MALAD KANDIVALI EDUCATION SOCIETY'S
NAGINDAS KHANDWALA COLLEGE OF COMMERCE,
ARTS & MANAGEMENT STUDIES & SHANTABEN NAGINDAS
KHANDWALA COLLEGE OF SCIENCE
MALAD [W], MUMBAI – 64
(AUTONOMOUS)

(Reaccredited 'A' Grade by NAAC)
(AFFILIATED TO UNIVERSITY OF MUMBAI)
(ISO 9001:2015)

CERTIFICATE

Name: Mr. Rahul Kushwaha_____

Roll No: 37_____ **Programme**: BSc IT/CS **Semester**: II

This is certified to be a bonafide record of practical works done by the above student in the college laboratory for the course **IT platforms, Tools and Practices** (Course Code: **2026UISTP**) for the partial fulfillment of Second Semester of BSc IT/CS during the academic year 2020-2021.

The journal work is the original study work that has been duly approved in the year 2020-2021 by the undersigned.

_____ _____

External Examiner **Subject-In-Charge**
(Ms.Sweety Garg)

Date of Examination: (College Stamp)

Name: Rahul Kushwaha

Roll No: 37

Sr. No.	DATE	TITLE	SIGN
1.		INTRODUCTION and CONTRIBUTING TO WIKIPEDIA a) What is Wikipedia? b) Steps to Create Account on Wikipedia c) Creating Page on Wikipedia d) Edit your page	
2.		Creating account, repository on GitHub and Cloning repository in GitHub Page	
3.		BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE a) Describe Open-Source Software with Example. b) Describe Free Software with Example c) Difference between Free and Open-Source Software.	
4.		WRITING EMAIL	
5.		Using practical examples, describe green computing. List and explain the steps that you take to contribute to green computing	
6.		WRITING BLOGS	
7.		Implementing coding practices in Python using PEP8.	
8.		PRESENTATION: _____	

1. Description about Wikipedia and its features

Wikipedia is a free, open content online encyclopedia created through **the** collaborative effort of a community of users known as Wikipedians. Anyone registered on **the** site can create an article for publication; registration is not required to edit articles **Wikipedia** was **the** only non-commercial site of **the** top ten.

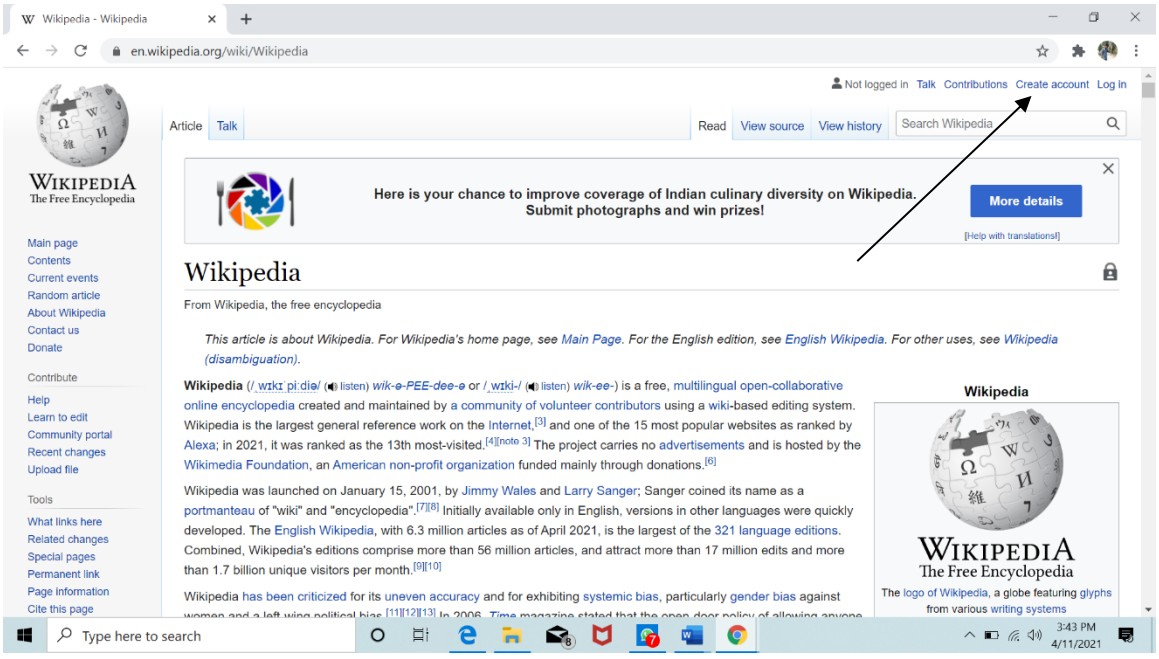
You may not have realized, but you've probably already used a **Wiki**. The most famous example most people have engaged with is **Wikipedia**, the free internet encyclopedia that anyone can edit.

Link between pages

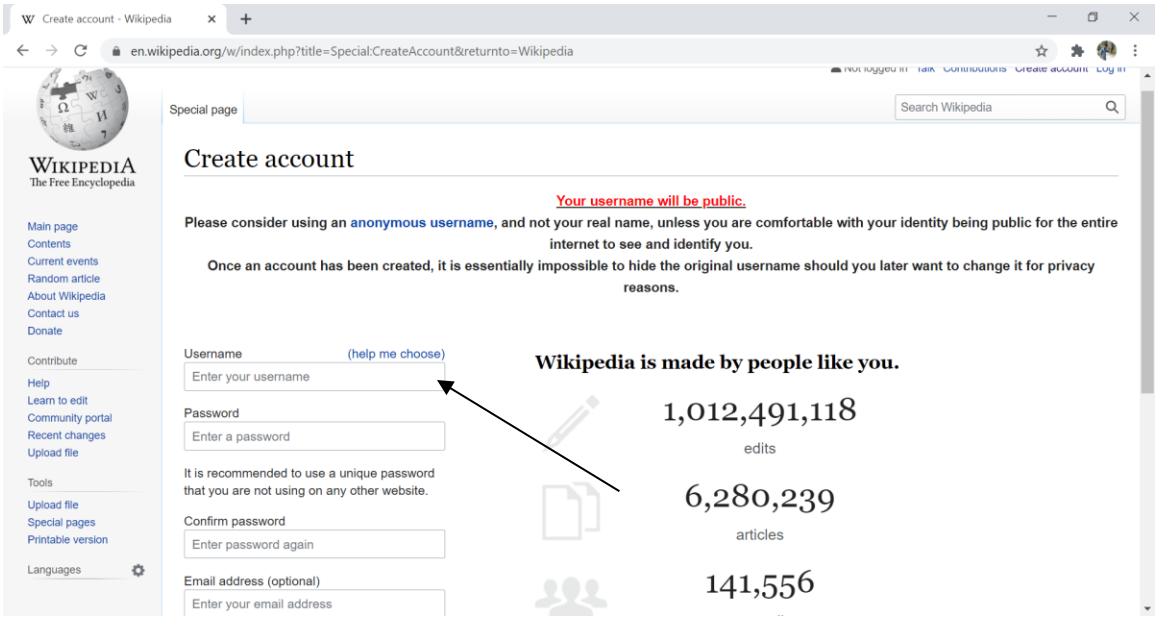
- Full page search.
- Hierarchical page **display**.
- A list of the most recently edited pages. Searching with tags.

a) Creating Account on Wikipedia

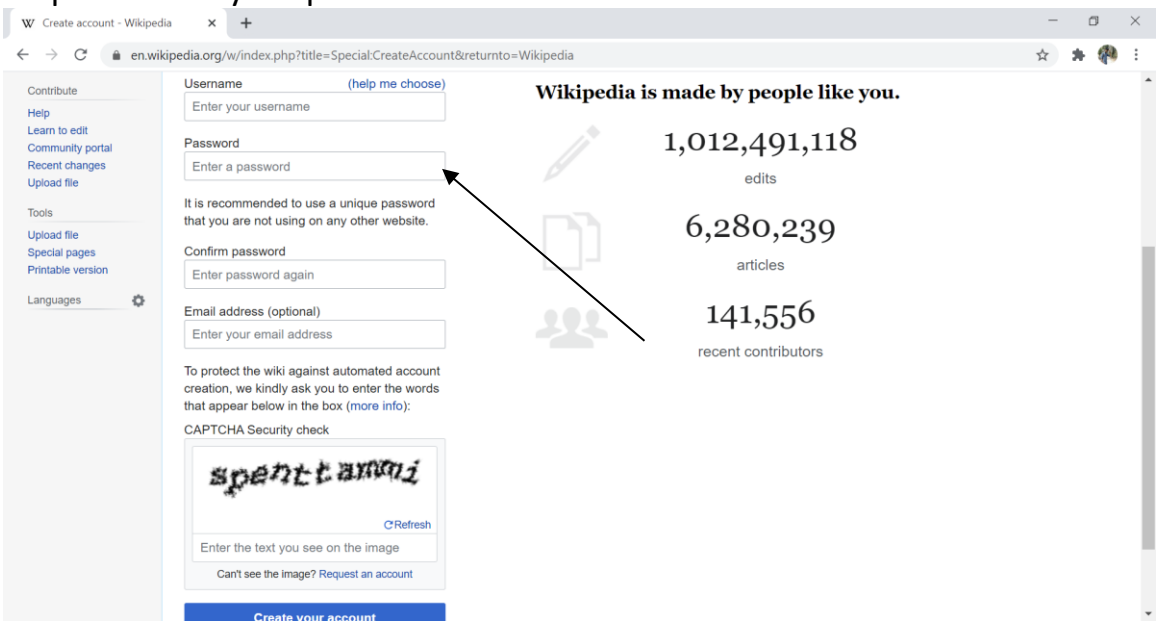
Step 1: To create your account click on create account.



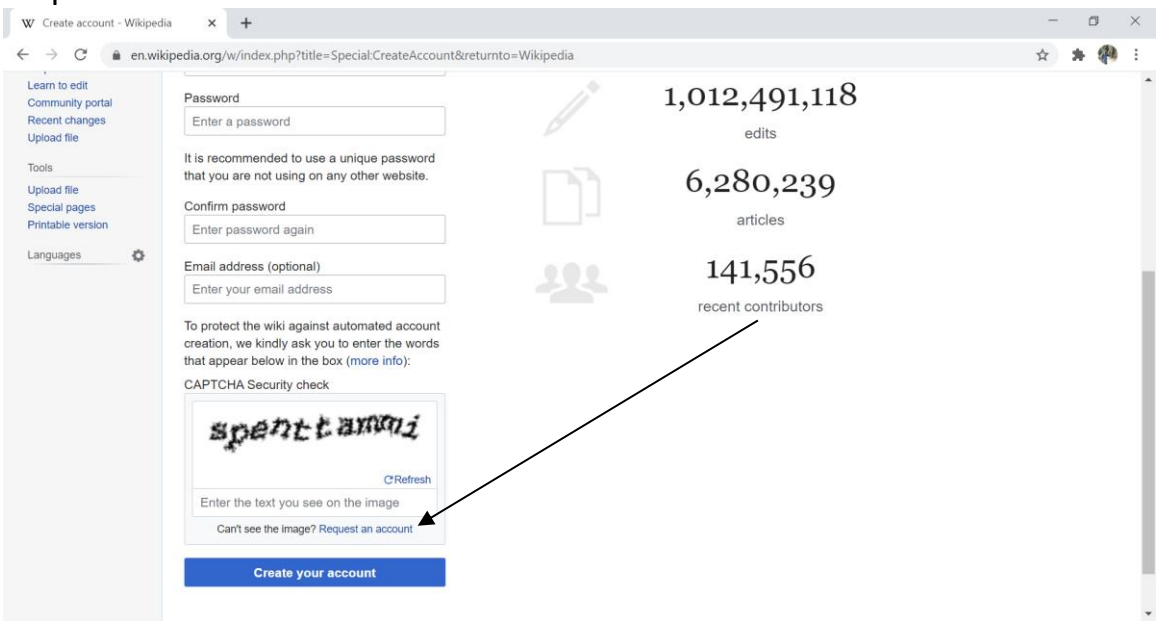
Step 2: Put **Unique** Username Here.



