock for Daylight Saving Time

Date:

January, 2017						
Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

Time:



3:03:09 AM

Next

Step 11: Click Work network to finish setting Windows 7 pro on your machine.

Select your computer's current location

This computer is connected to a network. Windows will automatically apply the correct network settings based on the network's location.



Home network

If all the computers on this network are at your home, and you recognize them, this is a trusted network. Don't choose this for public places such as coffee shops or airports.



Work network

If all the computers on this network are at your workplace, and you recognize them, this is a trusted work network. Don't choose this for public places such as coffee shops or airports.



Public network

If you don't recognize all the computers on the network (for example, you're in a coffee shop or airport, or you have mobile broadband), this is a public network and is not trusted.

If you aren't sure, select Public network.

Task 4

Installation of Linux and dual booting with both Windows and Linux

Installing Ubuntu

First, you have to download the Ubuntu ISO image from its website.

Then either burn it to a DVD or create a bootable pen drive using Unetbootin. Then boot from the disc or pen drive. Then you'll be given options to Try Ubuntu or Install Ubuntu. So let's choose "Install Ubuntu" and proceed.

If you choose to try Ubuntu, you can experience Ubuntu from the CD even without installing. But expect loss in performance and support for graphics drivers in the Live CD environment. When you try Ubuntu, you can install from the Live session by clicking on the "Install Ubuntu" icon present on the desktop. It is recommended to first try if Ubuntu works well on your hardware before installing.



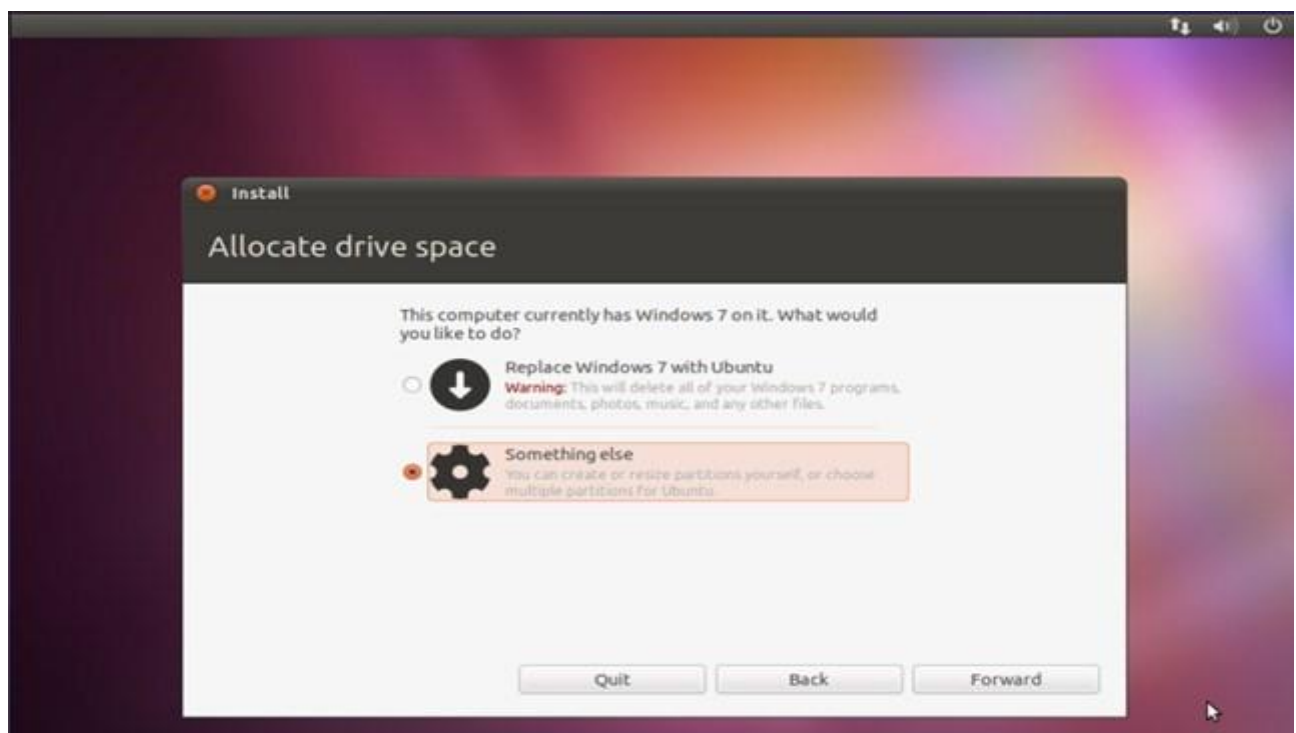
In the next step, you can check the boxes to automatically download and install updates and multimedia codecs during the installation process. This would require internet and can take longer if you have a slow connectivity. You can absolutely skip installing and install them after Ubuntu installation is complete. But without multimedia codecs, you won't be able to play proprietary media files like mp3.



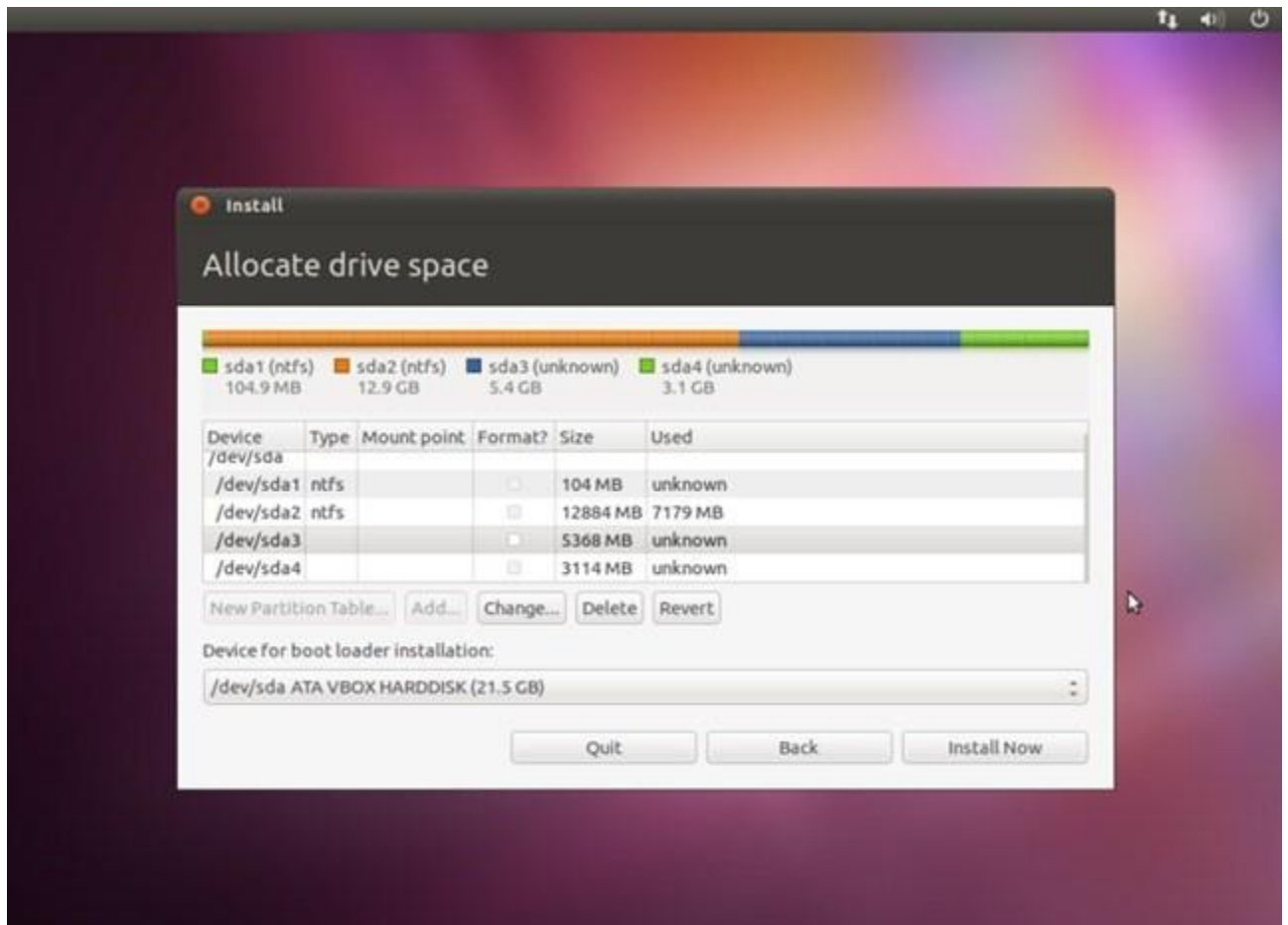
The next screen will give you different partition schemes. They may vary according to your condition. For example we had only two options. Generally, the options are,

1. Install Ubuntu Alongside Windows
2. Replace Windows 7 with Ubuntu
3. Use Entire Hard Disk
4. Something Else

To have more control over our partition scheme, we will choose “Something Else”.



