ASSIGNMENT IT TOOLS Kashinath Tawte FYCS 61

1. Explain Green Computing with its advantages

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, manufacturing/engineering, using and disposing of computing devices in a way that reduces their environmental impact.

Government regulation, however well-intentioned, is only part of an overall green computing philosophy. The work habits of computer users and businesses can be modified to minimize adverse impact on the global environment. Here are some steps that can be taken:

Power-down the CPU and all peripherals during extended periods of inactivity.

Try to do computer-related tasks during contiguous, intensive blocks of time, leaving hardware off at other times.

Power-up and power-down energy-intensive peripherals such as laser printers according to need.

Use liquid-crystal-display (LCD) monitors rather than cathode-ray-tube (CRT) monitors.

Use notebook computers rather than desktop computers whenever possible.

Use the power-management features to turn off hard drives and displays after several minutes of inactivity.

Minimize the use of paper and properly recycle waste paper.

Dispose of e-waste according to federal, state and local regulations.

Employ alternative energy sources for computing workstations, servers, networks and data centers.

Advantages -

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.

2.What is E-waste? What can be done to reduce the impact of E-waste.

The term "e-waste" is an abbreviation of "electronic and electrical waste". A key part of the definition is the word "waste" and what it logically implies – that the item has no further use and is rejected as useless or excess to the owner in its current condition.

E-waste includes almost any household or business item containing circuitry or electrical components with either power or battery supply.

Although e-waste is a general term, it can be considered to denote items such as TV appliances, computers, laptops, tablets, mobile phones, white goods - for example, fridges, washing machines, dryers - home entertainment and stereo systems, toys, toasters and kettles.

The definition of e-waste that has been agreed by StEP is:

"E-Waste is a term used to cover items of all types of electrical and electronic equipment (EEE) and its parts that have been discarded by the owner as waste without the intention of re-use."

The Global E-waste Monitor 2017 shows that e-waste has grown to 44.7 million metric tonnes annually. But only 20% of the e-waste generated is documented to be collected and recycled. The fate of 76% (34.1 million metric tonnes) is unknown, but likely dumped, traded or recycled under inferior conditions. Much e-waste also remains in the sheds, attics and storage rooms of its owners or gets disposed of with the normal household bin.

E-Waste is growing exponentially because global consumer demand continues to increase. Moreover, technology uptake and shorter replacement cycles are contributing to the growth of e-waste.

As many parts of our expanding world cross over to the other side of the ‘Digital Divide’, the contemporary consumer demands the means to enjoy an easier more comfortable lifestyle. But that very understandable demand creates a downstream problem of safe disposability.

To reduce Ewaste these are the following steps :

1. Sell old Electronics
One of the best and easiest methods of reducing the electronic waste footprint is to sell or donate your electronic gadgets to those in need.

2. Donate old Electronics
Donating electronics to the needy is also a practice followed by many. It not only gives the gadget a new life, but also makes you feel good about yourself.

If you decide to donate your old electronic devices when you don’t need them anymore, make sure to clear any information (like data in your laptop hard drive) before you donate it.

3. Recycle and Dispose of E-Waste Properly
Improperly disposed e-waste is becoming more and more hazardous, especially as the sheer volume of our e-waste increases.

For this reason, large brands like Apple, Samsung, and other companies have started giving options to its customers to recycle old electronics. Sometimes, you may even get financial compensation for recycling your old devices!

6. Store Data Online
Cloud services are much better than you would think in reducing your environmental impact.

By storing data online, you get to access your data from anywhere around the world, without the need to carry a storage device at all times. Cloud storage also gives you a large amount of storage, for free or for very cheap.

3. What are the benefits of going paperless.

Benefits of Going Paperless
Saves Time

Time spent filing, organizing, and searching for paper documents is time that could be spent on more productive tasks. Digitized documents are stored in a central repository, which is basically a well-organized digital filing cabinet where all of your documents live.

Using a digital document management system, you'll get to harness the same powerful search abilities that you're used to using on Google. This means employees can find files at the click of a button, much more quickly than the laborious, manual process of searching for a specific file in a buried folder. Employees are able to use this extra time on revenue-generating projects.

Saves Space

Paper takes up a lot of space – as do filing cabinets and space to store those filing cabinets. Books and bookshelves are bulky, too. What's worse, paper keeps piling up, oftentimes accumulating more quickly than it can be sorted and organized. This is particularly true of industries that have long mandatory retention periods for paperwork like the financial industry.
Digitizing files allows you to store all documents either on an on-premises server or in the cloud. Digital file folders in a repository require much less space than a physical records archive.

Saves Money

Going digital improves process efficiency, saving you money. Paperless offices can process a much larger volume of paperwork compared to traditional offices in the same amount of time.

Further, digitization reduces money spent on paper, printers, ink, postage, office space for files and employee time to manage paperwork. The savings on employee time become especially valuable in regards to regulatory audits and repetitive, high-volume tasks like expense reimbursements.

Eases Transfer of Information

Document management software offers a simple process for saving documents. The software easily compiles digital documents using scanners, mobile capture using a camera on a phone or tablet or importing any file type (.docx, .pdf, image files). Many commonly used applications, like Microsoft Office and Adobe Acrobat, integrate with document management systems and have native plugins which allow you to file your document into your content management system with just one click.
Promotes the Environment

Manufacturing paper products produce greenhouse gases, causing deforestation and global warming. Recycling can offset some of the environmental impact, but not by much. Most paper eventually ends up in a landfill. Further, ink and toners contain volatile compounds and non-renewable substances which are damaging to the environment. It is much more sustainable to simply reduce paper use altogether by switching to a paperless office.

Boosts Security

Physical documents are hard to track – reams of paper can get lost, misfiled or destroyed without anyone noticing. It can also be difficult to monitor the access, printing and copying of sensitive

files. Document management software has advanced security capabilities that can tackle these challenges. System administrators can set-up granular access rights, which assign permissions at the document level (e.g. settings based on the type of document), user level (e.g. settings based on person's job function), or system level (e.g. overarching security for all data in the system).

The security benefits of a paperless workplace go beyond access rights. Implementing document management software also allows organizations to leverage electronic signatures, redact confidential information, create audit trails and more.

4. What is Github? Give advantages of using Github.

GitHub is one of the world's largest community of developers. It's an intricate platform that fosters collaboration and communication between developers. GitHub has a number of useful features that enable development teams to work together on the same project and easily create new versions of software without disrupting the current versions, but it doesn't stop there.

Once new additions to a program are complete, for example, they can easily be incorporated into existing programs. GitHub also makes it extremely simple to work together on strings of code to really dial in and perfect even the smallest parts of a program. With GitHub, you can collaborate and work on projects with others anywhere in the world.

Advantages of github

The first is that it enables slick and easy collaboration and version control. This allows you to work on code with anyone from anywhere. Additionally, many employers use GitHub. So, if you plan on getting a job, you'll look really good if you already know your way around GitHub. And don't forget about the connections, learning, and portfolio aspects. GitHub is a robust learning and collaboration platform. Take time to explore it and see just how much it can expand your programming knowledge.

5. Write a program using PEP8 rules.