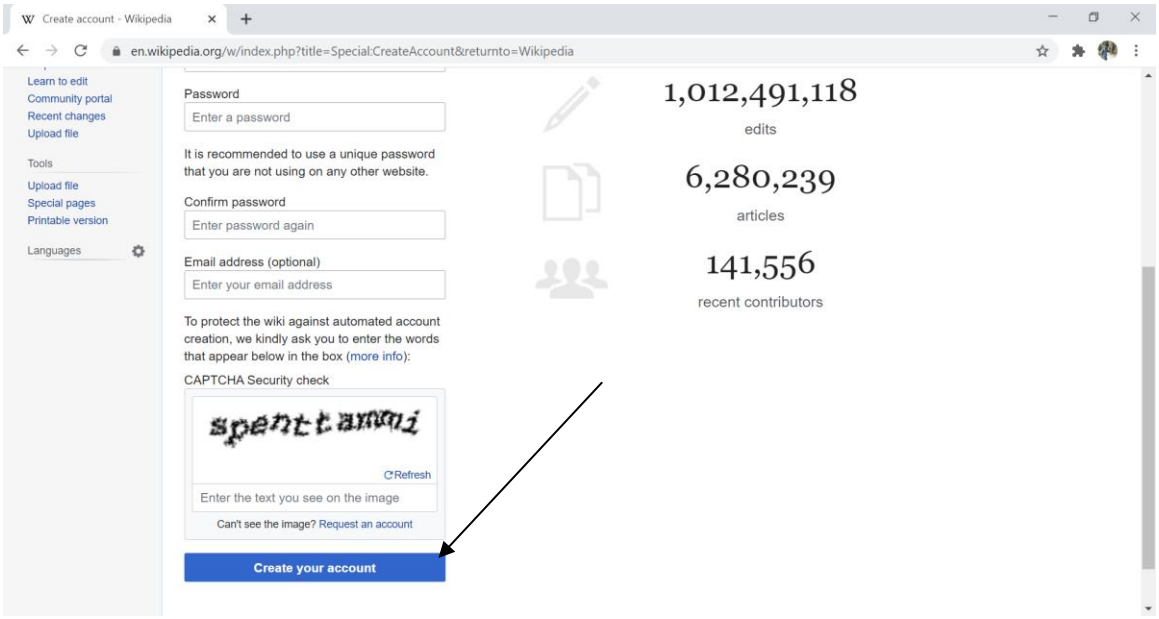
Step 3 : create your password and confirm it once.



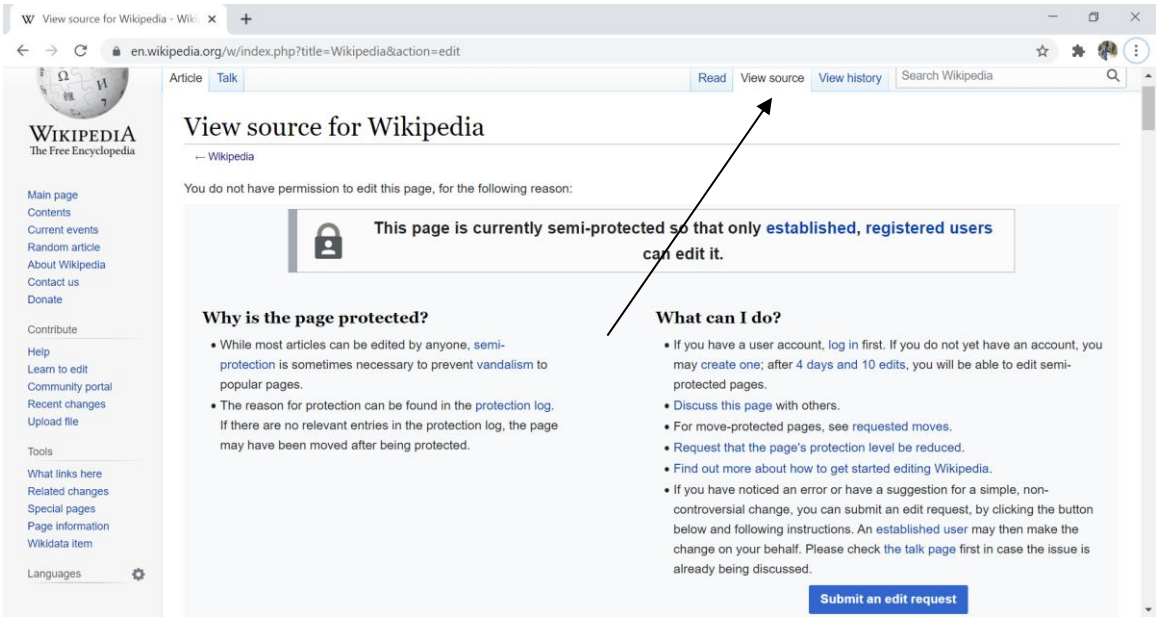
Step 4: Enter same text which is seen in the table



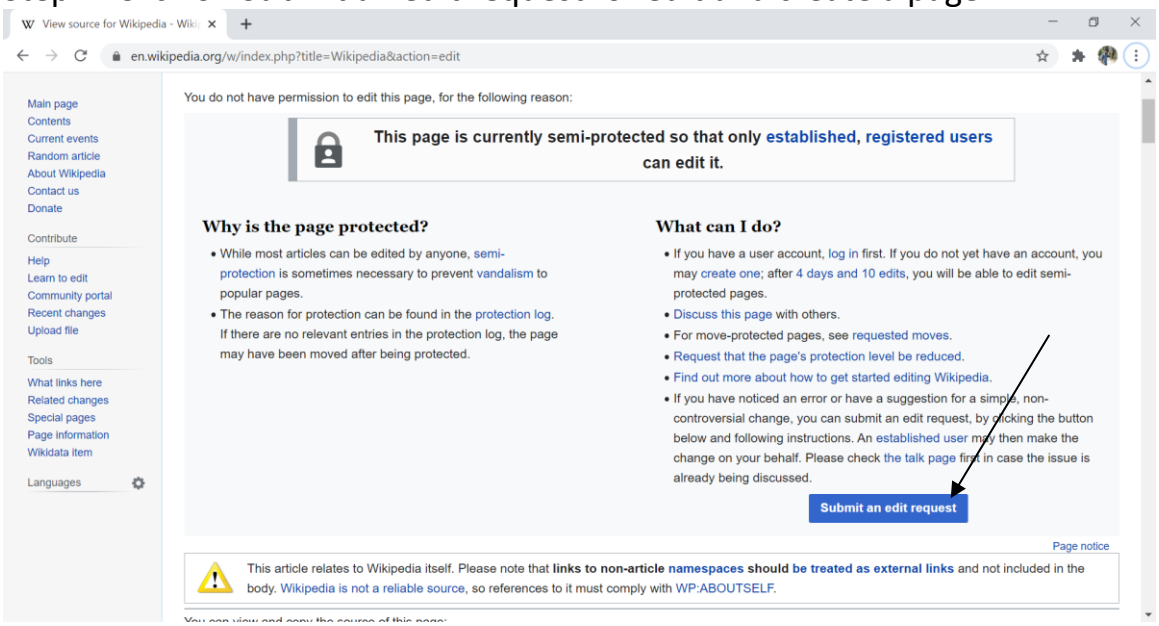
Step 5: click on Create account to create the account.



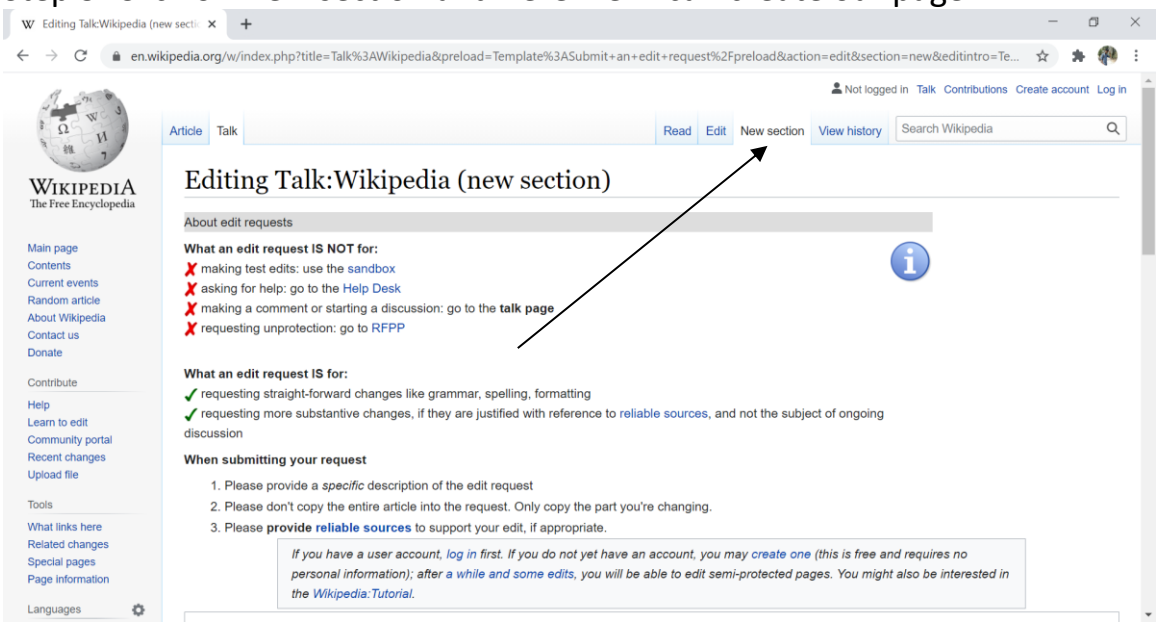
A. Creating your page on Wikipidea Step 1: Click on view source



Step 2: Click on Submit an edit request for edit and create a page.

