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Subject:- IT TOOLS

Roll No:- 27

Class:-FYCS

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ASSIGNMENT NO. 1:-

Q1. Explain Green Computing with its advantages.

Answer:-

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

Advantages of Green Computing are:-

1. Sustainable Computing means reduced energy consumption that leads to reduced GHG emission and fossil fuel usage.
2. Green Computing is cost-effective due to less energy usage and cooling requirements.
3. Sustainable IT helps in the prevention and effective utilization of natural resources.
4. It encourages reuse and recyclability that will result in a lesser number of electronic waste.
5. Green IT uses non-toxic components which do not pose any health hazard to the end-user.
6. It causes a considerable reduction in the quantity of heat produced from computing devices.
7. Sustainable computing inspires people to reduce, reuse and recycle.
8. Green IT implementation helps in improving the public image of an individual or an organization.

Q2. What is E-waste? What can be done to reduce the impact of E-waste.

Answer:-

E-waste:-

E-waste is any electrical or electronic equipment that's been discarded. This includes working and broken items that are thrown in the garbage or donated to a charity reseller like Goodwill. Often, if the item goes unsold in the store, it will be thrown away. E-waste is particularly dangerous due to toxic chemicals that naturally leach from the metals inside when buried.

Method to reduce impact of E-waste are:-

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.
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.
4. **Maintain your Electronics:-** One of the best ways to save your money and reduce e-waste is to keep your electronics well-maintained, to increase its life.
5. **Repurpose or Re-evaluate:-** Always think twice before upgrading or buying a new electronic device:
 - a. Do you really need this new device?
 - b. Is it a need, or more of a want?
 - c. Will it add value to your personal or professional life in any way?
6. **Store Data Online:-** Cloud services are much better than you would think in reducing your environmental impact.
7. **Buy Energy Star Rated Electronics:-** Investing in environmental friendly electronics have interdependent benefits.
8. **Learn to Repair Broken Electronics at Home:-** Some brands of modern electronic devices are only meant to last for a few years under regular use before failing.
9. **Rent Electronic Equipment instead of Buying:-** If you are planning to use a specific piece of electronic equipment for a limited period of time, it would be a better idea to rent it instead of buying it.
10. **Spread the Word!:-** Let's say you've been faithful in your quest to reduce electronic waste. You're buying less unnecessary electronics and donating your outdated ones, among other things.

Q3. What are the benefits of going paperless.

Answer:-

Benefits of Going Paperless are:-

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.
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.
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.
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).

Q4. What is Github? Give advantages of using Github.

Answer:-

GitHub:-

Github is a hosting platform wherein developers can store their computer code in the github server in files and folders called repository and track them continuously. It is an open-source version control and collaboration platform for program developers.

It helps all the programmers to collaborate with each other who are working on a similar project and also share their code easily as and when required. The collection of these files will show the source code of a program which is spread across the files to make it easier to manage what can be many thousands of lines of code and still be able to find the parts you need to find.

Advantages of GitHub are:-

1. **It's free and it is open source:-** As discussed earlier, github is completely free and you can use it without paying and since it is an open source you can download the source code and can make changes as per the requirements.
2. **It is fast:-** Since most of the operations are preferred locally, it allows huge benefit in terms of speed.
3. **It provides good backup:-** Here chance of losing data is very low as it provides the multiple copies of it.
4. **Multiple developers can work:-** Github allows multiple developers to work on a single project at a time. It helps all the team members to work together on a single project at a time from different locations.

Q5. Write a program using PEP8 rules.

Answer:-

What is PEP8:-

PEP 8, sometimes spelled PEP8 or PEP-8, is a document that provides guidelines and best practices on how to write Python code. The primary focus of PEP 8 is to improve the readability and consistency of Python code.

PEP stands for Python Enhancement Proposal, and there are several of them. A PEP is a document that describes new features proposed for Python and documents aspects of Python, like design and style, for the community.

Code:-

```
pep8.py - D:/Semester-2/OOP/Python/pep8.py (3.9.1)
File Edit Format Run Options Window Help

# Writing this PYTHON CODE to get the user details using PEP8.

class Student:
    """Student Class"""

    def __init__(self, name = None, rollno = None, age = None, marks = None):
        self.name = name
        self.rollno = rollno
        self.age = age
        self.marks = marks

    def setAge(self, age):
        self.age = age

    def setMarks(self, marks):
        self.marks = marks

    def Display(self):
        print("Student Name is: ", self.name)
        print("Student Roll Number is: ", self.rollno)
        print("Student Age is: ", self.age)
        print("Student Marks is: ", self.marks)

std = Student("Gautam Chandrakant Mandaliya", 27)
std.setAge(18)
std.setMarks(82)
std.Display()
```

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 (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: D:/Semester-2/OOP/Python/pep8.py =====
Student Name is: Gautam Chandrakant Mandaliya
Student Roll Number is: 27
Student Age is: 18
Student Marks is: 82
>>>
```

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