The next screen will list all your partitions. You can create, edit, delete and format your partitions here. choose a partition to install Ubuntu. Ensure that the partition has no data on it as we are going to format it.



Select your partition and click “Change”. In the “Use as” field, choose “Ext4 journaling file system”. Check the box “Format the partition” and choose “Mount point” as “/”.

Linux was made in days when RAM was expensive and was designed to be able to run in limited RAM.

So if your RAM is less, says less than 1GB, you should create a SWAP partition in order to better utilise you Hard Disk memory in limited RAM. You need another partition to use as SWAP partition.

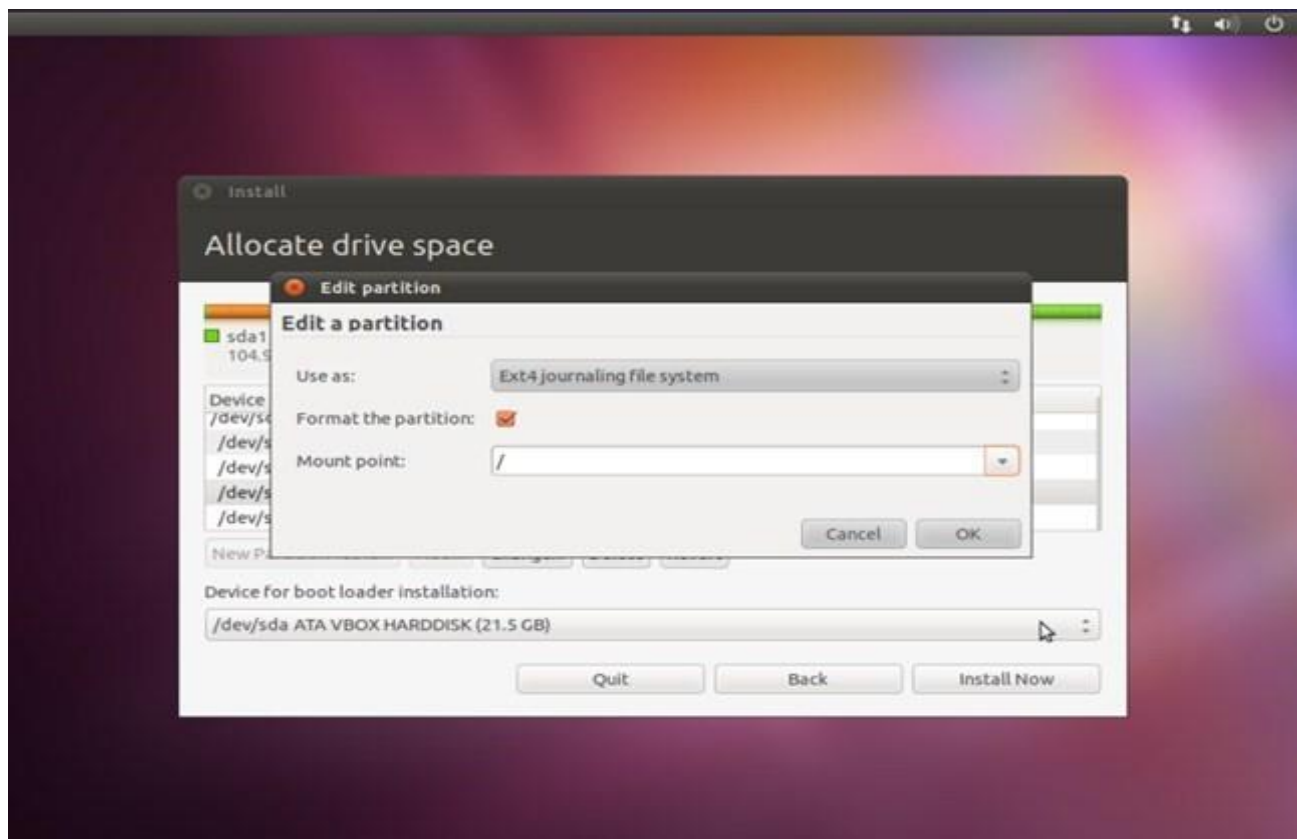
You normally need a SWAP partition approximately of size twice of your physical RAM. Say 2 GB in case of 1 GB RAM. Select the partition you want to use as SWAP partition and click “Change”.

In the “Use as” field, choose “SWAP”.

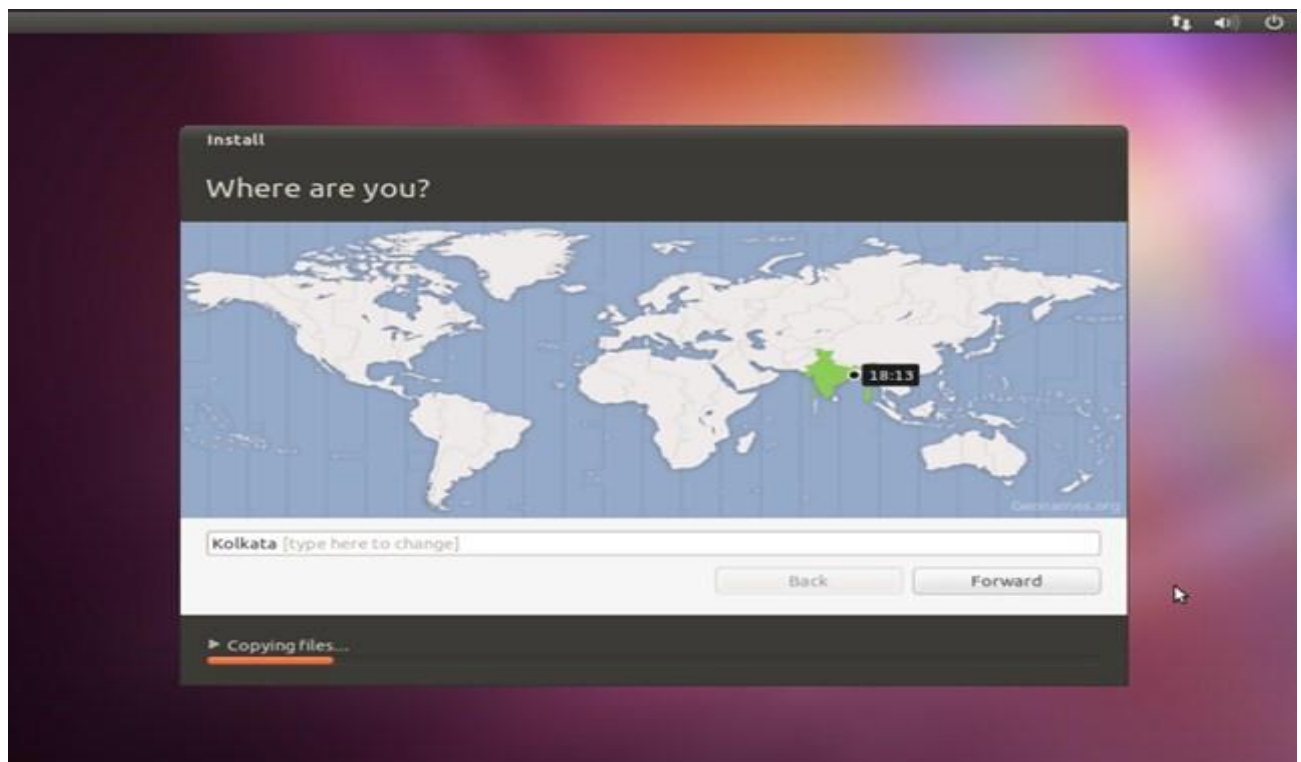
Remember that you cannot store any data in the SWAP partition.

Now click “Ok”.