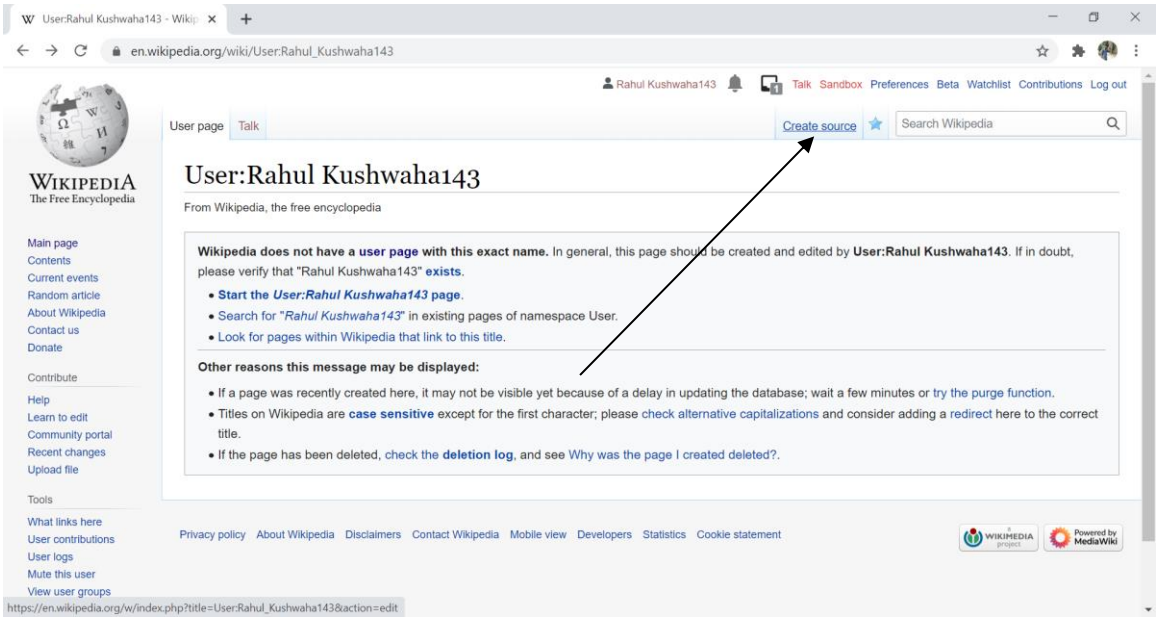


Step 3: Click on New section and here we v=can create our page

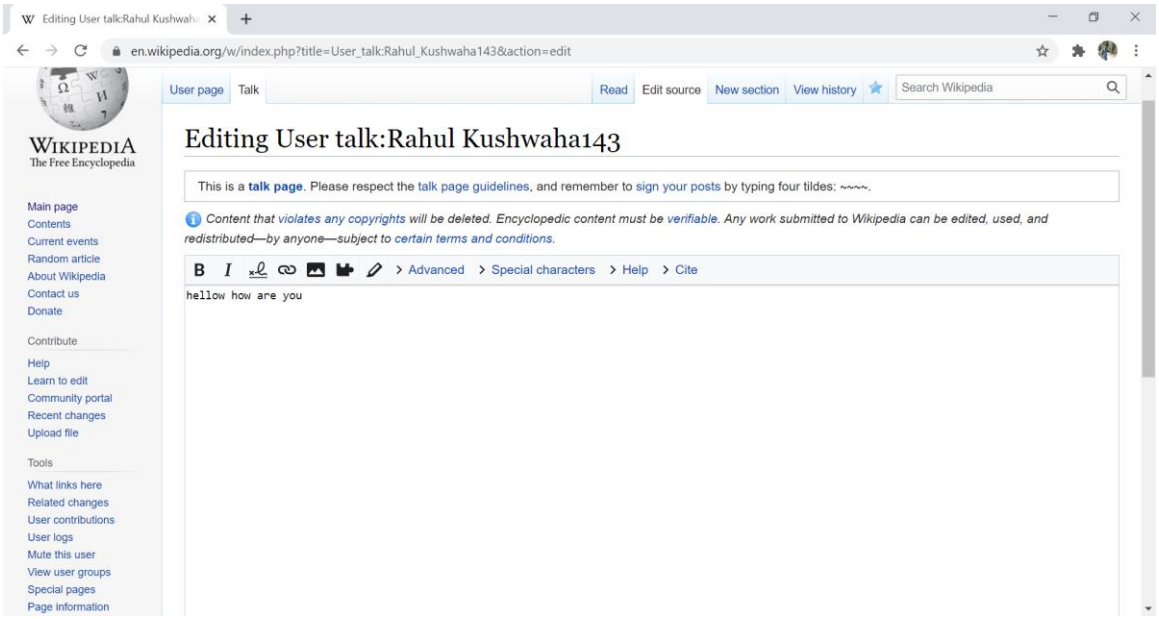


B. Editing your page on Wikipedia

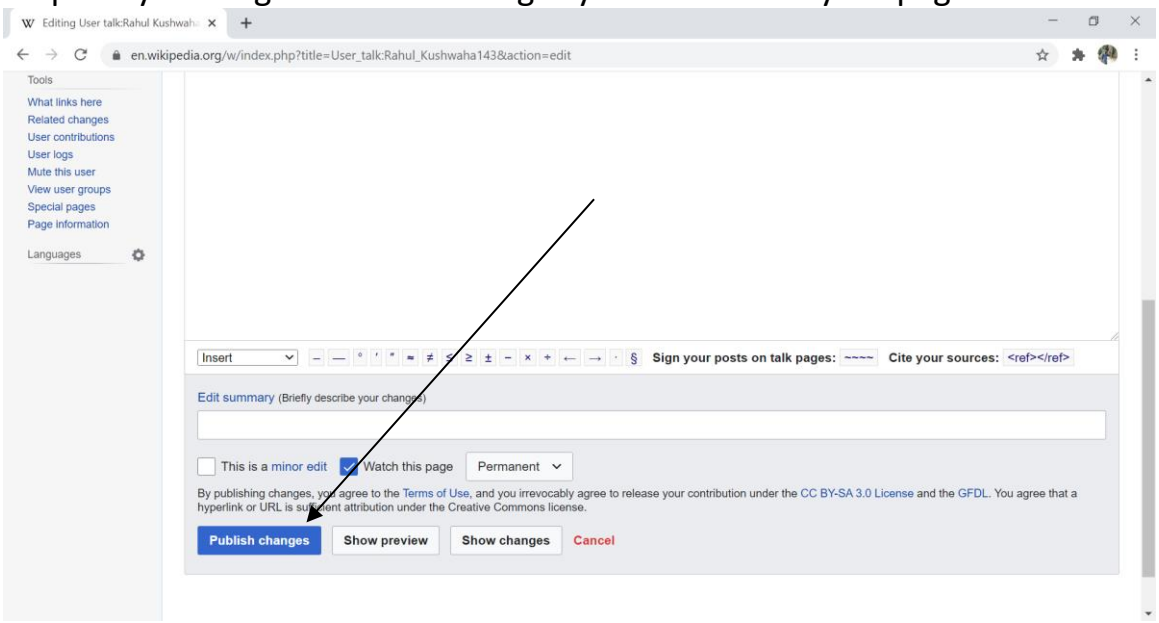
Step 1: Click on Create source button



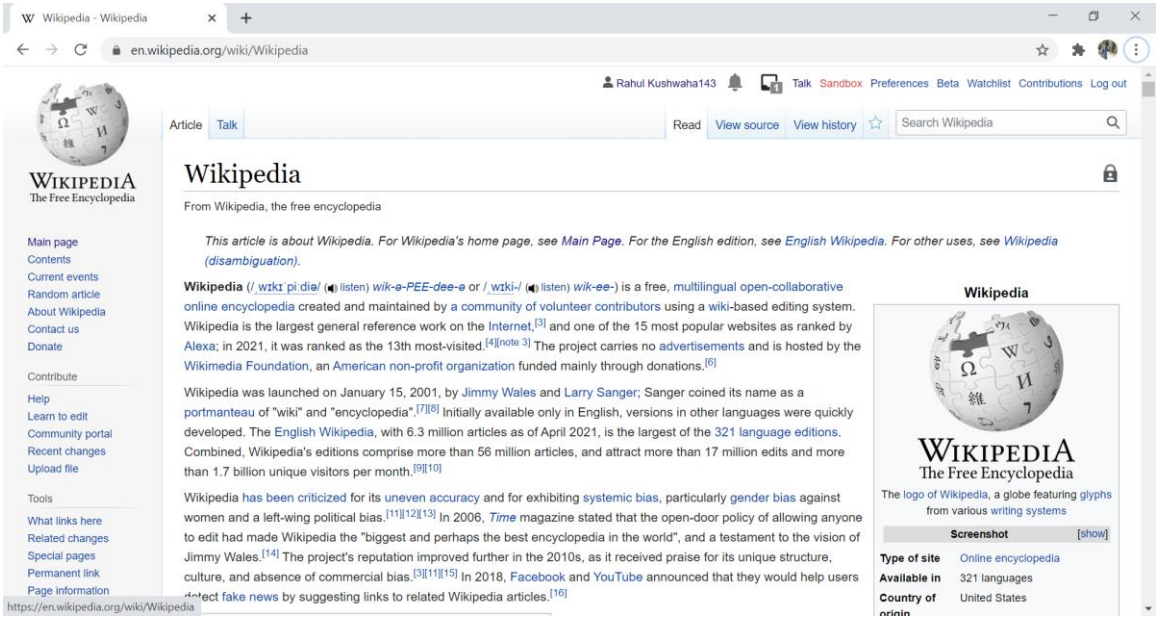
Step 2: Go to the User page and edit your page.



Step 3: By clicking on Publish changes you can Publish your page.



We can read our page by clicking on read.

