ASSIGNMENT

1) Explain Green Computing with its advantages.

Ans:-1. Green computing sometimes also called Green Technology. 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. Many IT companies have been start the use of green computing to reduce the environment impact of their IT operations. Green computing is the emerging practice of using computing and information technology resources more efficiently while maintaining or improving overall performance. The concept identifies the barriers and benefits of green computing.

3. 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.

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. There are many areas in which Uses of green computing are
- Energy Management in Data Centre's.
- Green Cloud Computing in Energy Efficiency.
- Green Wireless Network.
- Green Parallel Computing with Big Data Systems.
- Green cloud computing along with genetic algorithm.

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

Ans:- 1. Electronic waste or e-waste describes discarded electrical or electronic devices. Used electronics which are destined for refurbishment, reuse, resale, salvage recycling through material recovery, or disposal are also considered e-waste.

2. E-waste is particularly dangerous due to toxic chemicals that naturally leach from the metals inside when buried.

3. 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.

Ways to reduce E-Waste:-

1. Improperly disposed e-waste is becoming more and more hazardous, especially as the sheer volume of our e-waste increases.

2. 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.

3. Be a good consumer:- i)Do some research when you're ready to buy a new product. Make sure it's one that won't break easily or become damaged shortly after you purchase it.

ii) In other words, look for products likely to have a much longer lifespan so you won't need to replace it within a few years, or even months.

4. Buy environmentally friendly electronics**.** Look for products labeled Energy Star or certified by the Electronic Product Environmental Assessment Tool (EPEAT). Why use a memory stick or device when you can now easily store significant amounts of data on the Internet. There are many different types of clouds storage available online such as Dropbox and Google Drive (free). Some of the paid services will provide a free 30-day trial so you can see what will work best for you.

5. Reuse large electronics**.** Recycle electronics and batteries in e-waste recycling bins located around campus**.** Large electronics can go in the larger bins found in your building.

3) What are the benefits of going paperless.

Ans:-

1. Document organization:-

i). The ability to quickly locate and disseminate information may enhance your company's efficiency and professional image.
ii). Spending time hunting through piles of paper slows down response time in an age when most answers are only a few keystrokes away.
iii). By scanning electronic copies of receipts and invoices, documents can be sorted, filed, and organized for quick retrieval when it matters most.

2. Boosts Security:-

i). 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.
ii). Document management software has advanced security capabilities that can tackle these challenges.

3. Eases Transfer of Information:-

i). 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).
ii). Many commonly used applications, like Microsoft Office and Adobe Acrobat, integrate with document management systems.

4. Automatic backups:-

i). When you accidentally throw out an important paper, it's usually gone forever. However, maintaining electronic files allows for multiple backup points.
ii). Data can be saved on flash drives, in the cloud, or to an external hard drive.
iii). For vitally important financial data, cloud-based accounting systems provide automatic backups on a pre-scheduled basis, which eliminates the need for small business owners to set aside time for manual backups.

5. Data security:-

i). Customers will always be concerned about privacy and data protection, which requires companies to respond by implementing proper data security procedures beyond locked filing cabinets and paper shredders.
ii). Many of today's cloud-based accounting systems offer bank-level data security to protect financial and customer information, which is more than most small companies with limited technology staff can afford to build in-house.

6. Financial benefits:-

i). The savings of going paperless extends beyond just the cost of the paper, which can be substantial.
ii). The cost of other office supplies like ink cartridges also decreases. Additional upgrades or replacements to expensive office equipment such as copiers and fax machines may also decrease in a paperless office.

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

Ans:-1. GitHub is a Git repository hosting service, but it adds many of its own features. While Git is a command line tool, GitHub provides a Web-based graphical interface.

2) It also provides access control and several collaboration features, such as a wikis and basic task management tools for every project

Advantages of using Github:-

1. It makes it easy to contribute to your open source projects:-

i). 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.
ii). 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. Markdown:-

i). Markdown allows you to use a simple text editor to write formatted documents.
ii). GitHub has revolutionized writing by channeling everything through Markdown: from the issue tracker, user comments, everything.
iii). 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.

4. GitHub is a repository:-

i). This was already mentioned before, but it's important to note, GitHub is a repository.
ii). 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.

5. 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.

Ans:-

Code:-

trail.py - C:\Users\acer\OneDrive\Documents\trail.py (3.9.1)

File Edit Format Run Options Window Help

```
import string
SHIFT = 3
CHOICE = input("would you like to encode or decode?")
WORD = input("Please enter text")
LETTERS = string.ascii_letters + string.punctuation + string.digits
ENCODED = ' '
if CHOICE == "encode":
    for letter in WORD:
        if letter == ' ':
            ENCODED = ENCODED + ' '
        else:
            x = (LETTERS.index(letter) +
                 SHIFT)
            ENCODED = ENCODED + LETTERS[x]
if CHOICE == "decode":
    for letter in WORD:
        if letter == ' ':
            ENCODED = ENCODED + ' '
        else:
            x = LETTERS.index(letter) - SHIFT
            ENCODED = ENCODED + LETTERS[x]

print(ENCODED)
```

Output:-

IDLE Shell 3.9.1

File Edit Shell Debug Options Window Help

```
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec  7 2020, 17:08:21) [MSC v.1927 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\acer\OneDrive\Documents\trail.py ==============
would you like to encode or decode?encode
Please enter textthere is no happy ending
 wkhuh lv qr kdssB hqglqj
>>>
============== RESTART: C:\Users\acer\OneDrive\Documents\trail.py ==============
would you like to encode or decode?decode
Please enter text wkhuh lv qr kdssB hqglqj
  there is no happy ending
>>>
```