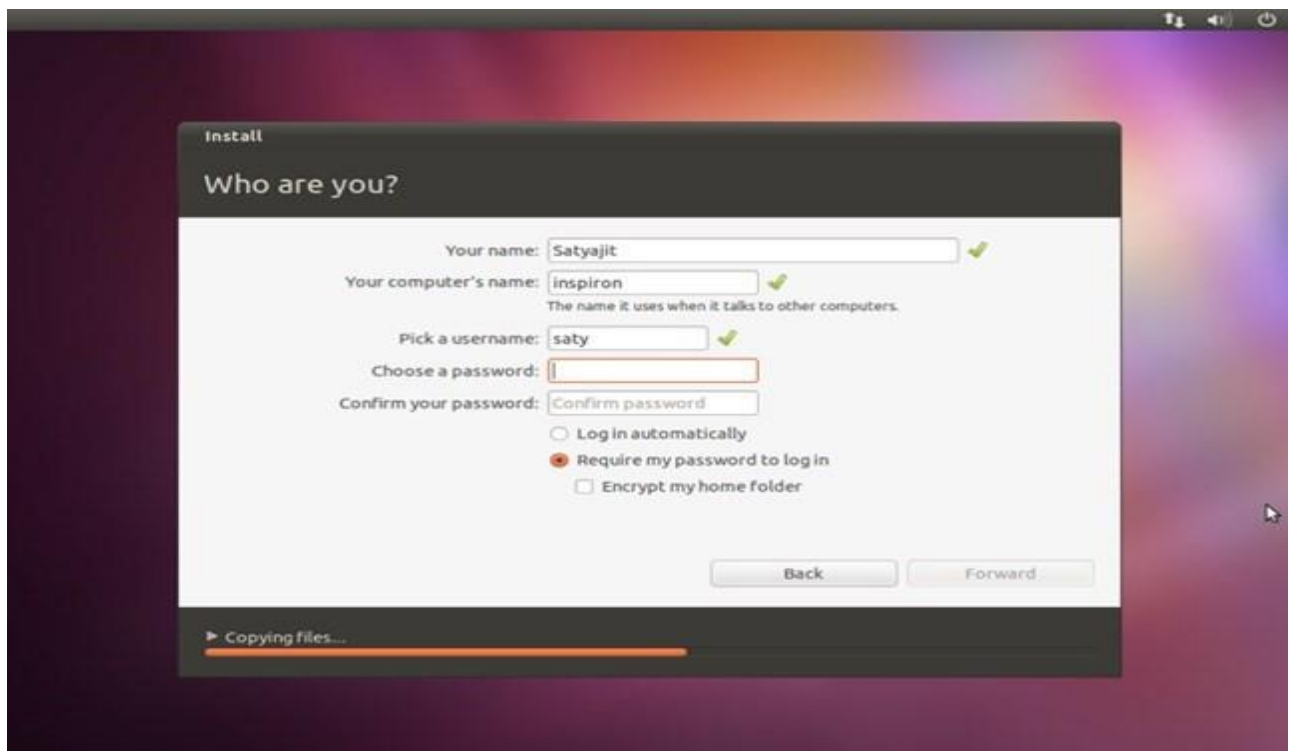
Then click “Install now” to begin installation.



The next screen prompts you to choose the time zone. You can conveniently click on the map to set your time zone.



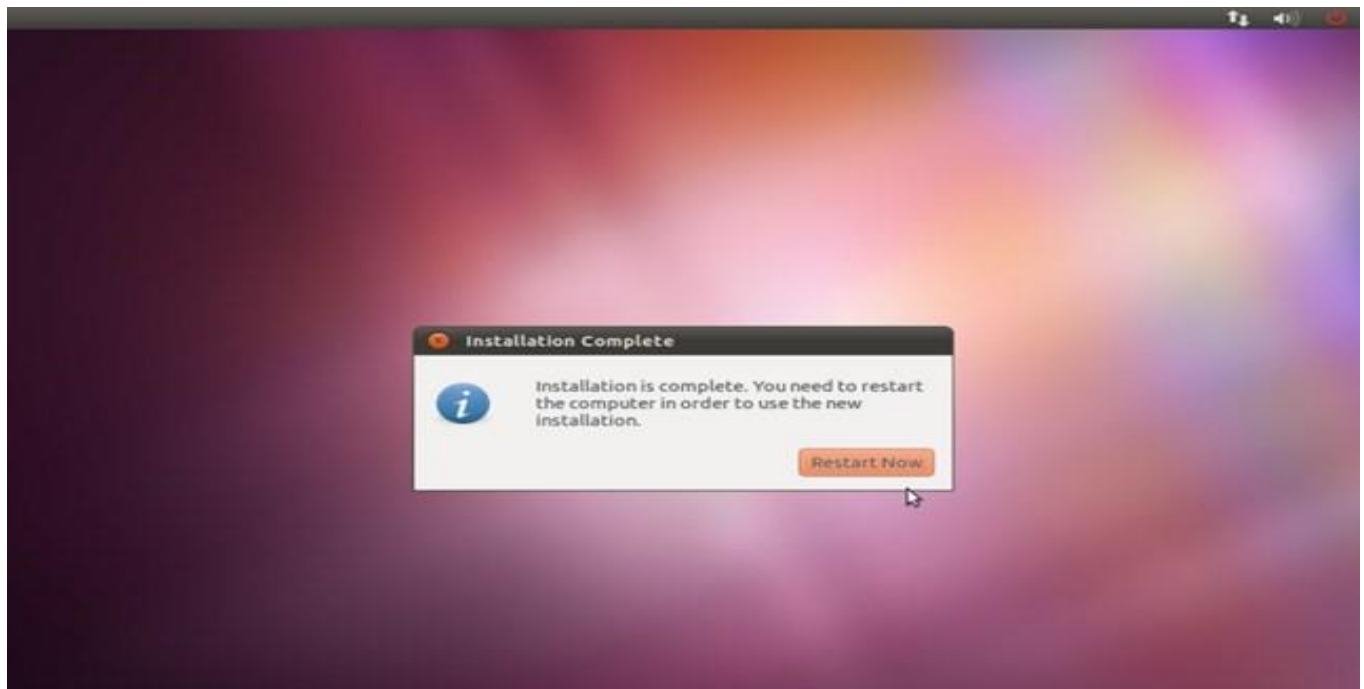
You'll be asked more information like keyboard layout and username, password etc. while the installation continues in the background.



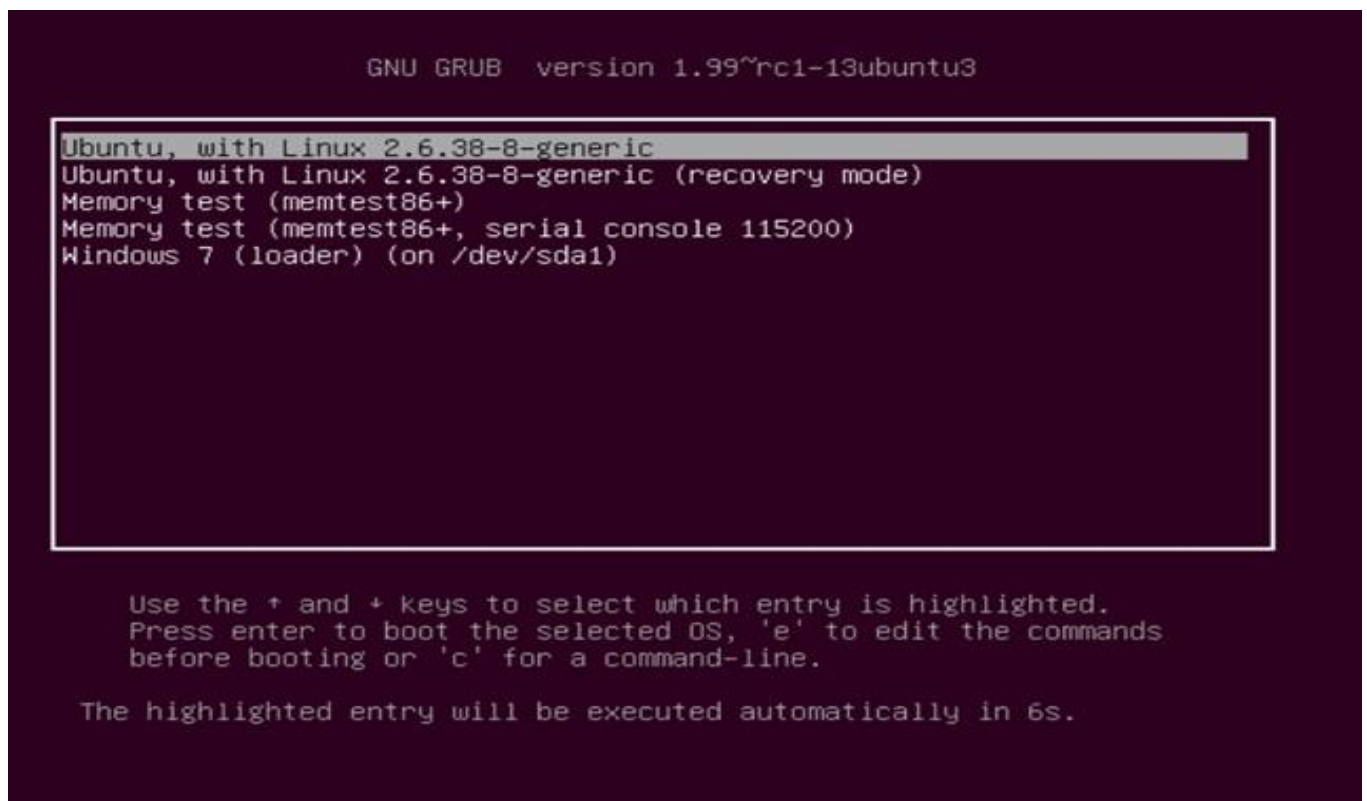
After providing the required information, you'll be presented with a slideshow describing some best aspects of Ubuntu.



