

## Practical No 1

**Aim:** Creating account, repository on GitHub and Cloning repository in GitHub Page

- **Creating account on GitHub:**

1. Go to <https://github.com/join> in a web browser. You can use any web browser on your computer, phone, or tablet to join.
2. Enter your personal details. In addition to creating a username and entering an email address, you'll also have to create a password.
3. Click the green create an account button. It's below the form.
4. Complete the CAPTCHA puzzle. The instructions vary by puzzle, so just follow the on-screen instructions to confirm that you are a human.
5. Click the choose button for your desired plan. Once you select a plan, GitHub will send an email confirmation message to the address you entered.
6. Click the verify email address button in the message from GitHub. This confirms your email address and returns you to the sign-up process.
7. Review your plan selection and click continue.
8. Select your preferences and click submit

- **Repository on GitHub:**

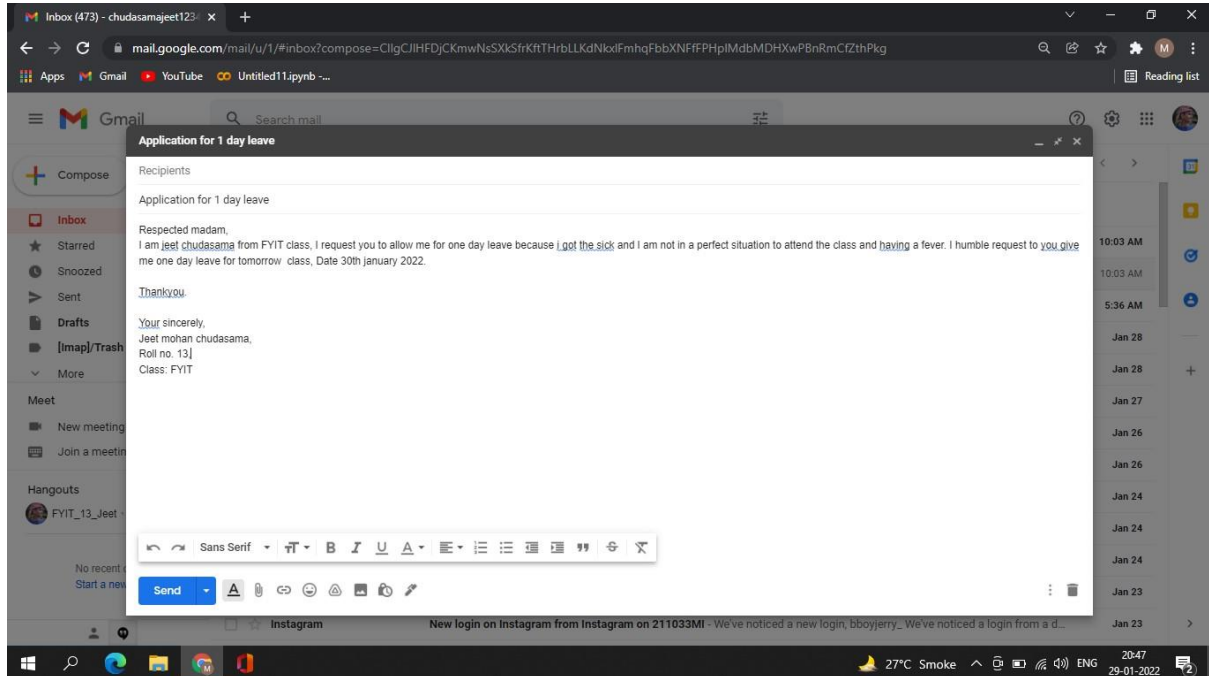
1. In the upper-right corner of any page use the + drop-down menu and select New Repository.
2. Type a short memorable name for your Repository.
3. Optionally add a description of your repository.
4. Choose a Repository visibility.
5. Select initialize this Repository with a README.
6. Click create Repository.

- **Cloning repository in GitHub:**

1. On GitHub, navigate to the main page of the Repository.
2. Above the list of files, click code.
3. To clone the repository using HTTPS, under “clone with HTTPS”. Click on copy button.
4. Open.
5. Change the current working directory to the location where you want the cloned directory.
6. Type git clone and then paste the URL you copied earlier.
7. Press enter to create your local clone.

## Practical No 2

**Aim:** Writing Email.



Respected madam,

I am jeet chudasama from FYIT class, I request you to allow me for one day leave because i got the sick and I am not in a perfect situation to attend the class and having a fever. I humble request to you give me one day leave for tomorrow class, Date 30th January 2022.

Thankyou.

Your sincerely,

Jeet mohan chudasama,

Roll no. 13,

Class: FYIT

## Practical No 3

**Aim:** Basic understanding on free and Open-Source Software.

### **A. Describe Open-Source software with example.**

Open-source software is software with source code that anyone can inspect, modify and enhance. Source code is the part of software that most computer users don't ever see. Its the code computer programmers can manipulate to change how a piece of software a program or application works. programmers who have access to a computer programs source code can be improve that program by adding features to it or fixing parts that don't always work correctly.

Examples: Mozilla's Firefox web browser, Thunderbird email client, PHP scripting language, Python programming language, etc.

### **B. Describe Free Software with example.**

Free software is a software which can be freely used, modified and redistributed with only one restriction any redistributed version of the software must be distributed with original terms of free use, modification and distribution known as copyleft. The concept of free software is the brainchild of Richard Stallman, head of the GNU project.

Example of free software is Linux an operating system that is proposed as an alternative to windows or other proprietary operating system.

### **C. Difference between Free and Open-Source software.**

#### **Free software.**

1. software is an important part of peoples lives.
2. software freedom translate to social freedom.
3. Freedom is a value that is more important than any economical advantage.
4. It is focused to provide moral collaboration.
5. But all free software dosent come under open source terminology.

#### **Open-Source Software.**

1. Software is just software. there are no ethics associated directly to it.
2. Ethics are associated to the people not to the software.
3. Freedom is not an absolute concept. freedom should be allowed, not imposed.
4. It is focused to provide economical collaboration.
5. All OSS comes under free software terminology.