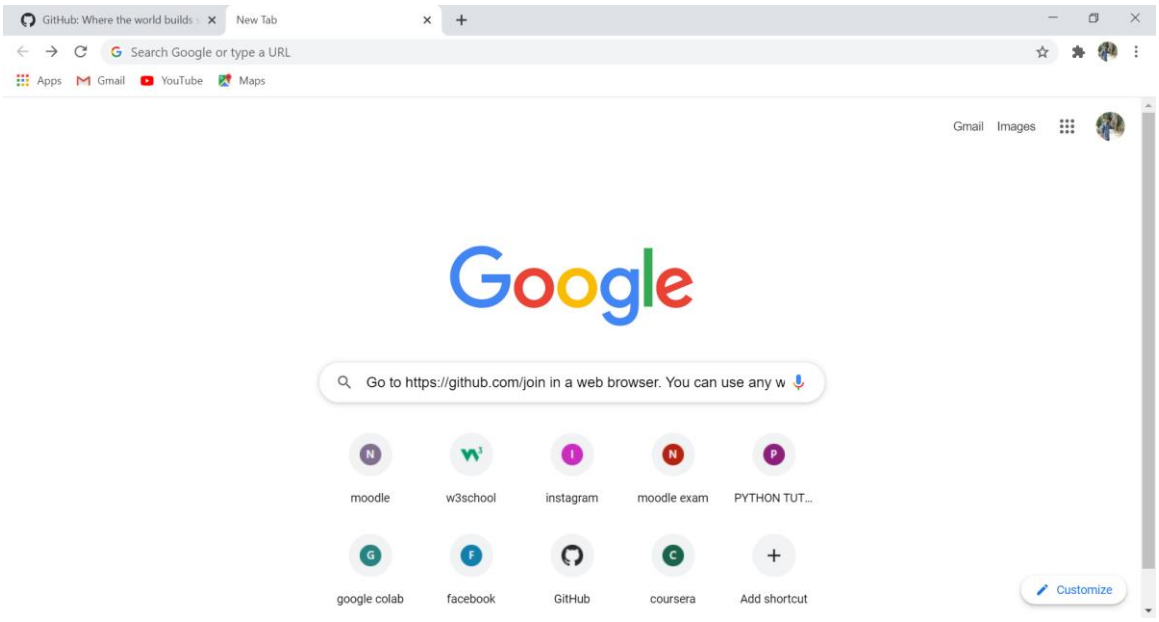


Practical 2

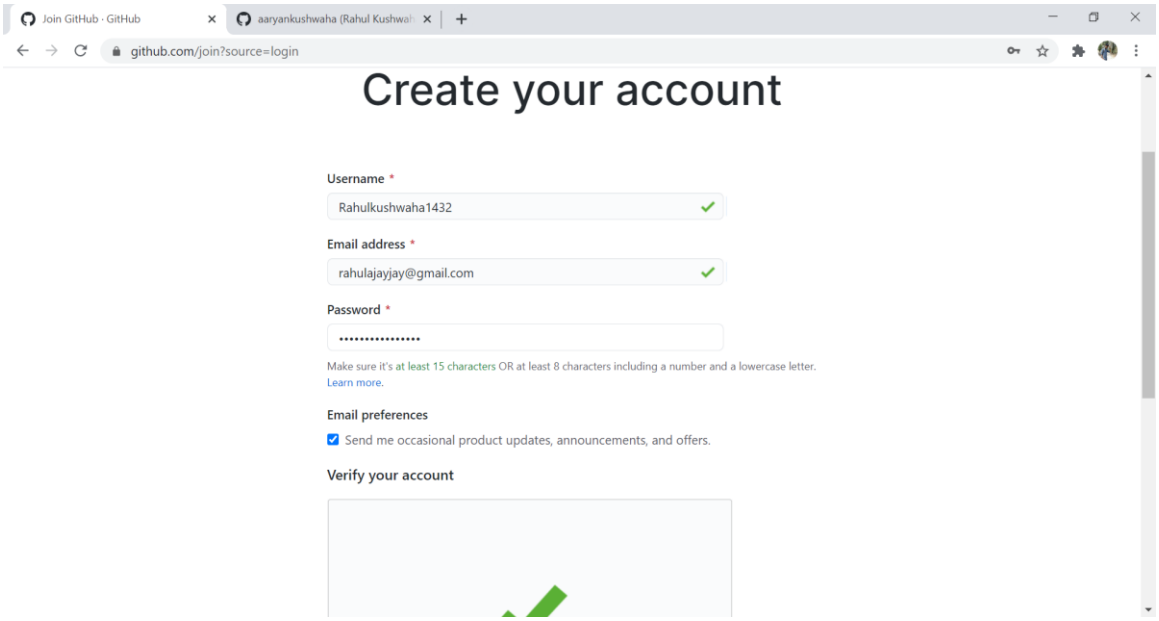
Creating account, repository on Github and Cloning repository in Github.

a) Creating Account:

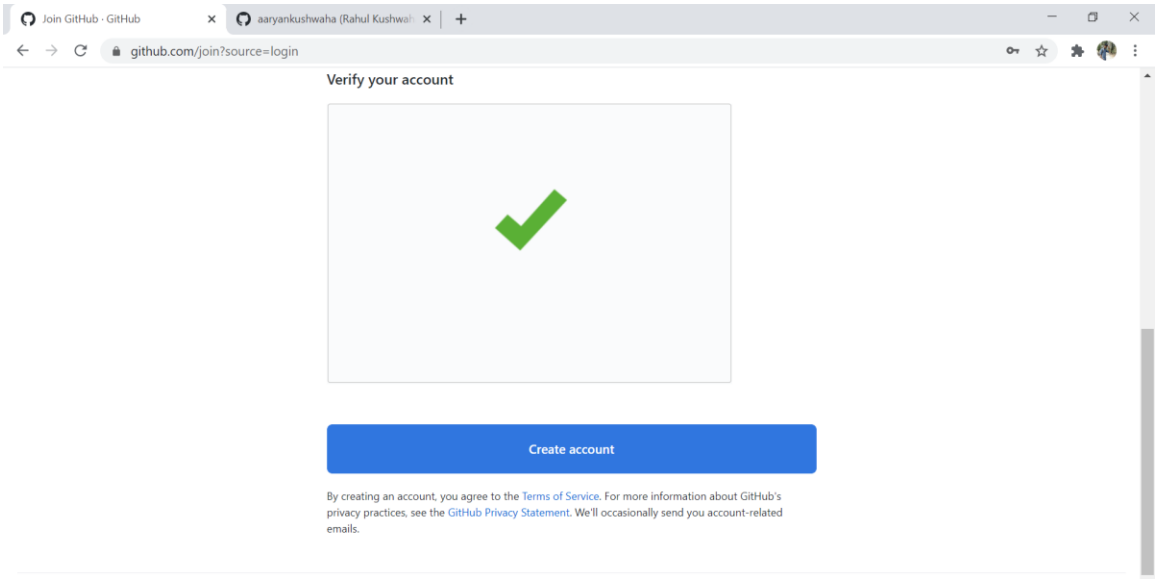
Step 1: Go to https://github.com/join in a web browser. You can use any web browser on your computer, phone or tablet to join.



Step 2: Enter your personal details and complete the CAPTCHA puzzle.

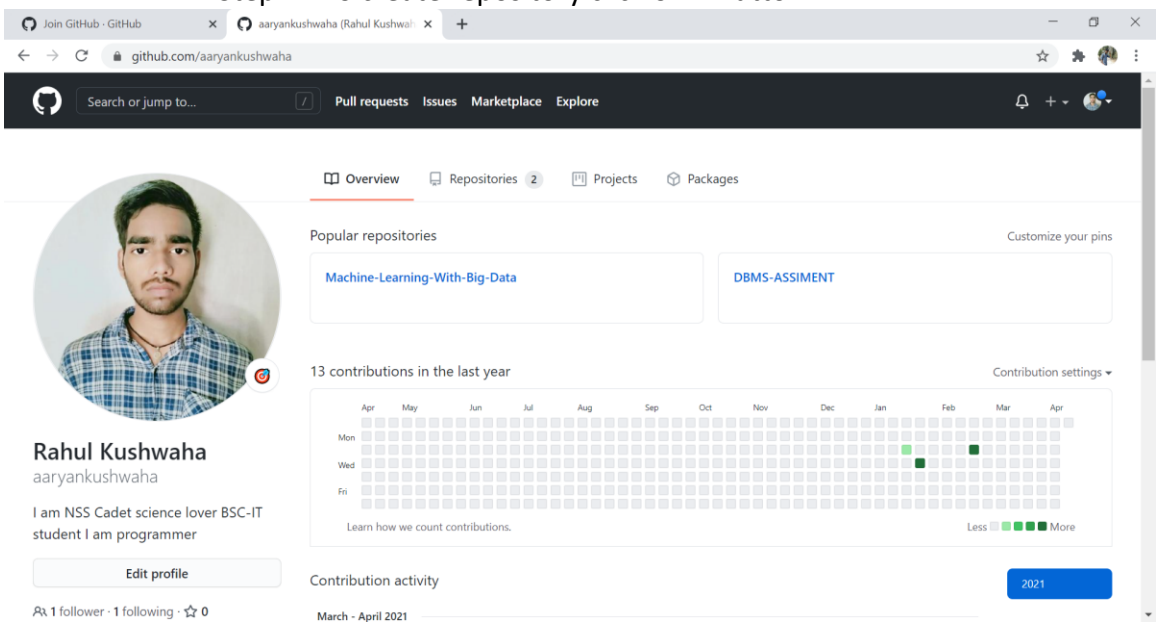


Step 3: Click the 'Create account' button below the form.

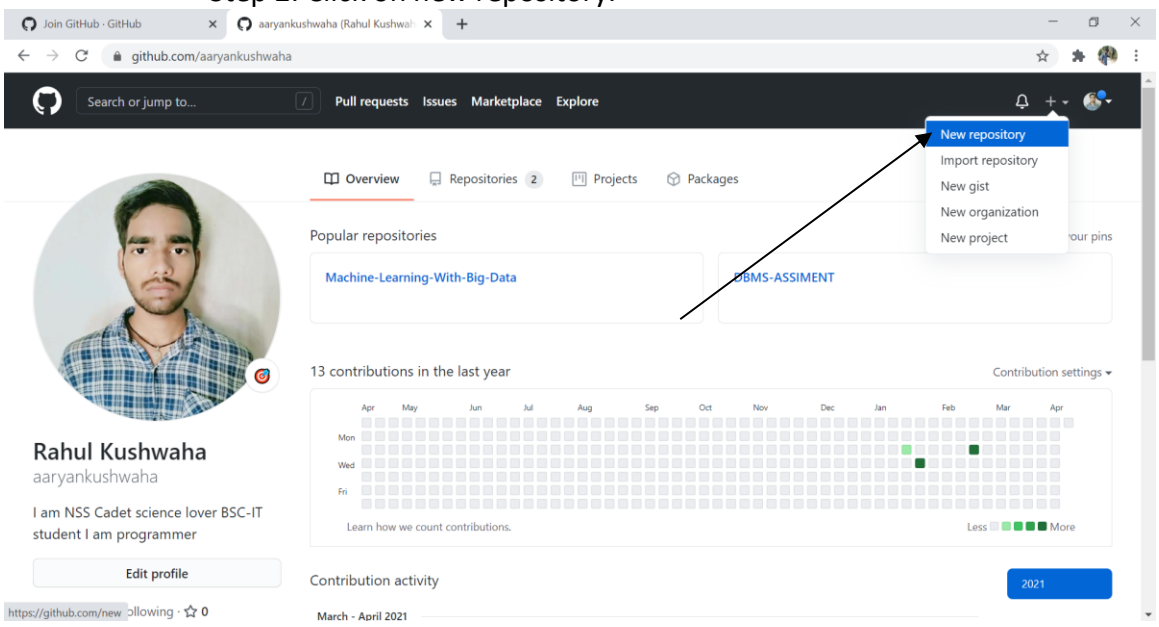


b) Creating Repository:

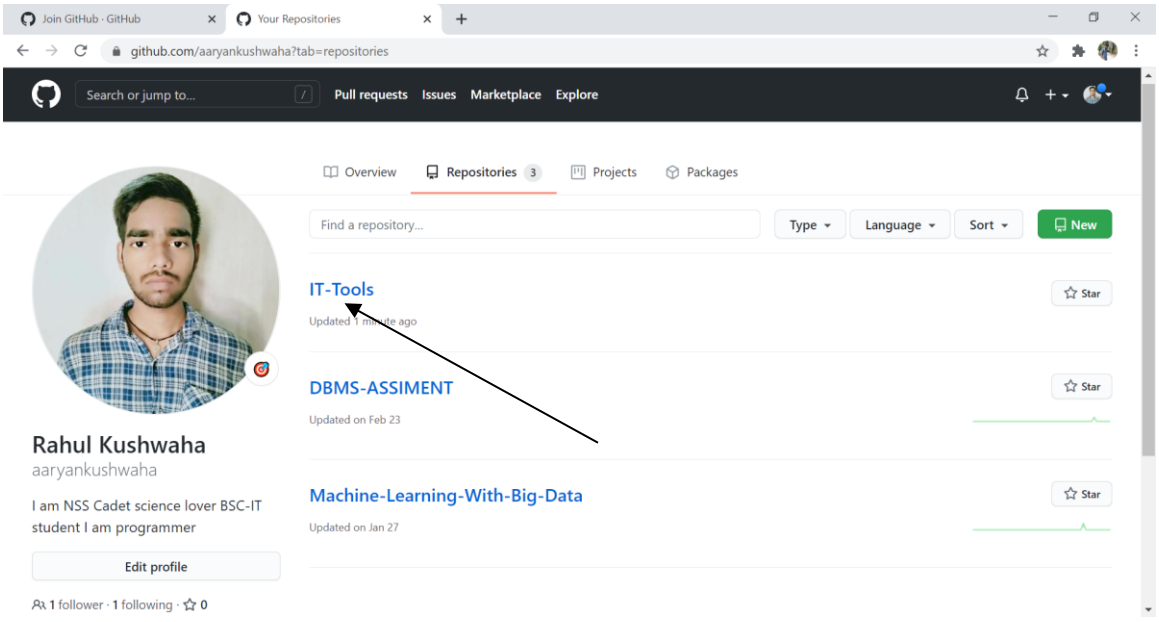
Step 1: To create repository click on + Button.