After the installation completes, you'll see an "Installation Complete" dialog. Click "Restart Now" to restart your system.



Now after restart, you'll be presented with the GRUB 2 boot menu listing all your installed operating system. You'll find your previous Windows installation at the bottom.



Task 5

Hardware Troubleshooting

PC Boot problems: (beep codes)

IBM BIOS

Indicator	System status
No Beeps - No Power	Loose Cord, or Short.
1 Short Beep - Normal POST	Computer is ok.
2 Short Beep - POST error	review screen for error code.
Continuous Beep - No Power	Loose Cord, or Short.
Repeating Short Beep - No Power	Loose Card, or Short.
One Long and one Short Beep	Motherboard issue.
One Long and Two short Beeps	Video (Mono/CGA Display Circuitry) issue.
One Long and Three Short Beeps	Video (EGA) Display Circuitry.
Three Long Beep	Keyboard / Keyboard card error.
One Beep	Blank or Incorrect Display Video Display Circuitry.

Award and Phoenix BIOS:

Indicator	System Status
1 short beep:	Normal
2 short beeps	CMOS error
1 long and 1 short beep	RAM error
1 long and 2 short beeps	Video card error
1 long and 3 short beeps	Keyboard error
1 long and 9 short beeps	ROM error
Long continuous beeps	RAM not installed correctly
Short continuous beeps	Bad power supply or over heating

Problem with power supply or CPU chips:

Make sure the power connector is connected correctly and fitted firmly in the mother board socket, some mother boards require two connectors from the power supply, refer to mother board manual. If the problem persists try using a different power supply. Check CPU fan, remove chip and clear dust, and make sure it is mounted properly.

Video card problem:

Remove video card and inspect for cracks or bad connectors. Make sure the video card mounted correctly in the slot; try using a different video card.

Keyboard error:

Either the key board is not functioning or is not attached correctly, try a different key board, if it has a PS/2 connector then make sure its not plugged into the mouse connector.

RAM error:

Remove ram inspect for cracks, bad connectors or dust. Insert the chip back into the slot and make sure its firmly seated properly in the slot, if the mother board has more then one slot then make sure the chip is in the first slot (i.e. closest to the CPU). If the problem persists change ram.

No beeps and no POST:

Pull everything out of the machine except for the CPU and power the PC up. The PC should now only consist of a power supply, a motherboard and a CPU/HSF. This means your PC should have no video card, RAM or IDE cables. You should have no PCI cards and that includes modems and sound cards. Have a power button and speakers hooked up to the board so you can turn it on and listen for beep codes.

If you have the PC stripped down this much and you still do not get any beep codes, then you may have an issue with either the CPU, motherboard or power supply.

Problems after booting:**Pc Freezes:**

Check CPU fan, case fan and power box fan, make sure all are working and clean off dust. Check hard drive, CPU, power supply for overheating. Some video cards may also heat up and create excessive heat inside the case. Make sure that the case is kept cool, by maintaining good air flow. Make sure all devices are functioning properly are plugged in. Unplug any faulty device.

PC Restarts while in use:

One problem could be bad RAM, replace RAM and restart machine. Open up resource hungry applications like Office, Photoshop, many instances of internet explorer until all the ram is used up. If system doesn't freeze or restart then return old chip to manufacturer. Check capacitors on motherboard make sure that they aren't bulging, leaking, or burned. If they are - that's the problem. Scan for viruses.

Voltage problem or overheated components:

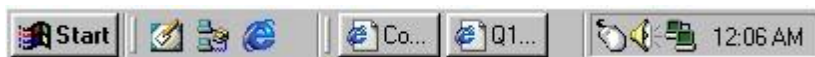
If the computer is actually functioning and the computer beeps continuously, then there is a problem with a voltage on the power supply being incorrect or the CPU overheating. Go into the BIOS and check CPU temperature, fan speed and voltages.

Task 6

Software Troubleshooting

1. Issues and questions related to the Windows taskbar.

Information about the Taskbar.



Above image is the Windows 98 Taskbar.

A bar commonly located at the bottom of Microsoft Windows 95, Windows 98, Windows NT, Windows 2000, Windows ME, Windows XP operating systems that displays the programs that are currently running. This bar also displays the time, systray and in later revisions of the Windows operating system, the Quick Launch. Below is an example of what the taskbar may look like.

I've lost my Windows Taskbar how do I get it back?

This is caused by either the Taskbar being on Auto hide or the computer user accidentally hiding the taskbar by dragging it down too far.

Verify Auto hide is not activated by following the below steps.

1. Press CTRL + ESC or your Windows key to make Start menu appear. 2. Click Settings and choose Taskbar & Start menu
3. Verify that Auto Hide is not checked.

If Auto Hide is not enabled move the task bar up by following the below steps.

1. Press CTRL + ESC or your Windows key to make Start menu appear.
2. Try to notice where the Start menu appeared; generally, it should be the bottom left corner.
3. Press ESC.

You should now notice a small gray line at the location of where the start was.

Move the mouse over that gray line, when in the appropriate position your mouse cursor should change.

2. Issues and questions related to Rundll

Rundll and rundll32 enable users to run a DLL file as an application. The rundll.exe and/or rundll32.exe files are included in Microsoft Windows 95, Windows 98, Windows NT 4.0, Windows ME, Windows 2000, and Windows XP.

Below are some examples of how the rundll.exe rundll32.exe files can be used in Microsoft Windows to perform numerous windows commands from the command prompt. Because of the different versions of rundll and rundll32, not all of the below options will work. If rundll or rundll32 encounter an error, it is possible that the command will fail without any error messages.

Shutdown, restart, logoff, and/or poweroff the computer

Users can shutdown Windows through the command line using rundll32 and the shell32.dll file.

Lock the Windows 2000 and Windows XP workstation

`rundll32 user32.dll,LockWorkStation`

Run the install for an inf file

Run the install for an inf file.

`rundll32.exe setupapi,InstallHinfSectionDefaultInstall 132 <inf file>`

Open the Open With folder for a file

Below is a command that can be run from the command line to open the "Open With" window for a particular file. `rundll32.exe shell32.dll,OpenAs_RunDLL <directory and/or file>`

3. Issues and questions related to Lost or forgotten Windows NT / 2000 / XP password.

Gaining access to an account or computer that is not yours without permission by using any of the below steps is against the law. Additional legal information and policy information can be found on our legal page.

There are various utilities that enable a user to gain access to a computer they have forgotten the password to, below is a listing of some of the more popular utilities available.

Windows XP users and Prevent a forgotten password option

If you have Windows XP and have gone through the "prevent a forgotten password option" and have created a diskette, use the diskette created to recover the forgotten password.

Offline NT Password & Registry editor

The offline NT password & registry editor is a great utility that enables users to overwrite their Windows NT, 2000, and XP SAM file, the file containing their passwords, with a new password. This will not allow a user to view their previous password, however, it will allow the user to gain access to their unencrypted files again. This utility is free and can be found on the below link.

<http://home.eunet.no/~pnordahl/ntpasswd/>

Emergency Boot CD

In addition to several other features, the EMCD, or Emergency Boot CD, is capable of changing the passwords of any user, including the administrator password in Windows NT, 2000, and XP without needing to know the previous password.

This utility is free and can be found on the below link.