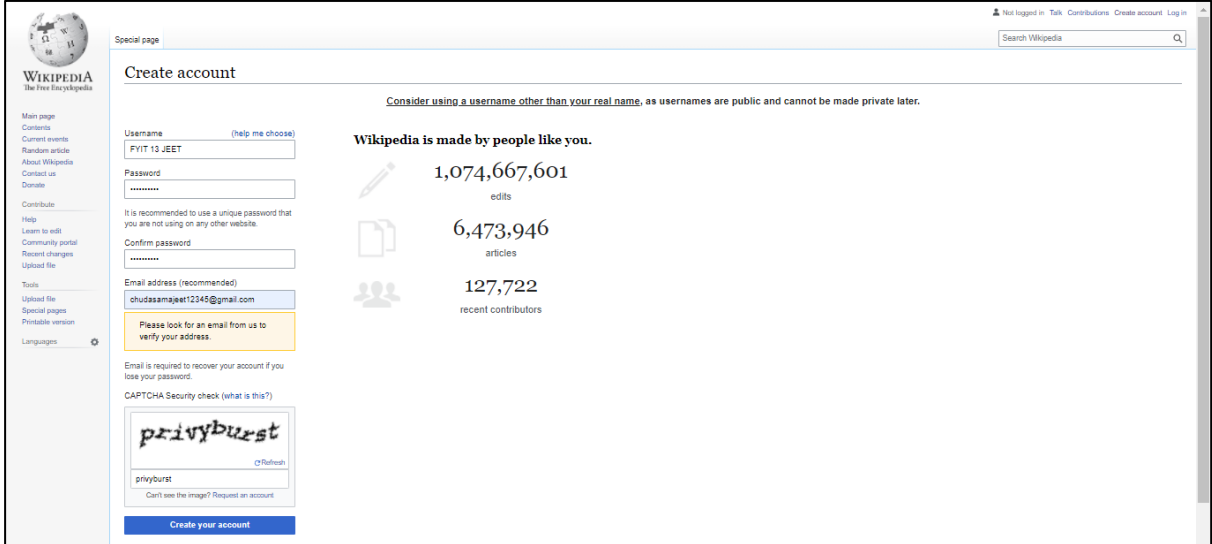
## Practical No 4

**Aim:** Introduction and Contributing to wikipedia.

### A. What is Wikipedia.

Wikipedia is a free online encyclopedia that provides open content to its users. It is written collaboratively and openly by a community of both actual and self-proclaimed experts who call themselves Wikipedia. It was created Jimmy Wales and Larry Sanger and was initially slated to be a for-profit website used to support Wales's and Sanger's earlier venture into online encyclopedia space, Nupedia. It is a type of website designed to make collaboration and modification of both content and structure easy, called a "wiki." Its purpose and scope eventually became a website that stores information on nearly all topics known to man, as in an encyclopedia, and thus it was named Wikipedia as an amalgamation of these two concepts.

### B. Steps to Create Account on Wikipedia.



Special page

Not logged in | Talk | Contributions | Create account | Log in

Search Wikipedia

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The Free Encyclopedia

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**Create account**

Consider using a username other than your real name, as usernames are public and cannot be made private later.

Username (help me choose)  
FYIT 13 JEET

Password  
.....

It is recommended to use a unique password that you are not using on any other website.

Confirm password  
.....

Email address (recommended)  
chudasamajeet12345@gmail.com

Please look for an email from us to verify your address.

Email is required to recover your account if you lose your password.

CAPTCHA Security check (what is this?)

privyburst

privyburst

Can't see the image? Request an account

**Create your account**

**Wikipedia is made by people like you.**

1,074,667,601  
edits

6,473,946  
articles

127,722  
recent contributors

---

Special page

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**Log in**

Username  
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Password  
.....

☐ Keep me logged in (for up to 365 days)

**Log in**

Help with logging in  
Forgot your password?

Don't have an account?  
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Article Talk

## Information technology

From Wikipedia, the free encyclopedia

"*IT*" redirects here. For other uses, see *IT (disambiguation)*.

"*infotech*" redirects here. For the Indian company, see *Cyient*.

**Information technology** (IT) is the use of **computers** to create, process, store, retrieve, and exchange all kinds of electronic data<sup>[1]</sup> and information. IT is typically used within the context of business operations as opposed to personal or entertainment technologies.<sup>[2]</sup> It is considered to be a subset of information and communications technology (ICT). An **information technology system** (**IT system**) is generally an **information system**, a **communications system**, or, more specifically speaking, a **computer system** — including all hardware, software, and peripheral equipment — operated by a limited group of IT users.

Humans have been storing, retrieving, manipulating, and communicating information since the Sumerians in Mesopotamia developed writing in about 3000 BC.<sup>[3]</sup> However, the term *information technology* in its modern sense first appeared in a 1958 article published in the *Harvard Business Review*; authors Harold J. Levavitt and Thomas L. Whisler commented that "the new technology does not yet have a single established name. We shall call it information technology (IT)."<sup>[4]</sup> Their definition consists of three categories: techniques for processing, the application of statistical and mathematical methods to decision-making, and the simulation of higher-order thinking through computer programs.<sup>[4]</sup>

The term is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones. Several products or services within an economy are associated with information technology, including computer hardware, software, electronics, semiconductors, internet, telecom equipment, and e-commerce.<sup>[5][6]</sup>

Based on the storage and processing technologies employed, it is possible to distinguish four distinct phases of IT development: pre-mechanical (3000 BC — 1450 AD), mechanical (1450—1840), electromechanical (1840—1940), and electronic (1940 to present).<sup>[3]</sup> This article focuses on the most recent period (electronic).

Information technology is also a branch of **computer science**, which can be defined as the overall study of procedure, structure, and the processing of various types of data. As this field continues to evolve across the world, the overall priority and importance has also grown, which is where we begin to see the introduction of computer science-related courses in K-12 education. However, concerns have been raised about this fact that most schools are lacking advanced-placement courses in this field.<sup>[7]</sup>

Contents [hide]
<b>1 History of computer technology</b>
<b>2 Electronic data processing</b>
<b>2.1 Data storage</b>
2.1.1 Databases
2.2 Data retrieval

Information science

**General aspects**

- Access - Architecture - Behavior - Management - Retrieval - Seeking - Society - Knowledge organization - Ontology - Philosophy - Science and technology studies - Taxonomy

**Related fields and sub-fields**

- Bibliometrics - Categorization - Censorship - Classification - Computer data storage - Cultural studies - Data modeling - Informatics - Information technology - Intellectual freedom - Intellectual property - Library and information science - Memory - Preservation - Privacy - Quantum information science

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**B** **I** **Ω** **∞** **↻** **⌂** **✎** > Advanced > Special characters > Help > Cite

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Content that violates our copyrights will be deleted. Encyclopedic content must be verifiable through citations to reliable sources.