Step 2: Click on new repository.

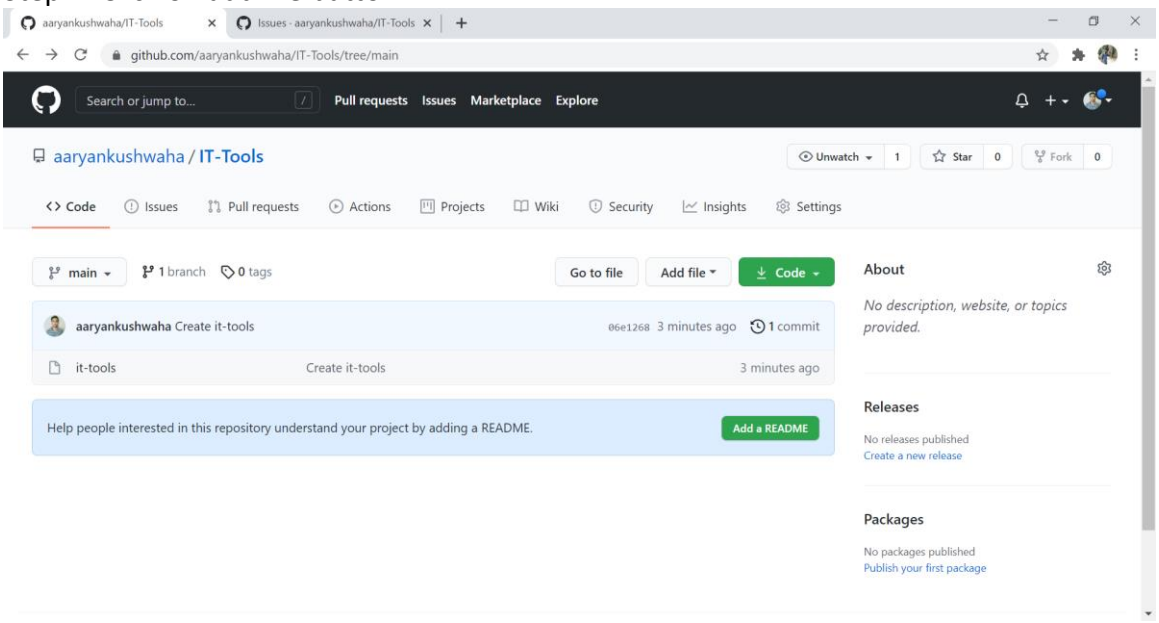


Step 3: Give name to your repository and choose one from private or public. Then click on create repository.

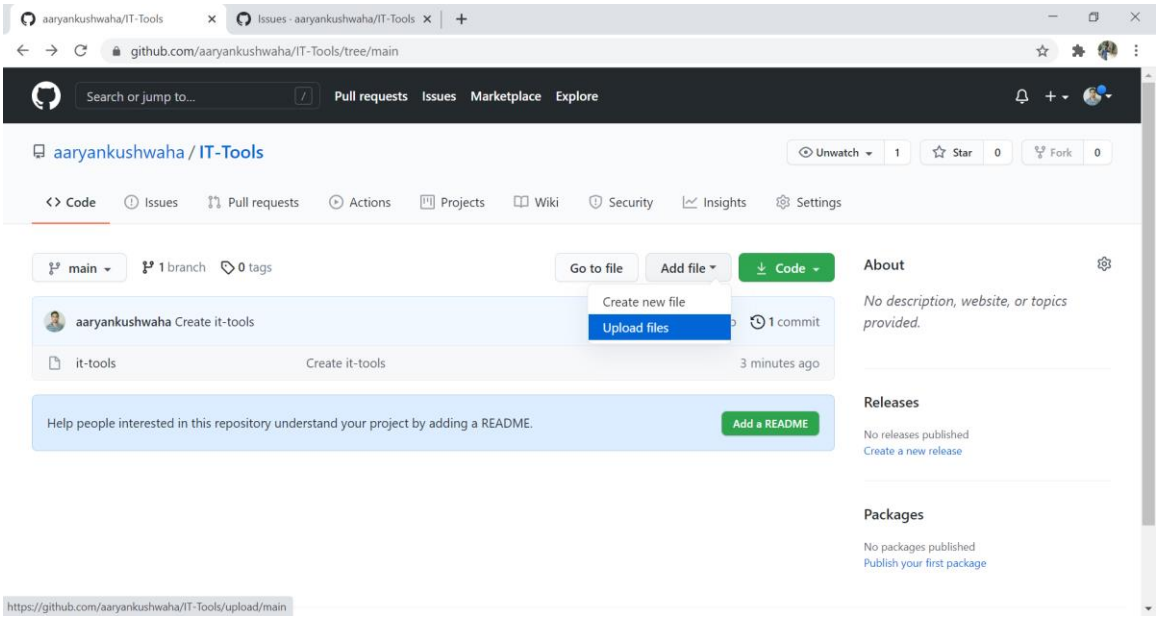


c) Cloning Repository:

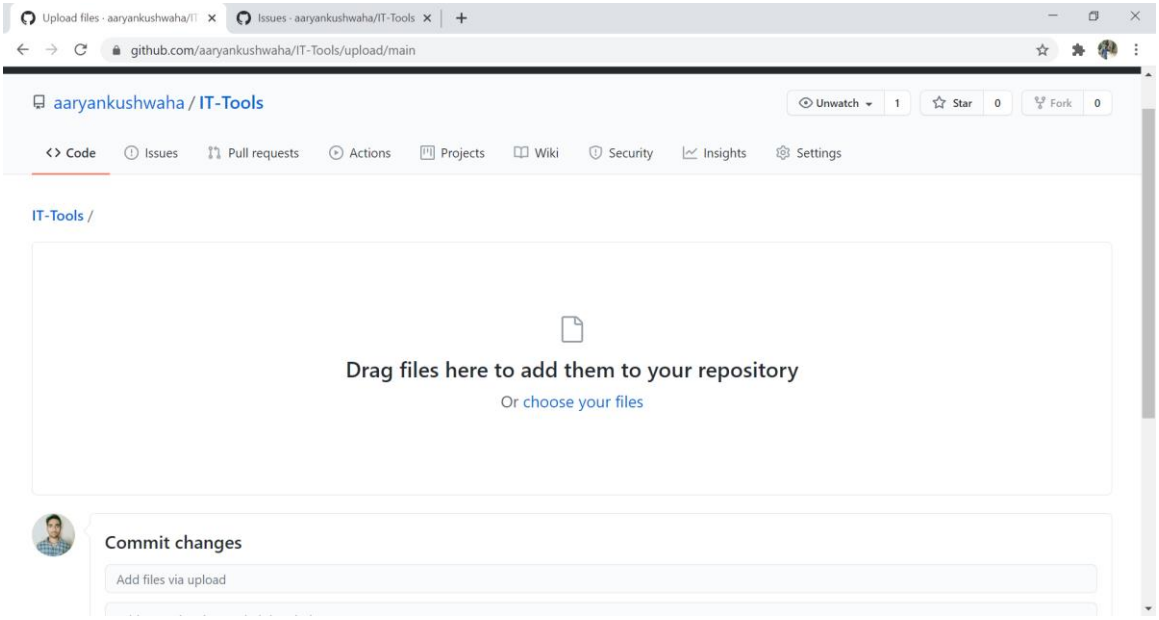
Step 1: Click on add file button.



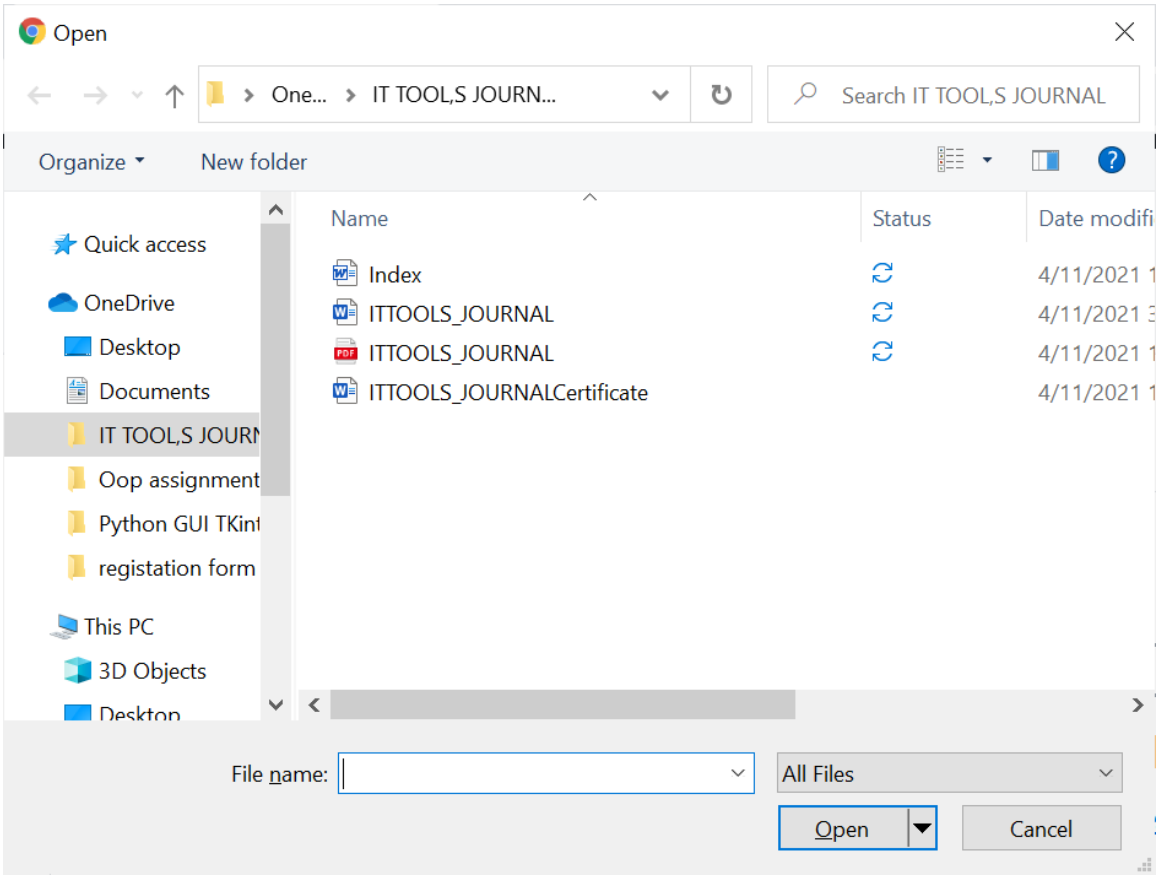
Step 2: Click on upload file button.