<http://ebcd.pcministry.com/>

4. Additional information and help with the boot.ini:

The "boot.ini" is a Microsoft initialization file found on the Microsoft Windows NT, Microsoft Windows 2000, and Microsoft Windows XP operating systems. This file is always

located on the root directory of the primary hard disk drive. In other words, it is located at "C:\\" directory or the "C Drive". This file is used by Microsoft Windows as a method of displaying a menu of operating systems currently on the computer and allowing the user to easily select which operating system to load. In addition, this file is also used to point to the locations of each of the operating systems.

Basic example of the boot.ini file:

```
[boot loader] timeout=5
default=multi(0)disk(0)rdisk(1)partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(1)partition(1)\WINDOWS="Microsoft Windows XP Home Edition" /fastdetect
```

In the above example, the boot.ini contains two sections, the "[boot loader]", and "[operating systems]". Within the boot loader section there are two lines. The "timeout" line is used for how long the boot menu time should be displayed, in seconds; we recommend that the timeout be set to at least five if you wish the computer to boot faster and commonly use the default operating systems. The "default" line is the default operating system that the boot.ini will load. If multiple operating systems are in the boot.ini, the default operating system will be automatically selected and used if the user does not specify a different operating system by the time the timeout value expires.

How to modify the boot. ini:

The boot.ini file is a hidden system file located in the root directory of your primary hard disk drive. To edit this file we recommend you follow the below steps.

1. From Windows, open an MS-DOS prompt by clicking "Start" and then "Run" and typing "cmd" in the text box. If you are not able to get into a MS-DOS prompt to edit the boot.ini file, boot into the recovery console to edit the file.
2. At the MS-DOS prompt, type:
c: <press enter> cd\ <press enter>
attrib -r -a -s -h boot.ini <press enter> edit boot.ini <press enter>

5. Unable to get into Windows safe mode.

This issue is caused by one of two things.

1. User is not entering safe mode properly.
2. Windows is seriously corrupted and is unable to load into save mode.
3. Hardware issue

Make sure you're entering safe mode properly many times the safe mode can be easily missed if done improperly.

If you're entering safe mode properly however when attempting to load Windows safe mode encounters errors, restarts, or never loads it's likely your computer is encountering either a major corruption with Windows and/or you have a hardware issue that is preventing the computer from loading.

If you have recently added any new hardware to the computer we first suggest you remove that new hardware to make sure it is not the cause of your issue.

If no new hardware has been added to the computer or removing the hardware does not resolve the issue it is possible that either Windows is corrupt or pre-existing hardware in the computer has become bad. We suggest resolving or locating the cause of this issue that you erase the computer hard disk drive and reinstall windows.

If during the reinstallation you encounter errors with copying files, or errors formatting your hard disk drive, it's very likely that your hard disk drive is failing or is already bad. If Windows was able to successfully reinstall it was likely Windows was corrupted and reinstalling everything has corrected your issue.

6. Windows restarts without warning.

This issue could be caused by any of the below possibilities.

1. Software issue or error.
2. Hardware issue or error.
3. Heat related issue.
4. Computer virus.
5. Issue with operating system.

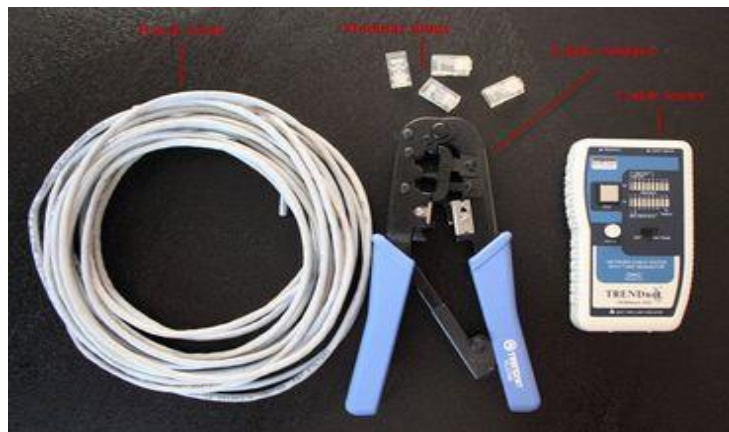
TASK 7

Make our own Ethernet cable

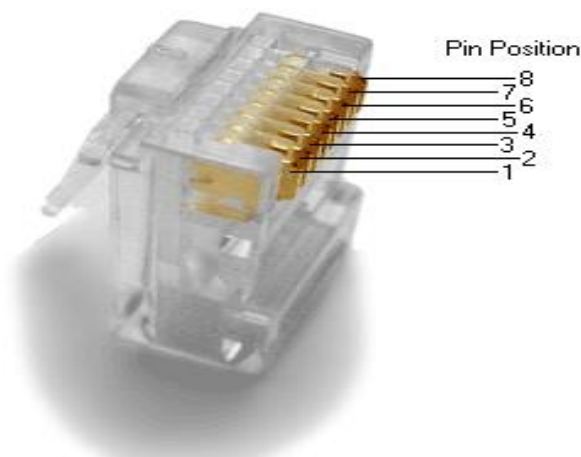
Cat5e or Cat 6 cable will be required. This cable is mostly used with making an Unshielded Twisted Pair (UTP.) Make sure that the body of the wire has not been damaged, feel for lumps or anything unusual while examining the cables, as this can cause errors and may not even let your cable work.

Apparatus

- Unshielded twisted pair (UTP) patch cable
- Modular connector (8P8C plug, aka RJ45)
- Crimping tool
- Cable tester (optional, but recommended)



There are four pairs of wires in an Ethernet cable, and an Ethernet connector (8P8C) has eight pin slots. Each pin is identified by a number, starting from left to right, with the clip facing **away** from you.



The two standards for wiring Ethernet cables are T568A and T568B. T568B is the most common and is what we'll be using for our straight Ethernet cable. The tables below show the proper orientation of the colored wires to the pins.

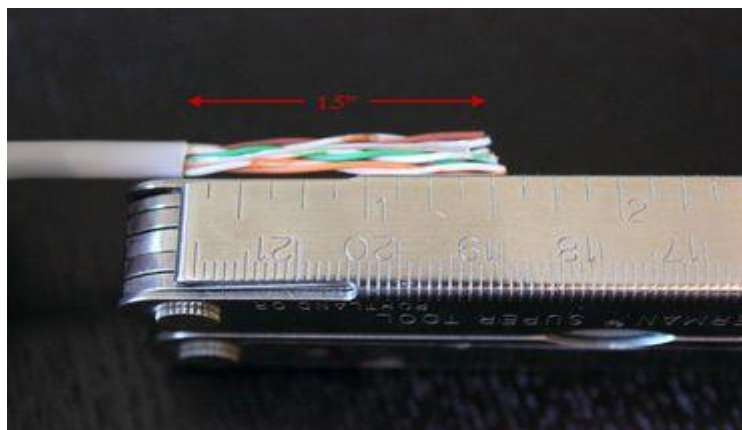
T568A Standard

Pin 1	White/Green
Pin 2	Green
Pin 3	White/Orange
Pin 4	Blue
Pin 5	White/Blue
Pin 6	Orange
Pin 7	White/Brown
Pin 8	Brown

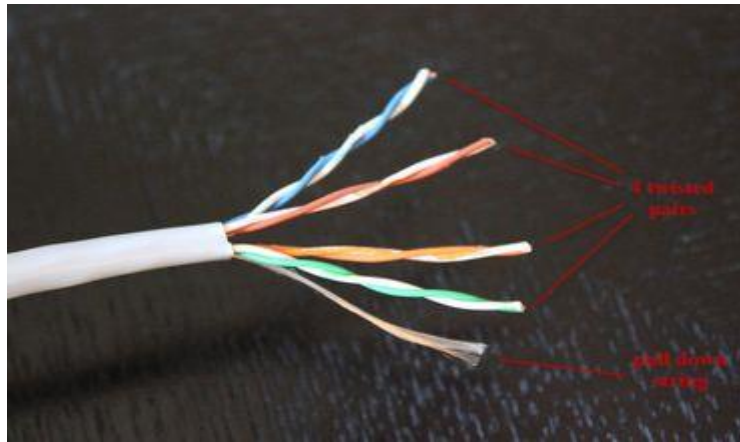
T568B Standard

Pin 1	White/Orange
Pin 2	Orange
Pin 3	White/Green
Pin 4	Blue
Pin 5	White/Blue
Pin 6	Green
Pin 7	White/Brown
Pin 8	Brown

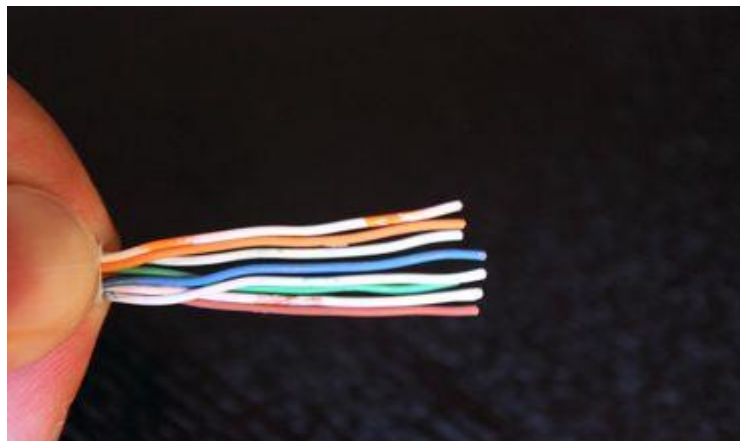
Step 1: Strip the cable jacket about 1.5 inch down from the end.