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Examples of information technology''  
So how is IT actually involved in day-to-day business? Consider five common examples of IT and teams at work:  
'''Server upgrade.'''  
One or more data center servers near the end of their operational and maintenance lifecycle. IT staff will select and procure replacement servers, configure and deploy the new servers, backup applications and data on existing servers, transfer that data and applications to the new servers, validate that the new servers are working properly and then repurpose or decommission and dispose of the old servers.  
'''Security monitoring.'''  
Businesses routinely employ tools to monitor and log activity in applications, networks and system IT staff receive alerts of potential threats or noncompliant behavior -- such as a user attempting to access a restricted file -- check logs and other reporting tools to investigate and determine the root cause of the alert and take prompt action to address and remediate the threat, often driving changes and improvements to security posture that can prevent similar events in the future.  
'''New software.'''  
The business determines a need for a new mobile application that can allow customers to log in and access account information or conduct other transactions from smartphones and tablets. Developers work to create and refine a suitable application according to a planned roadmap. Operations staff posts each iteration of the new mobile application for download and deploy the back-end components of the app to the organization's infrastructure.  
'''Business improvement.'''  
A business requires more availability from a critical application to help with revenue or business continuance strategies. The IT staff might be called upon to architect a high-availability cluster to provide greater performance and resilience for the application to ensure that the application can continue to function in the face of single outages. This can be paired with enhancements to data storage protection and recovery.  
'''User support.'''  
Developers are building a major upgrade for a vital business application. Developers and admins will collaborate to create new documentation for the upgrade. IT staff might deploy the upgrade for limited beta testing -- allowing a select group of users to try the new version -- while also developing and delivering comprehensive training that prepares all users for the new version's eventual release.

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Humans have been storing, retrieving, manipulating, and communicating information since the [[Sumer]]ians in [[Mesopotamia]] developed [[Cuneiform|writing]] in about

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[https://en.wikipedia.org/wiki/Main\\_Page](https://en.wikipedia.org/wiki/Main_Page)

## Practical No 5

**Aim:** Using practical examples, describe green computing. List and explain the steps that you take to contribute to green computing.

### **Greencomputing:**

Green computing, also called green technology, is the environmentally responsible use of computers and related resources. Such practices include the implementation of energy-efficient central processing units (CPUs), servers and peripherals as well as reduced resource consumption and proper disposal of electronic waste (e-waste).

Green computing is the name attached to this movement, which represents an environmentally responsible way to reduce power and environmental waste.

The goals of green computing are similar to green chemistry; reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime, and promote the recyclability or biodegradability of defunct products and factory waste research continues into key areas such as making the use of computers as energy-efficient as possible, and designing algorithms and systems for efficiency-related computer technologies.

### **Steps that can be used to contribute to green computing**

#### **1. Purchase energy-saving hardware**

purchasing energy-saving power supply units can save money, help the environment and they are often quieter.

#### **2. Power down computers while not using**

many of us leave our computers running even when we are not using them, this leads to waste of energy. if you do not want to switch them off completely use sleep mode or hibernate, this will help save the power and keep it to its current state to use it when needed.

#### **3. Use a laptop instead of a desktop**

Laptops are environmentally friendly because they have components that do not require a lot of power. use a laptop as much as you can.

#### **4. Use power-saving features**

These features in a computer can command the computer to do various energy-saving tasks automatically, therefore saving a lot of power.

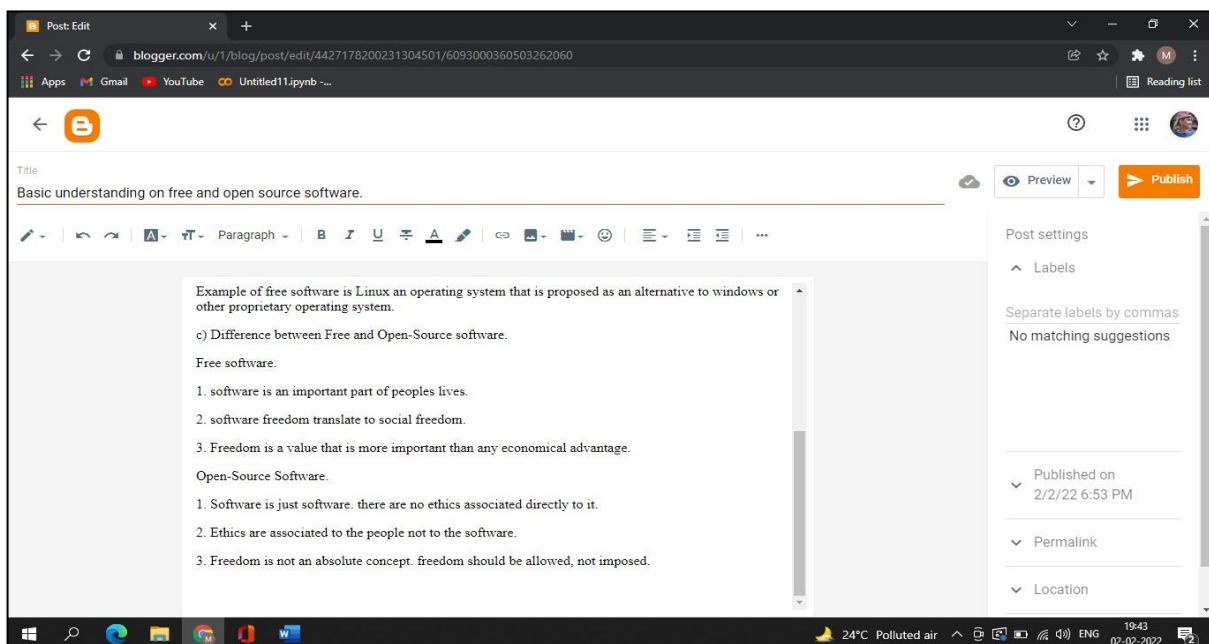
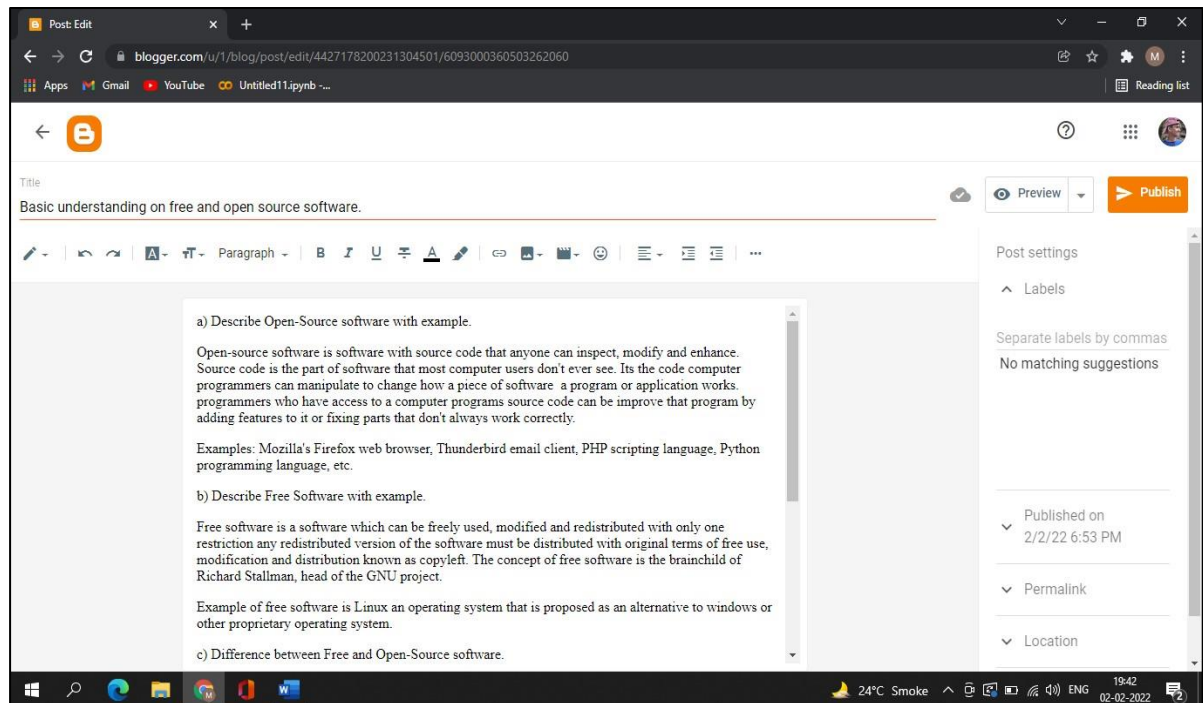
## **5. Recycle.**