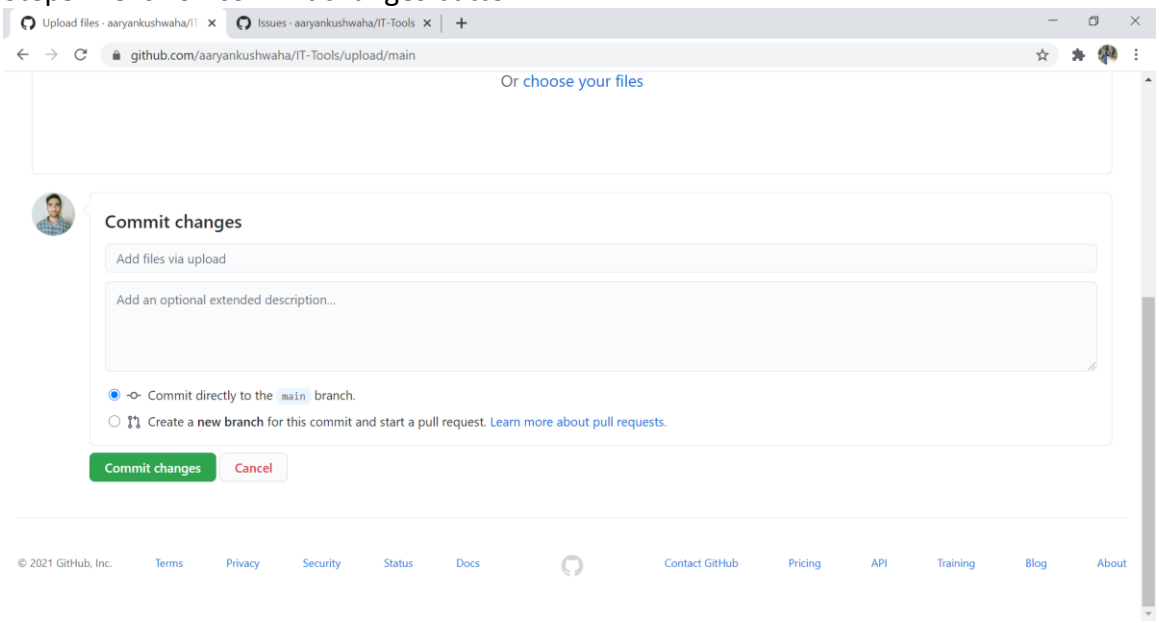
Step 3:- Click on choose your files.



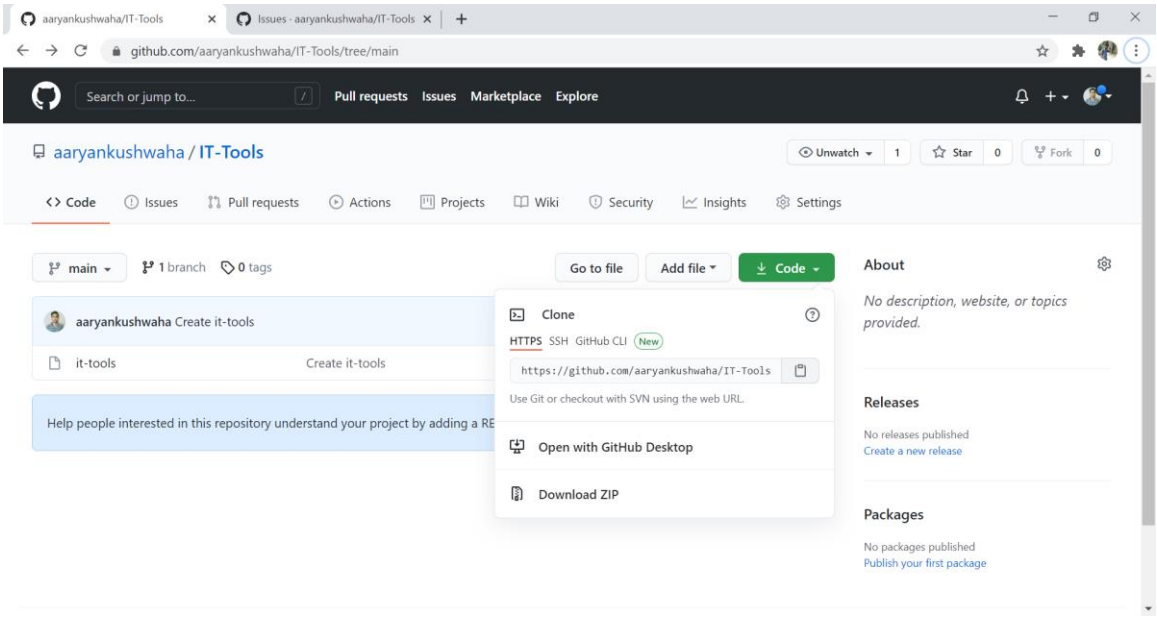
Step 4 :- Select file which you want to upload then click on open button.



Step5 :- Click on commit changes button.



Step6:- Click on code button to get the link of our reposit



PRACTICAL 3

BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE

1. Describe Open Source Software with Example.

➐ Open-source software (OSS) is any computer software that's distributed with its source code available for modification. That means it usually includes a license for programmers to change the software in any way they choose: They can fix bugs, improve functions, or adapt the software to suit their own needs

While its lack of cost is a key advantage, OSS has several additional benefits:

- Its quality can be easily and greatly improved when its source code is passed around, tested, and fixed.
- It offers a valuable learning opportunity for programmers. They can apply skills to the most popular programs available today.
- It can be more secure than proprietary software because bugs are identified and fixed quickly.
- Since it is in the public domain, and constantly subject to updates, there is little chance it can become unavailable or quickly outmoded—an important plus for long-term projects.

Open-source technologies helped establish much of the internet. Furthermore, many of the programs in use every day are based on open-source technologies. Cases in point: Android OS and Apple's OS X are based on the kernel and Unix/BSD open-source technologies, respectively.

Other popular open-source software is:

- Mozilla's Firefox web browser

- Thunderbird email client
- PHP scripting language
- Python programming language
- Apache HTTP web server

2. Describe Free Software with Example

❼ Free software is software that can be freely used, modified, and redistributed with only one restriction: any redistributed version of the software must be distributed with the original terms of free use, modification, and distribution (known as copyleft). The definition of free software is stipulated as part of the GNU Project and by the Free Software Foundation. Free software may be packaged and distributed for a fee; the "free" refers to the ability to reuse it, modified or unmodified, as part of another software package. As part of the ability to modify, users of free software may also have access to and study the source code.

Free software is easily confused with freeware, term describing software that can be freely downloaded and used but which may contain restrictions for modification and reuse.

Best Free software at a glance:

1. LibreOffice
2. VLC Media Player
3. GIMP
4. Shortcut
5. Brave
6. Audacity
7. KeePass
8. Thunderbird
9. FileZilla
10. Linux

3. Difference between Free and Open Source Software.

➔ **Free Software:**

"Free software" means software that respects users' freedom and community. Roughly, it means that the users have the freedom to run, copy, distribute, study, change and improve the software. The term "free software" is sometimes misunderstood—it has nothing to do with price. It is about freedom.

Open-Source Software:

Open Source Software is something which you can modify as per your needs, share with others without any licensing violation burden. When we say Open Source, source code of software is available publicly with Open Source licenses like GNU (GPL) which allows you to edit source code and distribute it. Read these licenses and you will realize that these licenses are created to help us.

- Coined by the development environments around software produced by open collaboration of software developers on the internet.
- Later specified by the Open Source Initiative (OSI).
- It does not explicitly state ethical values, besides those directly associated to software development.

Sr.No.	Free Software	Open-Source Software
1)	Software is an important part of people's lives.	Software is just software. There are no ethics associated directly to it.
2)	Software freedom translates to social freedom.	Ethics are to be associated to the people not to the software.
3)	Freedom is a value that is more important than any economic advantage.	Freedom is not an absolute concept. Freedom should be allowed, not imposed.
4)	Examples: The Free Software Directory maintains a large database of free- software packages. Some of the best- known examples include the Linux kernel, the BSD and Linux operating systems, the GNU Compiler Collection and C Library; the MYSQL relational database; the Apache web server; and the Send mail transport agent.	Examples: Prime examples of open-sources products are the Apache HTTP Server, the e- commerce platform ecommerce, internet browsers Mozilla Firefox and Chromium (the project where the vast majority of development of the freeware Google Chrome is done) and the full office suite LibreOffice.

PRACTICAL-4

From: aaryankushawha9082@gmail.com

To: sweety@nkc.ac.in; Cc & Bcc

Requested for Extension of Time for Assignment

Respected ma'am

Good Morning
I am Rahul Kushwaha, student of FYIT Roll no:37. I apologize for not being able to complete my assignment on time and missing the due date.

I request you to extend the submission date for the assignment. I hope you comprehend. I am sure that I will complete it by that time and submit you promptly

Looking forward for you positive response.

Regards
Rahul Kushwaha
Student of
Nagindas Khandwala College
(Autonomous)
Malad West
Mumbai - 400 064

Practical-5

Using Practical examples, describe green computing. List and explain the steps that you take to contribute to green computing.

Ans: 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.

Green computing is the study and practice of environmentally sustainable computing or IT. The goals of green computing are similar to green chemistry reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime, the recyclability or biodegradability of defunct products and factory waste. Green computing is important for all classes of systems, ranging from handheld systems to large-scale data centers. Many corporate IT departments have green computing initiatives to reduce the environmental effect of their IT operations. Many IT manufacturers and vendors are continuously investing in designing energy-efficient computing devices, reducing the use of dangerous materials and encouraging the recyclability of digital devices. Green computing practices came into prominence in 1992, when the Environmental Protection Agency (EPA) launched the Energy Star program. Green computing is also known as green information technology (green IT).

Steps To contribute to green computing:

1. **Proclamation of the Green Intentions:**

It is always best to begin Green IT initiatives by communicating intentions to adopt an environment-friendly IT infrastructure. The push for energy efficiency should be cascaded down to every staff, setting the stage for collaboration between various departments. Once they learn about the initiatives, they will know that everyone needs to be involved.

2. **Appointment of a working Group for Green IT Compliance Assurance:**

Once the ball is set to roll, you need to have a committee that will monitor and ensure that the company's plans are adhered to by all members of the organization. One of the most important tasks that the appointed Green IT Committee must focus on is the acquisition of energy efficient IT infrastructure. This team should make sure that the IT groundwork meets all the criteria that are set for the protection of the environment.

3. **Measurement of current Carbon Footprints produced by IT Components:**

Where the company stands in terms of carbon footprint brought about by information technology services, is an important information to be known. Quickly establish a carbon footprint reference point. Check on the power

usage in the IT center and compare it with existing power efficiency standards and metrics for industry.