Step 2: Spread the four pairs of twisted wire apart. For Cat 5e, you can use the pull string to strip the jacket farther down if you need to, then cut the pull string. Cat 6 cables have a spine that will also need to be cut.

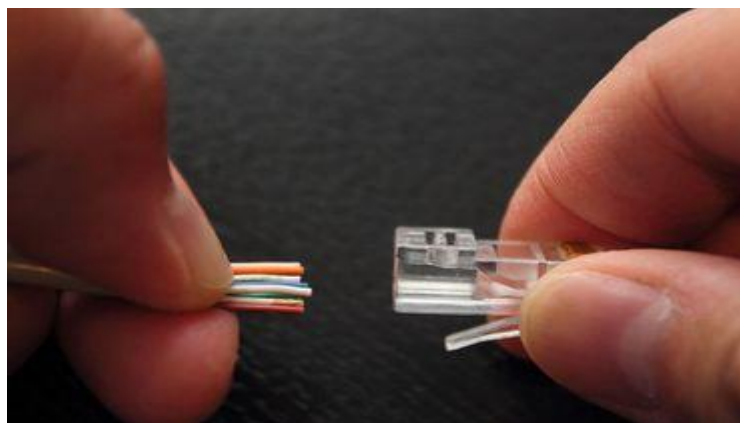


Step 3: Untwist the wire pairs and neatly align them in the T568B orientation. Be sure not to untwist them any farther down the cable than where the jacket begins; we want to leave as much of the cable twisted as possible.



Step 4: Cut the wires as straight as possible, about 0.5 inch above the end of the jacket.

Step 5: Carefully insert the wires all the way into the modular connector, making sure that each wire passes through the appropriate guides inside the connector.



Step 6: Push the connector inside the crimping tool and squeeze the crimper all the way down.

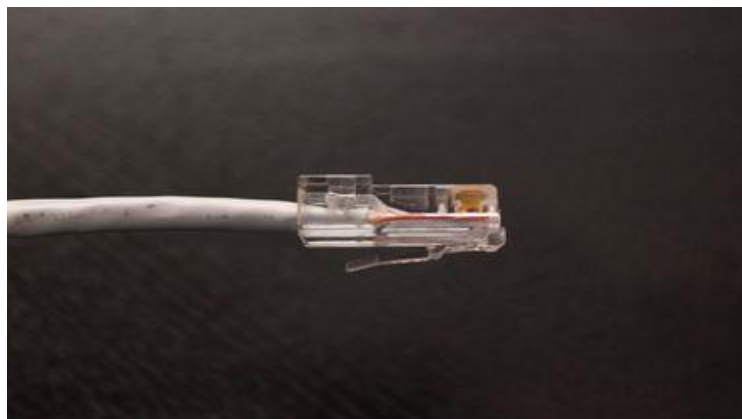


Step 7: Repeat steps 1-6 for the other end of the cable.

Step 8: To make sure you've successfully terminated each end of the cable, use a cable tester to test each pin.



When you're all done, the connectors should look like this:



That's it. For crossover cables, simply make one end of the cable a T568A and the other end a T568B. Now you can make Ethernet cables of any length, fix broken connectors, or make yourself a crossover cable.

TASK 8

Sharing a Printer on a Home Network in Windows 7

Before sharing your printer, you have to set up File and printer sharing. Here's how to set up File and printer sharing:

1. Click on Start in the bottom left corner of your screen. A popup list will appear.
2. Select Control Panel from the popup list. Type the word network in the search box.
3. Click on Network and Sharing Centre.
4. Click on Change advanced shared settings, in the left pane.
5. Click on the down arrow, which will expand the network profile.
6. Select File and printer sharing and choose Turn on file and printer sharing.
7. Click on Save changes.

You're now ready to share your printer.

1. Click on Start in the bottom left corner of your screen. A popup list will appear.
2. Click on Devices and Printers, from the popup list.
3. Right click the printer you want to share. A dropdown list will appear.
4. Select Printer properties from the dropdown list.
5. Click on the Sharing tab
6. Select the Share this printer check box.

In order for other people to connect to the printer, they just have to **add the network printer** that you just opened for sharing to their computers. Here's how to do this.

1. Click on Start in the bottom left corner of your screen. A popup list will appear.
2. Click on Devices and Printers from the popup list.
3. Select Add a printer.
4. Click on Add a network, wireless or Bluetooth printer.
5. Click the shared printer.
6. Click Next. Continue according to the instructions on the screen

TASK 9

To detect and remove malware from the computer

Malware is an abbreviated form of malicious software, is a type of software that has been particularly designed to gain access to or damage a computer, mostly without the knowledge of the owner. There are various types of malware, including computer worm, computer viruses, Trojan horse, adware, spyware, ransomware, scareware, and backdoor.

Types of Malware

- **Computer worm:** Worms also reproduce and spread more actively than viruses without depending on other files. Computer worms use removable media or networks to gain access to other systems and generally need a program to assist them in this task. Worms spreading via e-mails use the user's e-mail program in order to send themselves to all contacts in the address book. Just like viruses, worms can damage the system and are frequently used to gain secret control over the computer. Worms are considered to be the most common types of malicious software.
- **Computer viruses:** Viruses are programs that are capable of spreading separately by making copies of themselves and then infiltrating other computer programs. Virus is the best known and oldest type of malware. A virus multiplies after a virus program starts and it then interferes with a computer's functions, spies on the user, destroys data, or even causes damage to the hardware.
- **Trojan horse:** A Trojan horse is a type of malware that initially pretends to be a useful and safe application so that it can access a computer's system. It carries out functions that are mostly hidden from users. Trojan horses can execute a number of harmful actions such as monitoring a computer's data traffic. Some of these actions deal with copying information or files and sending them on while others execute particular tasks on the computer besides changing or installing new software. It is also possible to remotely control Trojan horses via a backdoor function, which provides other users the chance to hijack the computer for cybercriminal purposes.
- **Adware:** The word 'adware' considered to be a contraction of 'advertisement' and 'software' and it operates by inserting advertising into programs. It is usually included in free software and is mostly legitimate, but it can also be dangerous if it shows pop-ups or fake websites, or makes any alterations on the system or to the browser settings without permission.
- **Spyware:** This type of malware is used to uncover user data and send it to the creator or a third party with the user totally not aware that their behavior is being recorded. The information obtained by the spyware is mostly analyzed for commercial purposes so that customized ads can be shown, for example.
- **Ransomware:** This software goes one step further than scareware by blocking access to a computer's operating system or blocking vital files. The program demands a ransom payment in order to have the block lifted.

- **Scareware:** This malware focuses on scaring and disturbing the user by displaying fake warnings about malware detected on the computer. If a fee-based software is simultaneously advertised claiming to be able to remove the alleged malware, this is known as rogue security software or rogueware. A lot more of the malware will usually appear on the computer if the user buys this supposed useful application and installs it.
- **Backdoor:** Backdoor also known as trapdoor is more a function rather than an independent program. Part of a software is known as backdoor when an external user succeeds in getting access to a computer. This takes place without the user's knowledge. Often, remote access is exploited to perform denial-of-service attacks, which is when internet services get paralyzed, or send spam e-mails. Backdoors could be installed by Trojan horses, viruses, or worms.

How to Recognize Malware?