Discard used or unwanted electronic equipment in a convenient and environmentally responsible manner. Computers have toxin metals and pollutants that can emit harmful emissions into the environment. Never discard computers in a landfill. Recycle them instead through manufacturer programs such as HP's Planet Partners recycling service or recycling facilities in your community. Or donate still-working computers to a non-profit agency.



## Practical No 6

**Aim:** Writing Blogs.



Blogger Posts

Search posts

FYIT13jeet

+ NEW POST

Posts

Stats

Comments

Earnings

Pages

Layout

Theme

Settings

Reading List

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All (1)

MANAGE

B Basic understanding on free and open source software.

Published • Feb 2

Jeet

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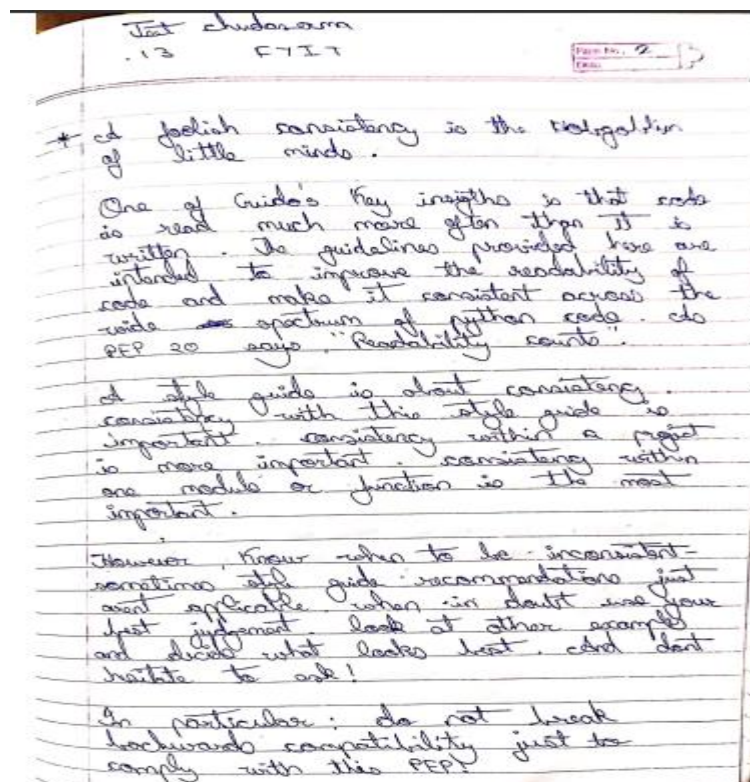
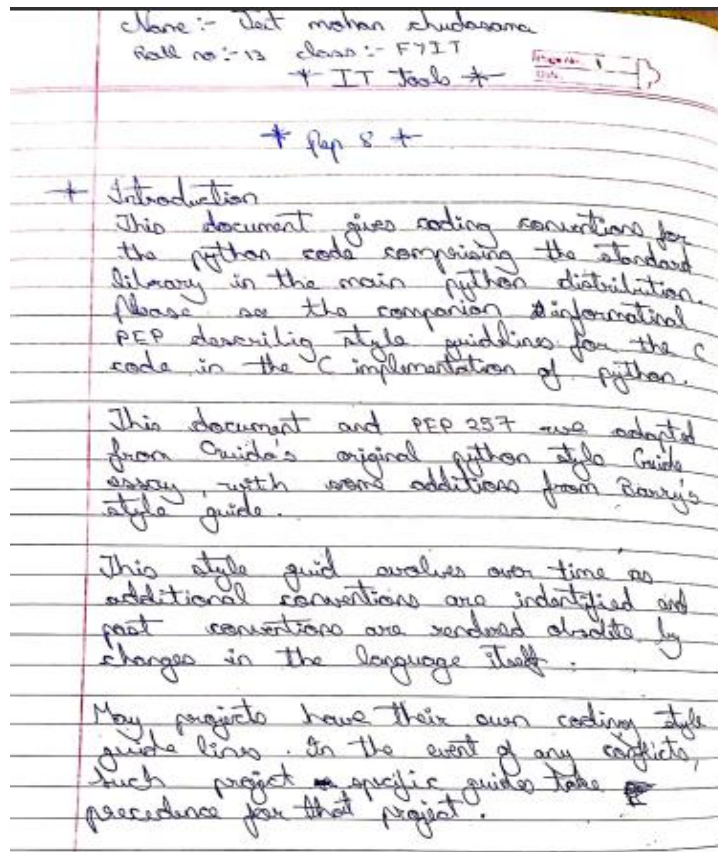
24°C Smoke

19:48

02-02-2022

## Practical No 7

**Aim:** Implementing coding practices in Python using PEP8.



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Some other good reasons to ignore a particular guideline:-

1. When applying the guideline would make the code less readable even for someone who is used to reading code that follows this PEP.
2. To be consistent with surrounding code that also breaks it --- although this is also an opportunity to ~~set~~ clean up someone else's mess.
3. Because the code in question precludes the introduction of the guideline and there is no other reason to be modifying that code.
4. when the code needs to remain compatible with older versions of python that don't support the feature recommended by the style guide.