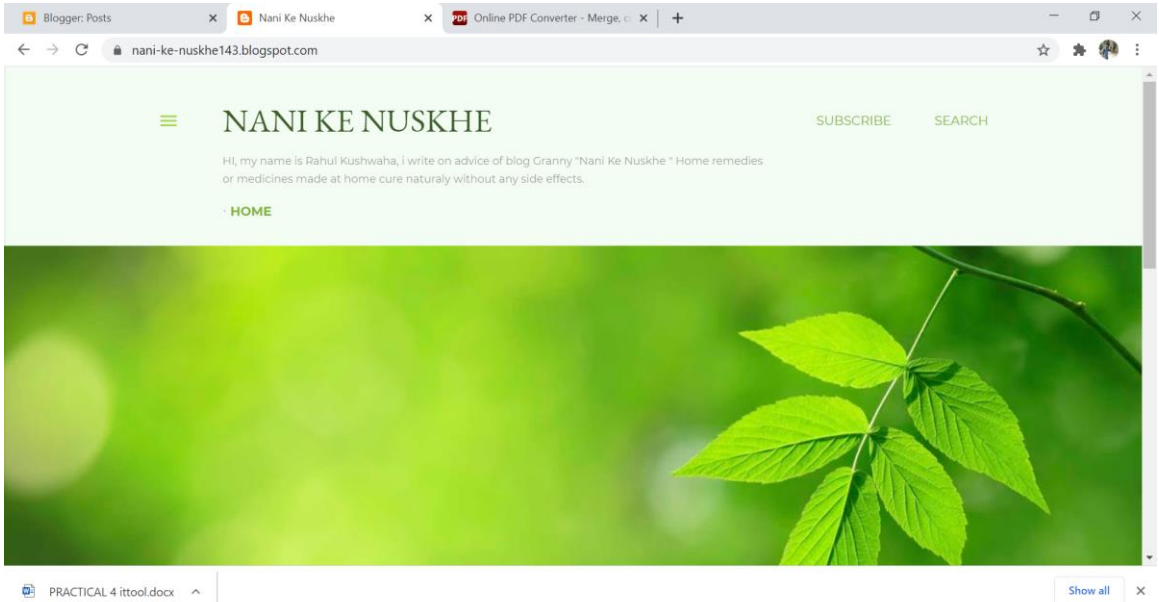
1. **Usage of More Efficient Computer Application:**

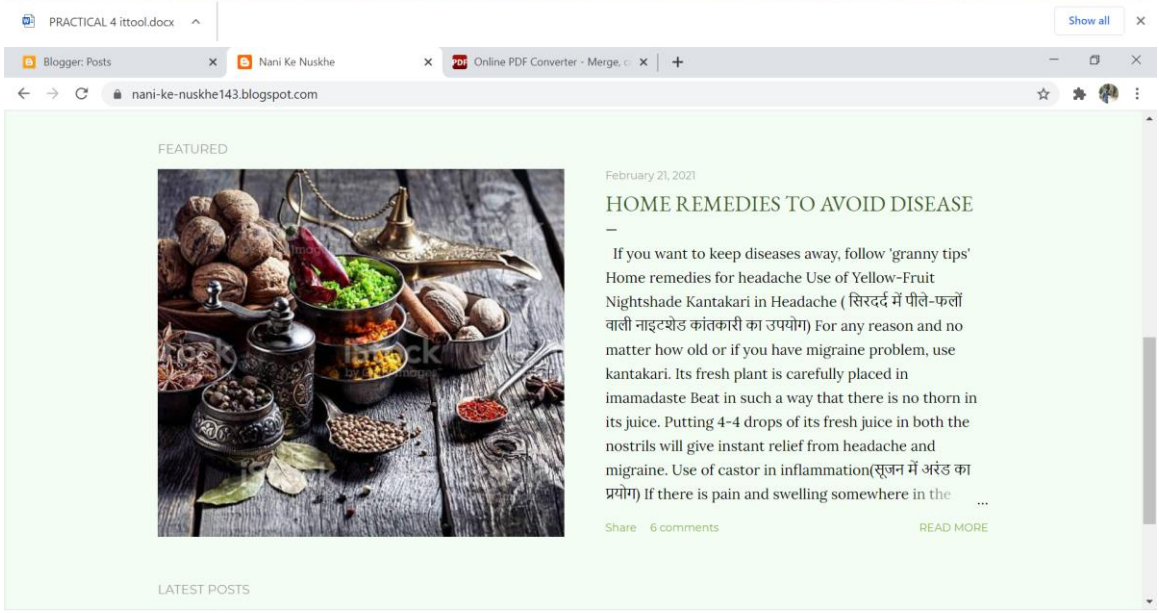
By using more powerful computer applications, your IT systems can better deal with inefficiencies. Besides, faster software spares the servers from regularly operating at maximum capacity, thereby consuming lesser power. If one can only increase the speed of the computer applications that is used, one can have a corresponding positive effect on the energy use and carbon emissions.

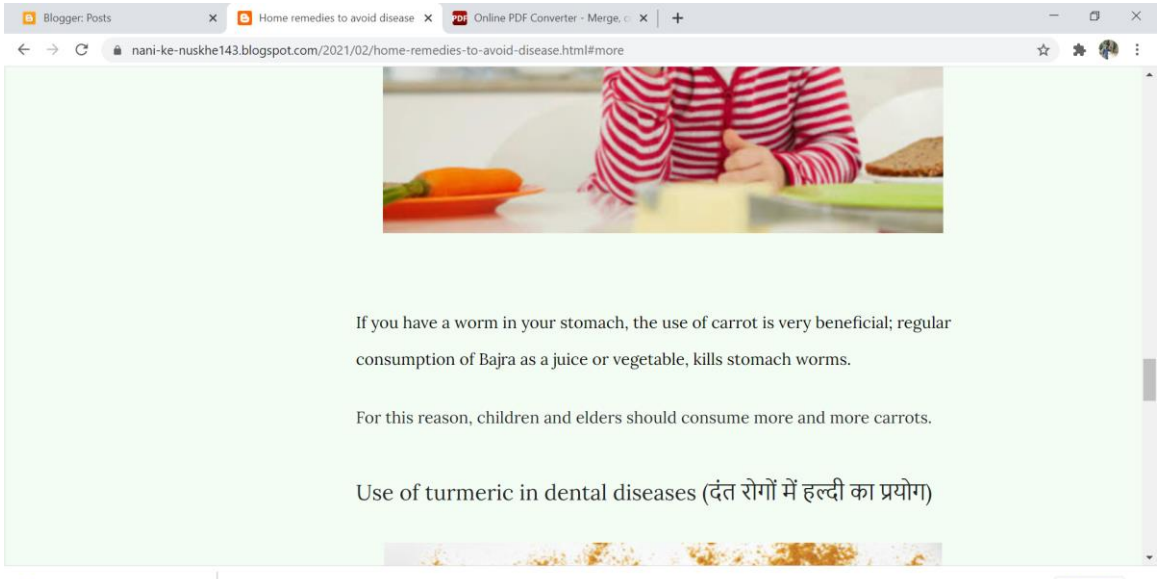
2. **Usage of More Efficient Cooling System:**

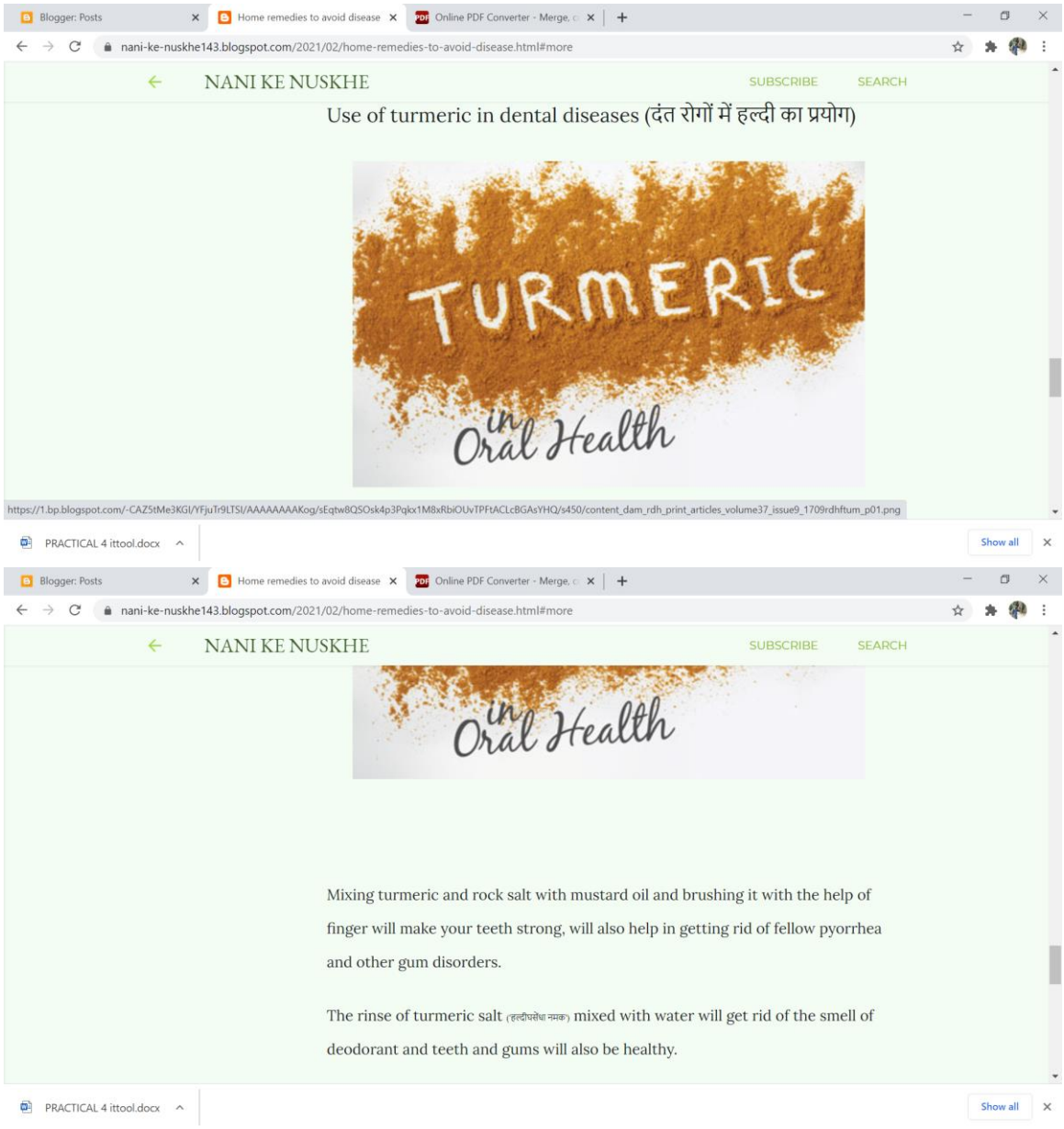
By using more powerful computer applications, your IT systems can better deal with inefficiencies. Besides, faster software spares the servers from regularly operating at maximum capacity, thereby consuming lesser power. If one can only increase the speed of the computer applications that is used, one can have a corresponding positive effect on the energy use and carbon emissions.

Practical 6: BLOG









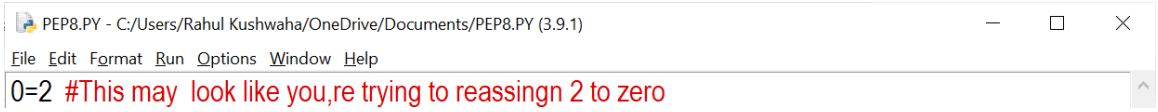
PRACTICAL-07: Implementing coding practices in Python using PEP8

PEP 8 exists to improve the readability of Python code.

1) Naming Conventions:

When you write Python code, you have to name a lot of things: variables, functions, classes, packages, and so on. Choosing sensible names will save you time and energy later. You'll be able to figure out, from the name, what a certain variable, function, or class represents. You'll also

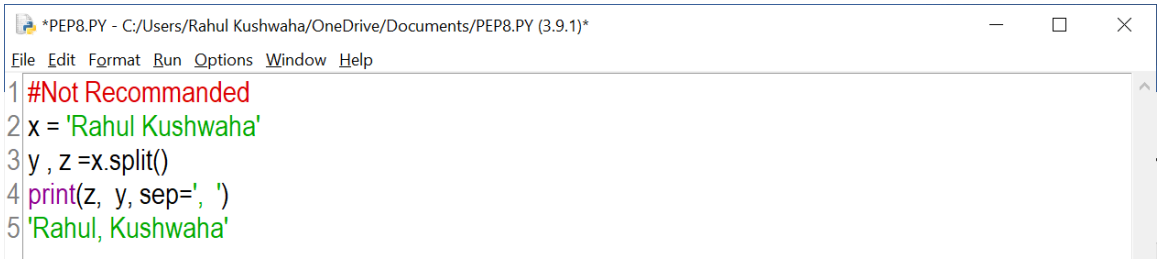
avoid using inappropriate names that might result in errors that are difficult to debug.