A slow computer is considered to be a very common sign guaranteeing that a device may be infected with malware. Other signs could include spam, pop-ups, and frequent crashes. A malware scanner can be used to check if the device has been infected or not.

Some of these symptoms are listed below:

- The computer haphazardly shuts down, fails to start up, or it suddenly crashes.
- The internet speed becomes very slow due to increased data traffic.
- There is an automatic redirecting to unwanted sites, increased display of unwanted internet content such as promotional pop-ups, or the sudden appearance of a new home page, search machine, or new toolbars in the browser.
- The computer runs much slower than expected because of the increased processor load.
- Programs crash or are faulty. Some viruses are also capable of deactivating antivirus programs and firewalls, which can be another indication that the system has been infected by malware.
- Changes on the computer are obvious, for example, new folders or files that you fail to recognize, e-mails or social media messages being sent by 'you', and the mouse cursor being remotely controlled.
- Unwanted programs have been installed. These programs are also capable of opening by themselves.

How to Remove Malware?

Malware is mostly being developed for making a profit from forced advertising (adware), spreading email spam, extorting money (ransomware), or stealing sensitive information (spyware).

Various factors are capable of making computers more vulnerable to malware attacks, including defects present in the operating system (OS) design, giving users too many permissions, all of the computers on a network running the same OS, or just because a computer runs on a specific operating system, such as Windows, for example.

The best protection from malware — whether bots, browser hijackers, ransomware, or several other malicious software — continues to be the usual, preventive advice of being careful about what email attachments you open, installing and maintaining an updated, quality antivirus program, and always being alert when surfing by staying away from untrusting websites.

Some of the basic steps for removing malware are presented below:

Installing efficient antivirus software is considered to be the only way to stay protected or remove an infection. The most advanced antivirus programs comprise of the best malware removal tools. Even free ones like Comodo Internet Security Suite, avast, Microsoft security essentials offers all the essential tools for removing malware.

1. Install an antivirus and update it.
2. Backup all the files and data on your computer prior to starting the removal procedure.
3. Disconnect your computer from the Internet.
4. Remove DVDs and CDs, and also unplug USB drives from your computer.
5. Start by scanning your computer in normal mode. A few specific types of malware may not allow you to do this.
6. Scan your computer in safe mode with networking.
7. Restart your computer and hold down the F8 key. You should remember to press this key before seeing the Windows startup logo.
8. Watch out for the Advanced Options screen and select Startup Settings. With the help of the arrow keys, highlight “Safe Mode with Networking” and then press “Enter.”

TASK 10

Webpage Designing

```
<!DOCTYPE html>
<html>
<head>
<title>webpage</title>
<meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"></script>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.0/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.0/js/bootstrap.min.js"></script>
</head>
<style>
.haed{
  background-color: rgba(0,0,0,0.2);
}
.row{

width: 100%;
}
.column {
  margin-left: 40px;
  width: 30%;
  margin-bottom: 16px;
  padding: 0 8px;
}
```

```
.card {  
  box-shadow: 0 4px 8px 0 rgba(0, 0, 0, 0.2);  
}
```

```
.container {  
  padding: 0 16px;  
}
```

```
.container::after, .row::after {  
  content: "";  
  clear: both;  
  display: table;  
}
```

```
.title {  
  color: grey;  
}
```

```
.button {  
  border: none;  
  outline: 0;  
  display: inline-block;  
  padding: 8px;  
  color: white;  
  background-color: #000;  
  text-align: center;  
  cursor: pointer;  
  width: 400px;  
}
```

```
.button:hover {  
  background-color: #555;  
}
```

```
.flip-box {  
background-color: transparent;  
width: 300px;  
height: 200px;  
border: 1px solid #f1f1f1;  
perspective: 1000px;  
}
```

```
.flip-box-inner {  
position: relative;  
width: 100%;  
height: 100%;  
text-align: center;  
transition: transform 0.8s;  
transform-style: preserve-3d;  
}
```

```
.flip-box:hover .flip-box-inner {  
transform: rotateY(180deg);  
}
```

```
.flip-box-front, .flip-box-back {  
position: absolute;  
width: 100%;  
height: 100%;  
backface-visibility: hidden;  
}
```

```
.flip-box-front {  
background-color: #bbb;  
color: black;  
}
```

```
.flip-box-back {  
background-color: #555;
```

```

color: white;
transform: rotateY(180deg);
}

```

```

    img {

border:5px solid white;
}

*{
    margin:0px;
    padding: 0px;
}

```

```

        .header{
            background-color: #0C1D2C;
            width: 1520px;
            height:722px;
        }
</style>
<body>
    <div class="header">
        <div class="haed">
            <nav class="navbar navbar-expand-sm navbar-dark ">

```

```

<a class="navbar-brand" href="#">
    Artificial Intelligence
</a>

```

```

<!-- Links -->
<ul class="navbar-nav ml-auto">
    <li class="nav-item">
        <a style="margin-right: 50px;" class="nav-link" href="#types">Types Of AI</a>
    </li>
    <li class="nav-item">
        <a style="margin-right: 50px;" class="nav-link" href="#defi">Definition</a>

```

```

</li>
<li class="nav-item">
  <a style="margin-right: 50px;" class="nav-link" href="#cre">Web Creaters</a>
</li>

</ul>
</nav>
</div>


<p style="color: white; margin-left: 625px; margin-top: 30px;">by <a href="#">Sahil
Kumar</a> on November 26, 2019</p>
<p style="color: white; margin-left: 550px; margin-top: 10px; font-size: 50px;">Artificial
Intelligence</p>
</div>

<div align="center" style="margin-top: -255px;">
  <div class="container">

<div style="width: 600px;" id="myCarousel" class="carousel slide" data-ride="carousel">
  <!-- Indicators -->
  <ol class="carousel-indicators">
    <li data-target="#myCarousel" data-slide-to="0" class="active"></li>
    <li data-target="#myCarousel" data-slide-to="1"></li>
    <li data-target="#myCarousel" data-slide-to="2"></li>
  </ol>

  <!-- Wrapper for slides -->
  <div class="carousel-inner">
    <div class="item active">
      
    </div>

    <div class="item">
      
    </div>
  </div>

```

```

<div class="item">
  
</div>
</div>

<!-- Left and right controls -->
<a class="left carousel-control" href="#myCarousel" data-slide="prev">
  <span class="glyphicon glyphicon-chevron-left"></span>
  <span class="sr-only">Previous</span>
</a>
<a class="right carousel-control" href="#myCarousel" data-slide="next">
  <span class="glyphicon glyphicon-chevron-right"></span>
  <span class="sr-only">Next</span>
</a>
</div>
</div>
</div>
<div class="para" >
  <p align="center" style="font-size: 100px; color: #0C1D2C; margin-top:
75px;">Types</p>
  <table style="margin-top:px;" width="100%" >
    <tr>
      <td align="center">
        <div class="flip-box">
          <div class="flip-box-inner">
            <div class="flip-box-front">
              
              <p>Machine Learning</p>
            </div>
            <div class="flip-box-back">
              <h2>Machine Learning</h2>
              <p>What an amazing Technology</p>
            </div>
          </div>
        </div>
      </td>
    </tr>
  </table>
</div>

```

```

        </td>
        <td align="center">
            <p style="color: rgba(0,0,0,0.5); font-size: 80px; font-family:
unset;">And</p>
        </td>
        <td align="center">
            <div class="flip-box">
<div class="flip-box-inner">
    <div class="flip-box-front">
        
        <p>Deep Learning</p>
    </div>

    <div class="flip-box-back">
        <h2>Deep Learning</h2>
        <p>What an amazing Technology</p>
    </div>
</div>
</div>
</div>

```

```

        </td>
    </tr>
</table>
</div>
<div id="defi" style="margin-top: 75px;" class="middle">
    <table width="100%; border="10px">
        <tr>
            <td width="170px"></td>
            <td>
                <p style="color: rgba(0,0,0,0.4); font-size: 18px;">Definition</p>
            </td>
        <td></td>
    </table>

```

</tr>

<tr>

<td width="170px"></td>

<td>

<p style="font-family: sans-serif; font-size: 40px;">Artificial Intelligence</p>

</td>

<td></td>

</tr>

<tr>

<td width="170px"></td>

<td>

<p style="font-size: 20px; font-family: serif;">Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self-correction. Particular applications of AI include expert systems, speech recognition and machine vision.</p>

<p style="font-size: 20px; font-family: serif;">AI can be categorized as either weak or strong. Weak AI, also known as narrow AI, is an AI system that is designed and trained for a particular task. Virtual personal assistants, such as Apple's Siri, are a form of weak AI. Strong AI, also known as artificial general intelligence, is an AI system with generalized human cognitive abilities. When presented with an unfamiliar task, a strong AI system is able to find a solution without human intervention.</p>

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<p style="font-size: 20px; font-family: serif;">Because hardware, software and staffing costs for AI can be expensive, many vendors are including AI components in their standard offerings, as well as access to Artificial Intelligence as a Service (AIaaS) platforms. AI as a Service allows individuals and companies to experiment with AI for various business purposes and sample multiple platforms before making a commitment. Popular AI cloud offerings include Amazon AI services, IBM Watson Assistant, Microsoft Cognitive Services and Google AI services.</p>

<p style="font-size: 20px; font-family: serif;">While AI tools present a range of new functionality for businesses, the use of artificial intelligence raises ethical questions. This is because deep learning algorithms, which underpin many of the most advanced AI tools, are only as smart as the data they are given in training. Because a human selects what data should

be used for training an AI program, the potential for human bias is inherent and must be monitored closely.

