

Practical No: 5 [Green Computing]

Green Computing: Green computing is the environmentally responsible and eco-friendly use of computers and their resources. In broader terms, it is also defined as the study of designing, engineering, manufacturing, using and disposing of computing devices in a way that reduces their environmental impact. Many IT manufacturers and vendors are continuously investing in designing energy-efficient computing devices, reducing the use of dangerous materials and encouraging the recyclability of digital devices. Green computing is also known as green information technology (green IT).

History of Green Computing:

The starting of Green computing was named as Energy Star, and it was originated in 1992. This Energy Star was using in all electronic product like as Printers, television and refrigerators, in that time saved more energy but that is not used in computers. After spending some time Green computing name was converted into Energy Star, after that was used in computers for saving energy.

Types of Green Computing:**Solar Power System**

In this program we utilize the sunlight and produce the Solar Power for personal and commercial usage. Canada, Spain and California have first position for implementing this technology. This is great achievement for green technology.

Wind Turbine Program

Other great type is Wind Turbine system because with the help of this system anyone can generate electricity power. After embedding wind turbine has no bad effect to environment. It decreases the carbon dioxide emissions. But require huge money for set up of wind turbine, so it is not possible to everyone.

Geothermal Power

This is also exclusive type of green technology. With the help of this Geothermal plant can be generated electricity, and people can utilize of this power in daily usage such as heating and cooling house.

Need of Green Computing

- Save huge money
- Save environment
- Decrease the risks in further life
- More consumption of energy
- for recycle of waste product
- Inspiring to worker
- For retaining high ticketing customers

Advantages of Green Computing:

- Lessened vitality utilization by green registering advances converts into low carbon dioxide emanations, which emerge because of the absence of petroleum derivatives utilized as a part of intensity plants and transportation.
- Conservation of resources means less energy is required to produce, use and dispose of products.
- Saving energy and resources saves money.
- Green processing includes changing government arrangement to empower reusing by people and organizations and to lessen vitality utilization.
- Reduce existing exposure in laptops such as chemical, cancer, nerve damage, and is known due to immune responses in humans.

Disadvantage of Green Computing:

- It can really be quite expensive.
- Some green computers may be very low.
- Rapid technology change.

Explain the steps that you take to contribute to green computing:

- Use the hibernate or sleep mode when away from a computer for extended periods
- Buy energy-efficient notebook computers, instead of desktop computers
- Activate the power management features for controlling energy consumption
- Make proper arrangements for safe electronic waste disposal
- Turn off computers at the end of each day
- Refill printer cartridges, rather than buying new ones
- Instead of purchasing a new computer, try refurbishing an existing device
- Buy "Energy Star" labelled monitors, desktops, laptops, and printers. The "Energy Star" devices can be programmed to "power-down" to a low power state when they are not in use, helping you save energy and run cooler which helps them last even longer.
- E-cycle used computer equipment. Find a recycler in your area. Also, Staples, the office supply retailer, has now started a recycling program. They will accept any brands of used desktop and notebook computers, monitors, printers, fax machines and all-in-one devices with a fee of \$10. Smaller items like keyboards, mice and speakers are free to drop off.
- It is relatively easy for an organization to centralize its information technology (IT) system. With server virtualization, carbon footprints can be significantly reduced.
- A good example is checking total power consumption for each month. If it has significantly dropped, then one can say that we have effectively reduced your organization's carbon footprint.
- Participate in electronic recycling programs.
- Look for green packaging solutions.
- Replace old CRT and LCD monitors with efficient OLED monitors.

Conclusion:

Various IT organizations in the world started adopting green computing practices and it has now become the main part of their day-to-day business activities. In India IT giant Wipro has already launched its eco-friendly series of computing systems called greenware. Samsung, Apple, and other IT companies have their own successful recycling programs. By adopting green computing practices we can get an eco-friendly environment, along with other benefits such as cost reduction, energy conservation, and waste minimization.

Now it's our turn, we must understand the importance of green computing and work collaboratively for a healthier and greener environment for our future generations.