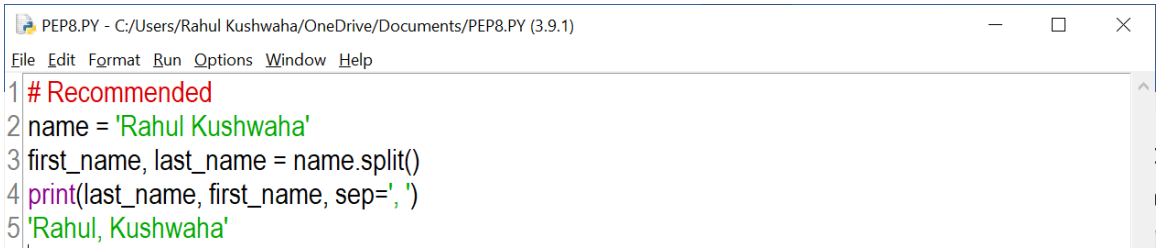
1) How to Choose Names:

When naming variables, you may be tempted choose simple, single-letter lowercase names, like x. But, unless you're using x as the argument of a mathematical function, it's not clear what x represents.

When naming variables, you may be tempted to choose simple, single-letter lowercase names, like x. But, unless you're using x as the argument of a mathematical function, it's not clear what x represents. Imagine you are storing a person's name as a string, and you want to use string slicing to format their name differently. You could end up with something like this:



The following example is much clearer. If you come back to this code a couple of days after writing it, you'll still be able to read and understand the purpose of this function:



2) Code Layout:

PEP 8 guidelines suggest that each line of code (as well as comment lines) should be 79 characters wide or less. This is a common standard that is also used in other languages including R.

PEP8.py

```
#CORRECT
# Perform some math
a = 1+2
b = 3+4
c = a+b

# Read in and Plot some
preceip_timeseries = pd.readcsv("precip-2019.csv")
preceip_timeseries.plot()
```

PEP8.py

```
#WRONG
a=1+2
b=3+4
c=a+b
date=pd.readcsv("precip=2019csv")
date.plot()
```

1)Whitespace in Expressions and Statements:

Adding space when there is more than one operator in a statement.

Surround the following binary operators with a single space on either side:

- **Assignment operators (=, +=, -=, and so forth)**
- **Comparisons (==, !=, >, <. >=, <=) and (is, is not, in, not in)**
- **Booleans (and, not, or)**

PEP8.py

```
# Recommanded
y = x**2 + 5
z = (x+y) * (x-y)
```

PEP8.py

```
# Not Recommanded
y = x ** 2 + 5
z = (x + y) * (x - y)
```

3) Comments:

Comments are lines that exist in computer programs that are ignored by compilers and interpreters.

Comment begins with a hash mark (#) Generally, comment looks like this:

 # this a comment.

Because comment does not execute, when you will run program you will not see any indication of the comment there.

- **Inline Comments:**

Inline comment should be separated by at least two spaces from the comment. They should start with a # and a single space.

Inline comments are unnecessary and in fact distracting if they state the obvious

PEP8.py

```
1    def print_name(self):
2        print(self.name) # comment is correct nowneeds a space
```

PEP8.py

```
1    def print_name(self):
2        print(self.name) # comment is correct now
```

OVERVIEW

Name :- Devansh B. Vala
Standard :- FYIT(sem-2)
Roll no. :- 97

GREEN IT ADOPTION TRENDS: AN OVERVIEW

- This report divides 11 Green IT initiatives into four major groups:
  - Virtualization and Consolidation
  - Energy Efficiency
  - Travel Reduction
  - Asset Disposal.

FOUR MAJOR GROUPS:

- **Virtualization & Consolidation:**

  Initiatives in this area include server virtualization and consolidation, storage consolidation and desktop virtualization. These projects typically improve cost and energy efficiency through optimized use of existing and new computing and storage capacity, electricity, cooling, ventilation and real estate.

- **Energy Efficiency:**

  Initiatives in this area include server room upgrades and new builds, IT energy measurement, printer consolidation, and PC power management. These projects have energy efficiency or reduction as a major cost savings benefits.

- **Travel Reduction:**

  Initiatives in this area include remote conferencing & collaboration and telecommuting. These projects are typically associated with reductions in travel, fuel and commuting costs.

- **Asset Disposal:**

  IT equipment recycling is the lone initiative in this category.

- Half the companies who participated in this study are either piloting or implementing at least one of the 11 Green IT initiatives.
- By and large, the most commonly adopted initiatives involve major cost savings up-front, with fewer major investments required.
- The most popular initiatives across the board include storage consolidation, remote conferencing and telecommuting, all of which yield immediate cost reduction benefits to the business if implemented correctly

STUDY AND METHODOLOGY

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ENERGY EFFICIENCY

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ENERGY EFFICIENCY

- Green Computing is a recent trend towards designing, building, and operating computer systems to be energy efficient.
- The goals are to maximize energy efficiency during the product's lifetime, reduce the use of hazardous materials
- It Promote recyclability or biodegradability of defunct products and factory waste

ADVANTAGES

- The many benefits of energy efficiency include: Environmental:
- Increased efficiency can lower greenhouse gas (GHG) emissions and other pollutants, as well as decrease water use.

DISADVANTAGE

- For large firms, many efficiency investments are too small to be attractive because of high transaction costs of the cost of energy-efficient equipment.
- The conventional method used to conserve genetic resources of date palm has been supplemented in recent years by rapid developments in plant biotechnology.

The following are examples of energy efficiency.

- Reuse
- Resource Utilization
- Efficient Design
- Maintenance
- Waste Reduction

LAWS OF NATURE

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3 NATURAL LAWS:

Symbiosis
Sustainability
Adaptation

"To get what you want,
you need to give others what they want."

The heart of symbiosis in an eco-system.

TRAVEL REDUCTION

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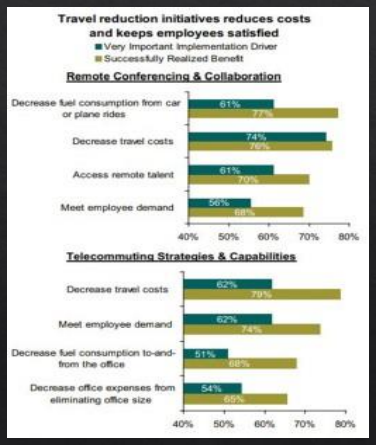
TRAVEL REDUCTION

- Remote configuration & Telecommuting Strategies
- Remote configuration and collaboration:-



- Telecommuting Strategy and Capabilities:-

Policies and strategies allowing or encouraging employees to Work from home.

- **CUTTING TRAVEL COSTS WHERE IT COUNTS**

These initiatives not only reduce costs of fuel,flights,hotels and related expenses,but also result in higher employee satisfaction.

Keeping Your People Happy

Organization are also gaining access to remote talent that they otherwise would not be able to tap. In two-thirds of all travel reduction projectOrganization reports their employees are very satisfied with the increased flexibility they are now offered.

GREEN SUPPLY CHAIN MANAGEMENT INITIATIVES

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Green Supply Chain Management Initiatives

- Green Supply Chain Management aims to integrate environmental thinking into supply chain management.
- This includes product design,material sourcing and selection, the manufacturing process and delivery of the final product to consumers.
- Approximately 2 million tons of e-waste are generated annually in india
- The management of e-waste and implementation of green initiatives to manage the supply chains have become imperative for Indian IT and electronics industry.
- They are innovating and coming up with cutting edge solutions that help them become more profitable, while helping the environment

HCL Infosystems Limited

- HCL Infosystems Ltd. is India´s premier hardware, services and ICT systems integration company, which offers a wide spectrum of ICT products that include computing, storage, networking, security, telecommunication, imaging and retail solutions
- HCL always focused on developing a sustainable future through environment friendly ICT products and services.
- This led to the introduction of Green desktops, equipped with the unique Dynamic Energy Saver (DES) technology, that cut overall power consumption by 20-35%.
- The company has also taken the following initiatives to conserve energy:

• Use of recyclable packing materials in PCs and monitors.

• Made S3 as the default sleep state in all products shipped with Microsoft Windows OS, so that the product automatically switches to standby mode after a specified amount of system inactivity.

• Compliance with MPR-II certification for CRT monitors.

• Compliance with TCO'03 certification for LCD monitors.

Tata Consultancy Services

- Tata Consultancy Services (TCS) Limited is one of the best Indian IT services, consulting and business solutions organizations.
- It is committed to measure, report and continually improve its overall environmental performance by optimizing its resource consumption, minimizing its ecological impact and in line with the precautionary principle espoused by Article 15 of the Rio Declaration, working to reduce its carbon footprint.
- TCS has developed an environment policy that guides its key activities. The basic foundation of the policy is:
- Climate change mitigation through commitment to reduce Greenhouse Gas (GHG) emissions and corresponding carbon footprint.
- Green procurement.
- Reduce, reuse, recycle.
- Resource efficiency.
- Green infrastructure – green buildings.
- Green IT.

IT EQUIPMENT RECYCLING

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Roll number: 114

Class : fyit

IMPORTANCE EIECTRONIC RECYCLING

- Rich source of raw materials
- Solid waste management
- Toxic materials
- International movement of hazardous waste

E-waste

- E waste in electrical electronic equipment that has been discarded working and broken items that are thrown in in the garbage aur donated to the charity reseller like goodwill.
- E-waste is particularly dangerous due to toxic chemical that naturally from the metals inside when buried.

DISADVANTAGES OF GOING GREEN

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Disadvantages of going green

1. Expenses :
2. Data Safety is important :
3. Dearness
4. Customer backlash

Disadvantages of going green

5. Is it worth it?
6. Competition
7. Marginal impact

GREEN IT EMISSIONS AND GREEN IT TYPICAL DIMENSIONS

NAME :- RITESH SONI
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ROLL NO. :- 90

- Green It
- Virtualization And Consolidation
- Energy Efficiency
- Asset Disposal
- Factors During Implementation
- Green It Outcomes

Name: Rahul Kushwaha
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Topic: Green IT Companies and Vendors

GREEN COMPANIES WITH AMAZING ENVIRONMENTAL INITATIVES

1.DISNEY

As far as sustainable companies go, Disney is a giant. It uses zero net direct greenhouse gas emission policies in all of its facilities. It's also trying to reduce electrical and water consumption, which will reduce indirect greenhouse gas emissions. Technology helps Disney save water and lower its manufacturing and distribution footprint as well.

- Overall, Disney is a leader in environmental responsibility for policies such as:
- Zero waste (nothing in landfills)
- Net positive environmental impact

2.DELL

Dell first started its Legacy of Good Plan in 2013 to use technology to drive human progress and advance health, happiness and prosperity. In 2020 , dell's new legacy of good plan is looking at the company's long-term commitment to society, its team members and the environment.

The business has already achieved its goal of using 50 million pounds of sustainable materials in its products. They hope to increase that number to 100 million pounds in the future.

Dell also announced it would increase the annual usage of ocean bound plastics

by 10 times by 2025. This initiative would keep 16,000 pounds of plastic from entering the ocean.

3.APPLE

When considering environmentally conscious companies, many don't look at big tech businesses such as Apple. However, the company focuses on three main areas — reducing its impact on climate change, preserving precious resources and using safer materials in products and processes.

Since setting those goals, Apple has created several wind and solar farms to power their data centers, retail stores, corporate offices and more. The corporation is attempting to preserve materials by increasing production efficiency, using renewable resources and designing long-lasting products. Apple has also made strides in improving its environmental testing lab to ensure products are safe.

THANKS FOR WATCHING