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#### \* Code lay-out

##### + Indentation

Use 4 spaces per indentation level.

Continuation lines should align wrapped elements either vertically using python's implicit line joining inside parentheses, brackets and braces or using a hanging indent. when using a hanging indent the following should be no arguments on the first line and further indentation should be used to clearly distinguish itself as a continuation:

# correct:

# aligned with opening delimiter.

```
foo = long_function_name(var_one, var_two,
var_three, var_four)
```

# add 4 spaces (an extra level of indentation) to distinguish arguments from the rest.

```
def long_function_name(
    var_one, var_two,
    var_three,
```



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```
var-four):
    print(var-one)

# wrong indents should add a level.
foo = long-function-name(
    var-one, var-two,
    var-three, var-four)
```

# wrong:

# arguments on first line forbidden when not using vertical alignment.

```
foo:
    long-function-name(var-one,
    var-two,
    var-three, var-four)
```

# further indentation required as indentation is not distinguishable

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```
def long-function-name(
    var-one, var-two, var-three,
    var-four):
    print(var-one)
```

The 4-space rule is optional for continuation lines.

Optional:

# wrong indents may be indented to other than 4 spaces.

```
foo = long-function-name(
    var-one, var-two,
    var-three, var-four)
```

when the conditional part of an if-statement is long enough to require that it be written across multiple lines, it's worth noting that the combination of a two character keyword, plus a single space, plus an opening

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parenthesis creates a natural 4-space indent for the subsequent line of the multiline conditional. This can produce a visual effect conflict with the indented suite of code nested inside the if-statement which would also naturally be indented to 4 spaces.

This PEP takes no explicit position on how or whether to further visually distinguish such conditional lines from the nested suite inside the if-statement. Acceptable options in this situation include, but are not limited to:

- # No extra indentation.

```
if (this-is-one-thing and
    that-is-another-thing):
    do-something()
```

- # Add a comment, which will provide some distinction in editors.

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# Supporting syntax highlighting.

```
if (this-is-one-thing and
    that-is-another-thing):
    # Since both conditions are true,
    # we can fabricate:
    do-something()
```

# Add some extra indentation on the conditional ~~and~~ continuation line.

```
if (this-is-one-thing
    and
    that-is-another-thing):
    do-something()
```

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The closing brace / bracket / parenthesis on multiline constructs may either line up under the first non-whitespace character of the last line of list, as in:

```
my-list = [
    1, 2, 3,
    4, 5, 6,
]
```

result =

some-function-that-takes-arguments (

```
'a', 'b', 'c',
'd', 'e', 'f',
)
```

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or it may be lined up under the first character of the line that starts the multiline construct, as in:

```
my-list = [
    1, 2, 3,
    4, 5, 6,
]
```

result =

some-function-that-takes-arguments (

```
'a', 'b', 'c',
'd', 'e', 'f',
)
```



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\* Tabs or Spaces?

Spaces are the preferred indentation method.

Tabs should be used solely to remain consistent with code that is already indented with tabs.

Python disallows mixing tabs and spaces for indentation.

\* Maximum line length.

Limit all lines to a maximum of 79 characters.

For flowing long blocks of text with fewer structural restrictions, the line length should be limited to 72 characters.

Limiting the required editor window width makes it possible to have several files open side by side, and works well when using code review tools that present the two versions in adjacent columns.

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The default wrapping in most tools disrupts the visual structure of the code, making it more difficult to understand. The limits are chosen to avoid ~~wrap~~ wrapping in editors with the window width set to 80 even if the tool places a marker ~~at~~ <sup>at</sup> the final column when wrapping lines. Some web-based tools may not offer dynamic line wrapping at all.

Some teams strongly prefer a larger line length for code maintained exclusively or primarily by a team that can reach agreement on this issue, it is okay to increase the line length limit up to 99 characters, provided that comments and docstrings are still wrapped at 72 characters.

The Python standard library is conservative and requires limiting lines to 79 characters and docstring / comments to 72.



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The preferred way of wrapping long lines is by using python's implicit line continuation inside parentheses, brackets and braces. Long lines can be broken over multiple lines by wrapping expressions in parentheses. These should be used in preference to using a backslash for line continuation.

Backslashes may still be appropriate at times. For example, long, multi-line with-statements could not use implicit continuation before python 3.10, so backslashes were acceptable for that case:

with

```
Open ('/path/to/some/file/you/want  
/to/read') as file_1,
```

```
Open ('/path/to/some/file/being/  
written', 'w') as file_2:
```

```
file_2.write(file_1.read())
```

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(see the previous discussion on multiline if-statements for further thoughts on the indentation of such multiline with-statements.)

Another such case is with assert statements.

make sure to indent the continued line appropriately.

\* should a line Break Before or after a Binary Operator?

For decades the recommended style was to break after binary operators. But this can hurt readability in two ways: the operators tend to get scattered across different columns on the screen and each operator is moved away from its operand and onto the previous line. Here, the eye has to do extra work to tell which items are added and which are subtracted:

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# wrong:

# operators sit far away from their operands.

$$\text{income} = (\text{gross} - \text{wages} + \text{taxable} - \text{interest} + (\text{dividends} - \text{qualified} - \text{dividends}) - \text{ira} - \text{deduction} - \text{student} - \text{loan} - \text{interest})$$

To solve this readability problem, mathematicians and their publishers follow the opposite convention. Donald Knuth explains the traditional rule in his computers and typesetting series: "although formulas within a paragraph always break after binary operations and relations, displayed formulas always break before binary operations".

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following the tradition from mathematicians and their publishers follows the opposite convention. Donald usually results in more readable code:

# correct:

# easy to match operators with operands.

$$\text{income} = (\text{gross} - \text{wages} + \text{taxable} - \text{interest} + (\text{dividends} - \text{qualified} - \text{dividends}) - \text{ira} - \text{deduction} - \text{student} - \text{loan} - \text{interest})$$

In python code, it is permissible to break before or after a binary

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is consistent locally. for new code  
Kuth's style is suggested.

#### \* Blank lines

Surround top-level function and class  
definitions with two blank lines.