Some industry experts believe that the term artificial intelligence is too closely linked to popular culture, causing the general public to have unrealistic fears about artificial intelligence and improbable expectations about how it will change the workplace and life in general. Researchers and marketers hope the label augmented intelligence, which has a more neutral connotation, will help people understand that AI will simply improve products and services, not replace the humans that use them.

Types of artificial intelligence

Arend Hintze, an assistant professor of integrative biology and computer science and engineering at Michigan State University, categorizes AI into four types, from the kind of AI systems that exist today to sentient systems, which do not yet exist. His categories are as follows:

Type 1: Reactive machines. An example is Deep Blue, the IBM chess program that beat Garry Kasparov in the 1990s. Deep Blue can identify pieces on the chess board and make predictions, but it has no memory and cannot use past experiences to inform future ones. It analyzes possible moves -- its own and its opponent -- and chooses the most strategic move. Deep Blue and Google's AlphaGO were designed for narrow purposes and cannot easily be applied to another situation.

Type 2: Limited memory. These AI systems can use past experiences to inform future decisions. Some of the decision-making functions in self-driving cars are designed this way. Observations inform actions happening in the not-so-distant future, such as a car changing lanes. These observations are not stored permanently.

Type 3: Theory of mind. This psychology term refers to the understanding that others have their own beliefs, desires and intentions that impact the decisions they make. This kind of AI does not yet exist.

Type 4: Self-awareness. In this category, AI systems have a sense of self, have consciousness. Machines with self-awareness understand their current state and can use the information to infer what others are feeling. This type of AI does not yet exist .

```

        <td width="160px"></td>
    </tr>
</table>
<div id="cre" class="row">
    <div class="column">
        <div class="card">
            
            <div style="width: 455px;" class="container">
                <h2>Sahil Kumar</h2>
                <p class="title">Student At MIMIT</p>
                <p>I am a full stack web developer.I am fond of new designs and Ideas.</p>
                <p>sk9781637173@gmail.com</p>
                <p><button class="button">Contact</button></p>
            </div>
        </div>
    </div>
    <div class="column">
        <div class="card">
            
            <div style="width: 455px;" class="container">
                <h2>Ajeet Kumar Prasad</h2>
                <p class="title">Student At MIMIT</p>
                <p>I am a rising Cse student.</p>
                <p>nagrajajeet@gmail.com</p>
                <p><button class="button">Contact</button></p>
            </div>
        </div>
    </div>
    <div class="column">
        <div class="card">
            
            <div style="width: 455px;" class="container">
                <h2>Suraj Kumari</h2>

```

```

        <p class="title">Student At MIMIT</p>
        <p>PHP Developer</p>
        <p>kumarisuraj555@gmail.com</p>
        <p><button class="button">Contact</button></p>
    </div>
</div>
</div>
</div>

<br><br><br>
<footer style="background-color: #0C1D2C;" class="page-footer font-small unique-color-dark pt-4">

    <!-- Footer Elements -->
    <div class="container">

        <!-- Call to action -->
        <ul class="list-unstyled list-inline text-center py-2">
            <li class="list-inline-item">
                <h5 style="color: white;" class="mb-1"></h5>
            </li>
            <li class="list-inline-item">
                <a style="color: white;" href="#" class="btn btn-outline-white btn-rounded"></a>
            </li>
        </ul>
        <!-- Call to action -->

    </div>

    <!-- Footer Elements -->

    <!-- Copyright -->
    <div style="color: white;" class="footer-copyright text-center py-3">© 2018 Copyright:
        <a href="#"> Samkum.com</a>
    </div>

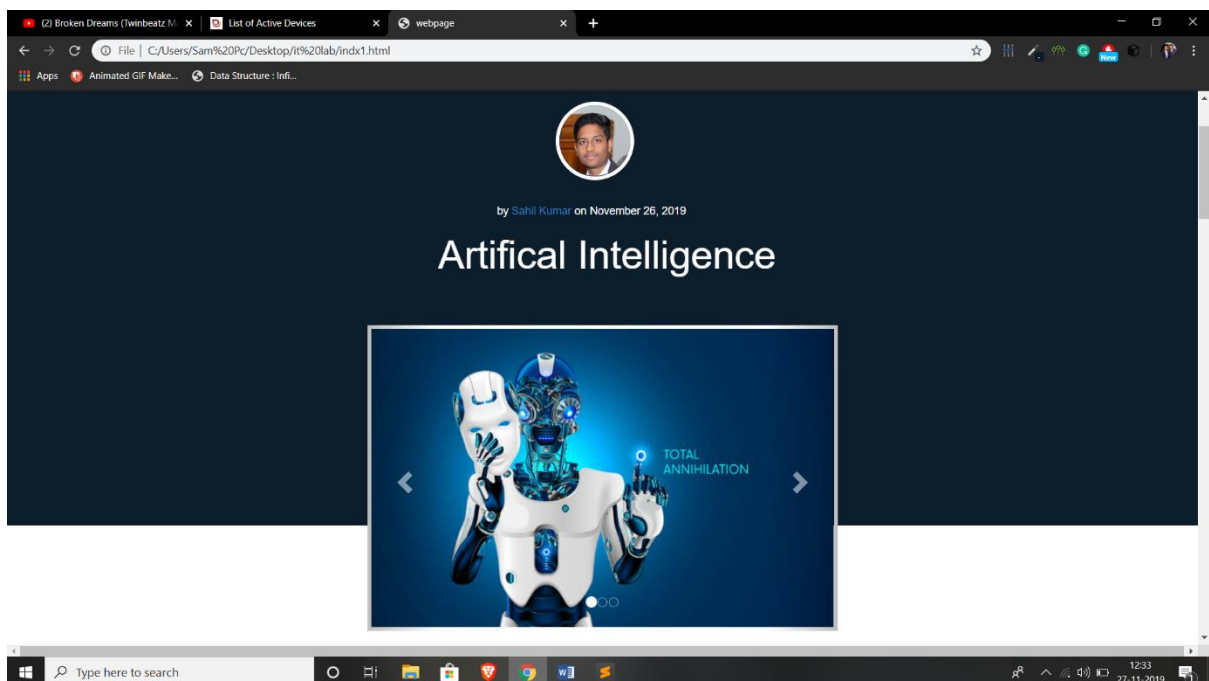
```

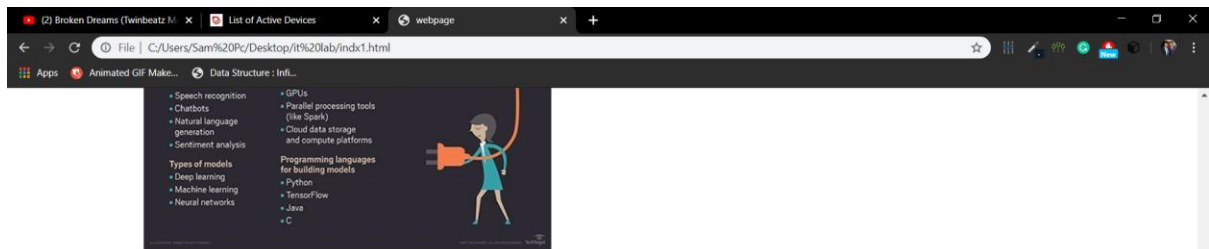
<!-- Copyright -->

</footer>

<!-- Footer --></body>

</html>





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Sahil Kumar



Ajeet Kumar Prasad



Suraj Kumari

