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Assignment No.1

1. Explain Green Computing with its advantages.

Answer:

What is Green Computing:

1.**Green Computing** refers to durable computing of the environment. This reduces the use of electricity as well as power and reduces environmental waste when we are using a computer.

2.It **Computing** has the same goal with green chemistry, which is now the life of the product and makes the product more energy efficient, the abandoned product and factory waste are more easily recycled and to be biodegradable, less Dangerous Use Content.

3.There are different **objectives of green computing** are:

- To minimize the implementation of hazardous products.
- More production of energy efficiency.
- To use the recyclability of wasted product and factory wasted products.
- To design proper algorithms for improve the computer's efficiency

ADVANTAGES OF GREEN COMPUTING :

1) Green computing technique reduces the energy consumption which results into low carbon dioxide emission.

2) By using green computing techniques, we can also save money that was spent in extra usage of energy and resources.

3) Green computing also applies changing government policy to encourage recycling.

4) Green computing also removes the risk which is existing in the laptop such as chemical known to cause cancer or nerve damage etc.

5) Use preserve resources which use less energy to produce use and dispose of product.

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

Answer:

What is E-waste?

1.E-waste is electronic products that are unwanted, not working, and nearing or at the end of their "useful life." Computers, televisions, VCRs, stereos, copiers, and fax machines are everyday electronic products.

2.The ongoing challenge of how best to dispose of used and unwanted electronics isn't a new one and dates back at least to the 1970s. But a lot has changed since then, particularly the number of electronics being discarded today.

3.We also have something else today: a term for this issue. After several terms got suggested, including "Digital rubbish," a consensus formed around the simple word "e-waste."

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

1. Stem the Spread

Before buying a brand-new PC or other device, the Environmental Protection Agency (EPA) suggests you first consider upgrading the hardware or software. Many computers can have memory and performance enhancing features added to them. Deleting or zipping information can free up hard drive space. Also, uploading files to an online service, flash drive, or external storage can also boost performance. In addition, IFixIt.com offers many easy-to-follow videos to help troubleshoot problems with your electronic devices, preventing you from having to throw them away.

2. Sell or Donate

There are many resources online for selling electronics that still work: craigslist, eBay, Usell, Gazelle, ecoatm, iReTron, and Glyde, to name but a few. Calling your local Goodwill or secondhand shop is another alternative; you may be surprised what they accept. Do you have an old cell phone to donate? Give cellphonesforsoldiers.com a look or sellmycellphones.com. Search your area for a local schools, charities, or organizations that may want your old electronics. A good way to do this is with www.cristina.org.

3. Go Local

Know where your local electronics collection centers are. Apple will take back their products, Staples accepts electronics items, and Best Buy will take almost any E-waste. You can also look for a local E-Steward-certified recycler in your area. This can be done by going onto e-stewards.org and selecting the "Find a recycler" tab.

4. Educate and Organize

Now that you are a residential expert on E-waste, educate your neighbors and local businesses about pro recycling. By getting these electronics back into the recycling stream you can reduce the load on the mining, processing, manufacturing, and transport industries–in turn, reducing pollution. Not to mention, organizing a local drive to clean out old electronics can make a trip to the local recycling center much more economical. For those in the San Francisco Bay area, Green Citizen.com organizes pickups; the company also offers mail-in programs for those who don't.

5. Talk to Government Officials

As noted above, there currently is no mandatory federal recycling legislation. Contact your Congressional representatives and let them know your stand on E-waste.

3. What are the benefits of going paperless.

1.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.**

2.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.

3.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.

4.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.

5.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.

6.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).

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

What is Github?

1.GitHub is a for-profit company that offers a cloud-based Git repository hosting service. Essentially, it makes it a lot easier for individuals and teams to use Git for version control and collaboration.

2.GitHub's interface is user-friendly enough so even novice coders can take advantage of Git. Without GitHub, using Git generally requires a bit more technical savvy and use of the command line.

3.GitHub is so user-friendly, though, that some people even use GitHub to manage other types of projects – like writing books.

4.Additionally, anyone can sign up and host a public code repository for free, which makes GitHub especially popular with open-source projects.

Give advantages of using Github:

1. It makes it easy to contribute to your open-source projects
To be honest, nearly every open-source project uses GitHub to manage their project. Using GitHub is free if your project is open source and includes a wiki and issue tracker that makes it easy to include more in-depth documentation and get feedback about your project. If you want to contribute, you just fork a project, make your changes and then send them a pull request using GitHub web interface.

2. Documentation
By using GitHub, you make it easier to get excellent documentation. Their help section and guides have articles for nearly any topic related to git that you can think of.

3. Showcase your work
Are you a developer and wishes to attract recruiters? GitHub is the best tool you can rely on for this. Today, when searching for new recruits for their project, most companies look into the GitHub profiles. If your profile is available, you will have a higher chance of being recruited even if you are not from a great university or college.

4. Markdown
Markdown allows you to use a simple text editor to write formatted documents. GitHub has revolutionized writing by channeling everything through Markdown: from the issue tracker, user comments, everything. With so many other programming languages to learn for setting up projects, it's really a big benefit to have your content inputted in a format without having to learn yet another system.

5. GitHub is a repository
This was already mentioned before, but it's important to note, GitHub is a repository.
What this means that it allows your work to get out there in front of the public. Moreover, GitHub is one of the largest coding communities around right now, so it's wide exposure for your project.

6. Track changes in your code across versions
When multiple people collaborate on a project, it's hard to keep track revisions—who changed what, when, and where those files are stored. GitHub takes care of this problem by keeping track of all the changes that have been pushed to the repository. Much like using Microsoft Word or Google Drive, you can have a version history of your code so that previous versions are not lost with every iteration.

7. Integration options
GitHub can integrate with common platforms such as Amazon and Google Cloud, services such as Code Climate to track your feedback, and can highlight syntax in over 200 different programming languages.

5. Write a program using PEP8 rules.

Code:

```
# Import needed package
from collections import defaultdict

# Define our data
list_data = [1, 2, 3, 4, 2, 4, 1, 2]


# Helper Function
def list_to_dict(input_list):
    """Convert list to DefaultDict"""
    d = defaultdict(int)
    for i in input_list:
        d[i] += 1
    return d
```

Output:

```
# Output
print(ltd(list_data))
```