Method definitions inside a class are  
surrounded by a single blank line.

Extra blank lines may be used sparingly  
to separate groups of related functions.  
Blank lines may be omitted between a  
block of related one-liners or a  
set of dummy implementations.

Use blank lines in functions, sparingly  
to indicate logical sections.

Python accepts the control-L form  
feed character as whitespace. Many  
tools treat these characters as  
page separators, so you may use  
them to separate pages of related

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sections of your file. Note, some  
editors and web-based code viewers  
may not recognize control-L as a  
form feed and will show another  
glyph in its place.

#### \* Source file encoding

Code in the core python distribution  
should always use UTF-8 and should  
not have an encoding declaration.

In the standard library, non-UTF-8  
encodings should be used only  
for test purposes only to create  
places and human names. If  
using non-ASCII characters as data,  
avoid noisy unicode characters like  
yogya and byte order marks.

File identifiers in the python standard  
library must use ASCII-only  
identifiers and should use english  
words whenever feasible (in many  
cases, abbreviations and technical terms  
are used which aren't english).



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Open source projects with a global audience are encouraged to adopt a similar policy.

### \* Imports

- Imports should usually be on separate lines:

# correct:

```
import os
```

```
import sys
```

# wrong:

```
import sys, os
```

It's okay to say this though:

# correct: ~~the~~

```
from subprocess import Popen,
```

```
PIPE
```

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- Imports are always put at the top of the file just after module comments and docstrings and before module global and constants.

Imports should be grouped in the following order

1. Standard library imports.
2. Related third party imports.
3. Local application / library specific imports

you should put a blank line between each group of imports.

- absolute imports are recommended, as they are usually more readable and ~~that~~ tend to be better behaved or at least give better error messages if the import system is incorrectly

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Configured such as when a directory inside a package ends up on sys.path

import mypkg.sibling

from mypkg import sibling

from mypkg.sibling import

example

However, explicit relative imports are an acceptable alternative to absolute imports, especially when dealing with complex package layouts where using absolute imports would be unnecessarily verbose.

from . import sibling

from .sibling import example.

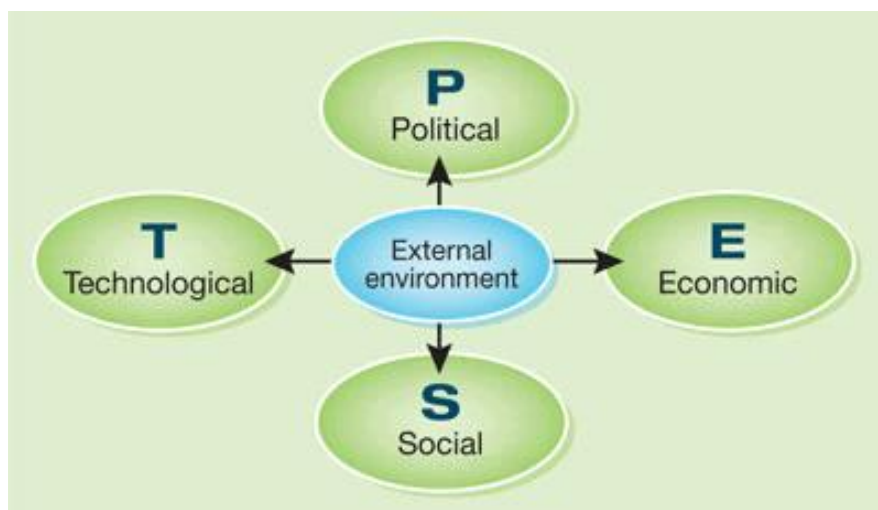
standard library code should avoid complex package layouts and always use absolute imports.

## Practical No 8

**Aim:** Importance of The Multidisciplinary Nature of Environmental Studies.

The word environment is derived from the French word 'environner' which means to 'encircle or surround'. Thus our environment can be defined as "the Social, Cultural and Physical conditions that surround, affect and influence the survival, growth and development of people, animals and plants". This broad definition includes the natural world and the technological environment as well as the cultural and social contexts that shape human lives.

EVS is a multidisciplinary academic field that is involved with the exploration, research, and expansion of an understanding of the living and physical environment. It also helps in a better understanding of the natural, political, technological, economic, social, and cultural aspects of environments. It can also be said that Environmental Studies or EVS is the science of physical phenomena in the environment.



The word 'disciplinary' means to have a disciplined study in a particular field. On the contrary, multidisciplinary refers to the combination of more than one discipline or field of study. It defines the multi-sectoral, and multi-dimensional study in various fields. For instance, when you study various subjects such as Science, Social Science, Mathematics, English, etc., then it is considered a multidisciplinary course of study.

What do you understand by the Multidisciplinary Nature of Environmental Studies?

Environmental Study is a vast subject to be studied upon. It has all the aspects of various subjects such as anthropology, science, social science, statistics, economics, computers, geology, health, and sociology. It illustrates the multi-sectoral and multi-dimensional study in various fields. It also educates us about the Physical, Social, Cultural, and Biological aspects.

It brings our natural environment and human impacts altogether. It is a multidisciplinary approach that deals with every issue that affects an organism. It covers the impacts of environmental science and social aspects of the environment as well.

Why is EVS known as the Multidisciplinary Nature of Environmental Studies?

Environmental Studies consist of different components. They are listed below:

- Anthropology – It is the study of human characteristics, their biological and psychological wellbeing, their societies and cultures, their development and evolution. EVS is related to anthropology as it deals with the study of humans and their environment as well across space and time.
- Biology – It is a branch of science that is concerned with the study of living organisms. It includes their physical structure, chemical processes, molecular interactions, development, and evolution. EVS is related to biology as it deals with the natural habitat of the living organisms.
- Chemistry – It is a branch of science that studies chemicals and the substances of which matter is composed of. In EVS, for the understanding of natural phenomena, we require knowledge of chemistry.
- Computers – With the advancing world, computers have become everyone's requirement. The Environmental Protection Agency uses computers to maintain a record and to investigate chemicals that are used in soil and water.
- Economics – It is a branch of knowledge that is concerned with the production, consumption, and distribution of goods and services. To protect the environment from pollution, global warming, and climate change, various economic policies have been developed in analysing and finding solutions or remedies for environmental issues.
- Geology – It is the study of physical structures and the substances that are present on earth, their history, and the processes they go through. EVS also deals with the study of the earth and the environment.
- Physics – It is a branch of science that studies the energy and matter in space and time and their relationship with each other. Physics works on energy conservation, atmospheric models, and various issues related to the **environment**.
- Sociology – It is the study of social life, social change, social causes, and the social consequences of human behavior. It also deals with the relationship between modern societies and the environment.
- Statistics – It is the study of collecting, analysing, interpreting, and presenting quantitative data. It is also used to analyze data to discover patterns and suggest the best growth of the environment.

Importance of Multidisciplinary nature of Environmental Studies

Environmental Studies is essential as it helps us to understand our surrounding environment and natural phenomena. Numerous points provide us the importance of the Multidisciplinary nature of Environmental Studies. They are:

- It helps in gaining knowledge about the current environmental issues. It provides us with the necessary skills to obtain solutions for various environmental issues such as pollution, global warming, and climate change.
- It helps in maintaining the ecological balance through fundamental knowledge of environmental systems and processes.

- It provides us information about the changes in the environment due to anthropogenic factors. It also provides us the skills for analysing different environmental systems and changes in the environment because of human activities.
- It aims to preserve and protect biodiversity. It makes us familiar with the various species of flora and fauna. It provides us with different ways to preserve and protect them.
- It provides us the consciousness about our duties towards the environment. It additionally educates us about the various environmental issues which need to be resolved at a faster pace. Environmental issues such as conservation of energy, toxic emissions, water conservation, proper disposal of wastes, rising global temperature, and many more are also explained to us by environmental studies.
- Various more issues such as the depletion of natural resources, growing human population, rising numbers of natural calamities, for instance, earthquakes, tsunamis, floods, drought, are all serious concerns that need to be taken seriously. EVS makes us understand the harmful and drastic effects of these issues on the environment, and humans as well.
- By studying Environmental Studies, people can explore and connect with their natural and surrounding environment. It helps people in developing their insights for understanding human processes, natural phenomena, and various changes in the environment.

#### What is the Scope of Multidisciplinary Nature of Environmental Studies?

The scope of Multidisciplinary Nature of Environmental Studies consists of various aspects such as biological, cultural, social, and physical. It is also related to other subjects such as science, geography, economics, statistics, health, technology, population, and ecology.

- Biological aspects – This is one of the most essential aspects of environmental studies. It is the solution of an organism, or a population, or a community to changes in its environment. Human beings, plants, animals, microorganisms, birds, insects are all included in the biological aspects.
- Cultural aspects – The environment gives knowledge about different customs, laws, dresses, values, and religious beliefs. They all are included under cultural aspects. Environmental studies help us in understanding these diverse aspects.
- Physical aspects – The environment which is shaped by human activities are considered as physical aspects, for example, bridges, roads, buildings, industries, etc. Apart from them, natural resources such as land, air, water, minerals, vegetation, landforms like hills, oceans, mountains, forests, etc.
- Social aspects – It illustrates the standard of living, tastes, preferences, educational status, and etiquettes of individuals living in society. Environmental Studies give acquaintance about people who have linguistic, cultural, and educational differences in societies.

#### How the Multidisciplinary Nature of Environmental Studies helps in solving environmental problems?

Environmental Studies deals with various areas – conservation of natural resources, controlling pollution, the impact of the growing human population on the environment. A multidisciplinary nature is required to address these complex environmental problems. These problems are connected with different sectors like agriculture, land degradation, economic loss, contamination of natural resources, forestry, habitat fragmentation, ozone layer depletion, solid waste management, etc.



The emerging climatic and environmental concerns need multidisciplinary solutions. Environmental issues are an alarming indication of upcoming disasters. Therefore, to gain knowledge about these issues, the Multidisciplinary Nature of Environmental Studies is a must.

There are various ways in which our environment can be conserved. Some of them are listed below:

- Replacing disposal items with reusable ones.
- Proper disposal of wastes
- Recycling of paper, plastics, etc.
- Neutralizing the poisonous emissions by the factories
- Conserve resources like water and electricity
- Support eco-friendly products more
- Afforestation and reforestation
- Enhancement of the use of public transport
- Limit the use of paper
- By spreading awareness about the importance of the environment

A pure, harmless, and pollution-free environment is every individual's right. These issues can be solved when people acquaintance with the need of conserving the environment. For this, knowledge of Environmental Studies is needed.

## Conclusion

EVS is a multidisciplinary academic field that is involved with the exploration, research, and expansion of an understanding of the living and physical environment. It has all the aspects of various subjects such as anthropology, science, social science, statistics, economics, computers, geology, health, and sociology. It brings our natural environment and human impacts altogether. Environmental Studies is essential as it helps us to understand our surrounding environment and natural phenomena.

It provides us with the necessary skills to obtain solutions for various environmental issues such as pollution, global warming, and climate change. It aims to preserve and protect biodiversity. Environmental Studies deals with various areas – conservation of natural resources, controlling pollution, the impact of the growing human population on the environment. Environmental issues such as conservation of energy, toxic emissions, water conservation, proper disposal of wastes, rising global temperature, and many more are also explained to us by environmental studies.

The emerging climatic and environmental concerns need multidisciplinary solutions. Environmental issues are an alarming indication of upcoming disasters. Therefore, to gain knowledge about these issues, the Multidisciplinary Nature of Environmental Studies is a must. The scope of Multidisciplinary Nature of Environmental Studies consists of various aspects

such as biological, cultural, social, and physical. It is also related to other subjects such as science, geography, economics, statistics, health, technology, population, and ecology.

## Practical No 9

**Aim:** Importance of Going Paperless.

“Going Paperless” is a term that was coined not so long ago to describe the processes of “reducing the amount of paper used in a business context, exchanging printed pages for digital documents especially in internal processes.”

Common paperless areas of choice by companies include receipts, invoices, tax returns and pay checks, among others. Areas that manual work adds no real value to the company and the steps required to have its work done are too time-consuming.

It should not be a surprise that, once this wave started, it was only a matter of time for it to become bigger. This happened mainly because of the rise of modern technology that is taking over companies worldwide, digitalising several processes that were previously made with tons of paper.

Seven reasons why going paperless may be beneficial for your small business:

### 1. Document organization

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

### 2. Client communication is faster and less expensive

By maintaining a customer email list, you can instantaneously communicate sales and special offers without incurring postage and printing expenses. With the advanced technology of smart devices, most people have immediate access to emails. While it increases efficiency, electronic communication also decreases storage costs as the amount of paper copies littering your office will begin to dwindle.

### 3. Paperless files are easily saved and retrieved on the go

With the advent of photo-scanning apps, business travellers can easily back up expense reports without needing to save a pile of papers to bring back to the office. Electronic files can also be shared with co-workers over a network or via email. Shifting to paperless documentation also makes the transportation of data more efficient, without the need for cumbersome fax machines or document couriers.

#### 4. Automatic backups

When you accidentally throw out an important paper, it's usually gone forever. However, maintaining electronic files allows for multiple backup points. Data can be saved on flash drives, in the cloud, or to an external hard drive. 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

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. 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. Environmental friendliness

According to the Environmental Paper Network's most recent State of the Paper Industry report, paper usage in North America is decreasing while the amount of paper recovered for recycling is increasing. Companies are striving to recycle, yet office copy paper alone still accounts for over 20 percent of the total paper usage in the United States. But being green is more than just reducing paper production. A paperless environment may also mean less energy consumption. Small businesses use less energy when printers, faxes, and copiers are inactive.

#### 7. Financial benefits

The savings of going paperless extends beyond just the cost of the paper, which can be substantial. 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.

The shift toward a paperless environment increases each year as new technology becomes available to improve data storage and electronic communication. Taking action to reduce paper usage may help your business be more efficient and enhance the level of security that guards your most valuable information.

## Practical No 10

**Aim:** Define the terms renewable resource and non-renewable and give examples of each resource type that are related to forage production.

A natural resource is something supplied by nature that helps support life. When you think of natural\_resources, you may think of minerals and fossil fuels. However, ecosystems and the services they provide are also natural resources. Biodiversity is a natural resource as well.

### Renewable\_Resources

Renewable resources can be replenished by natural processes as quickly as humans use them. Examples include sunlight and wind. Metals and other minerals are renewable too. They are not destroyed when they are used and can be recycled.



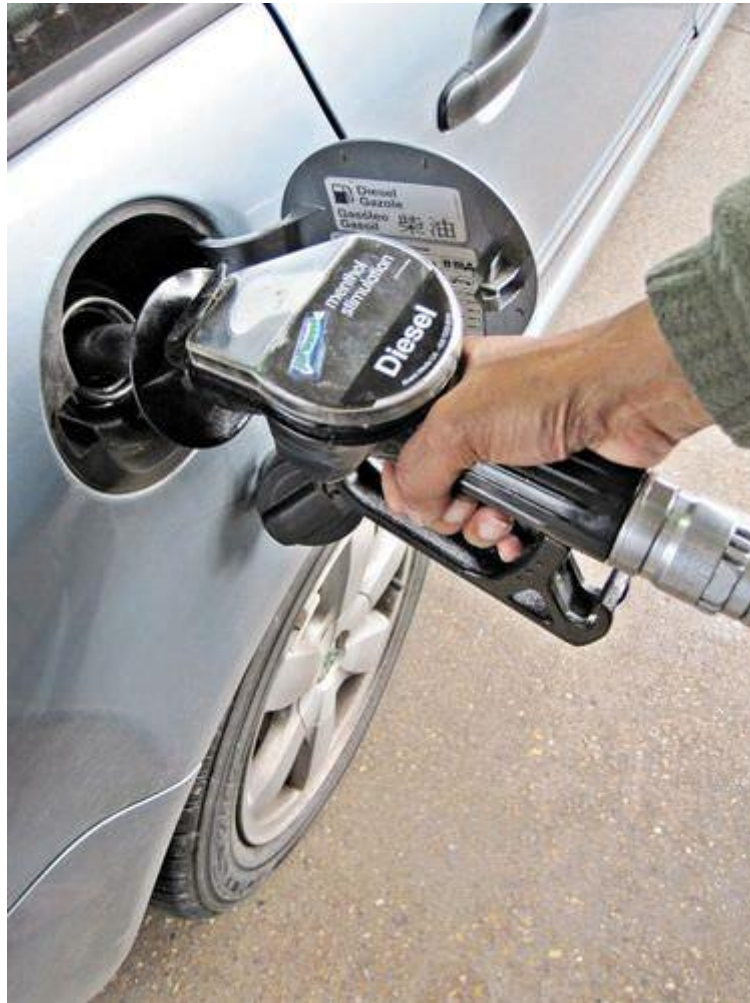
Wind is a renewable resource. Wind turbines like this one harness just a tiny fraction of wind energy.

Living things are considered to be renewable. This is because they can reproduce to replace themselves. However, they can be over-used or misused to the point of extinction. To be truly renewable, they must be used sustainably. Sustainable **use** is the use of resources in a way that meets the needs of the present and also preserves the resources for future generations.

### Non-renewable\_Resources

Non-renewable **resources** are natural\_resources that exist in fixed amounts and can be used up. Examples include fossil fuels such as petroleum, coal, and natural gas. These fuels formed from the remains of plants over hundreds of millions of years. We are using them up far faster than they could ever be replaced. At current rates of use, petroleum will be used up in just a few

decades and coal in less than 300 years. Nuclear power is also considered to be a non-renewable resource because it uses up uranium, which will sooner or later run out. It also produces harmful wastes that are difficult to dispose of safely.



Gasoline is made from crude oil. The crude oil pumped out of the ground is a black liquid called petroleum, which is a non-renewable resource.



### Coal is another non-renewable resource.

One environmental issue that has been of prominent concern in the 20th century has been the growth in human population. The chart below, from the population reference bureau, illustrates the dramatic growth in human population beginning around the year 1750. As human population has grown the demand for resources of all kinds has also grown. Supporting more people means producing more food, which in turn requires greater amounts of energy, soil nutrients, water, and other resources associated with agricultural production

There are many types of resources that go into producing food and producing forages. In general these resources have been grouped into two types: renewable resources and non-renewable resources. Renewable resources may be defined as resources that have the potential to be replaced over time by natural processes. The renewal process may be relatively quick, as with sunshine which comes on a daily basis. Or, the renewal process may be very slow, as in the formation of soil which may take hundreds of years. Non-renewable resources may be defined as resources whose stock or reserves is limited or fixed. The available supply of non-renewable resources may be replenished through recycling (e.g. recycling aluminium cans), but the overall supply remains relatively constant. The table below gives several examples of each type of resource.

Renewable Resources	Non-renewable resources
Solar Energy	Oil
Soil	Steel
Trees	Aluminium
Grass	Coal
Groundwater	Phosphates

Examining the resources listed in the table above suggests that modern agricultural production, including forage production, is dependent on a number of resources that are considered non-renewable. Farm equipment contains steel and aluminium parts and uses oil-based fuels. The energy to manufacture fertilizer and other agrichemicals is derived from oil, coal, and natural gas. Phosphate fertilizers are widely used on crops. The realization of this dependence on non-renewable resources has led to increased interest in developing and implementing so called sustainable agricultural production systems.