



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./Ms. GLORY LITHIYAL UDAYKUMAR

Roll No: 95 Programme: BSc IT 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)



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Sr. No.	DATE	TITLE	SIGN
1.	02/02/2021	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.	09/02/2021	Creating account, repository on GitHub and Cloning repository in GitHub Page	
3.	16/02/2021	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.	23/02/2021	WRITING EMAIL	
5.	25/02/2021	Using practical examples, describe green computing. List and explain the steps that you take to contribute to green computing	
6.	02/03/2021	WRITING BLOGS	
7.	09/03/2021	Implementing coding practices in Python using PEP8.	
8.	20/03/2021	PRESENTATION: GROUP NO-8: PEP8	

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PRACTICAL-1:- Introduction & Contribution to Wikipedia

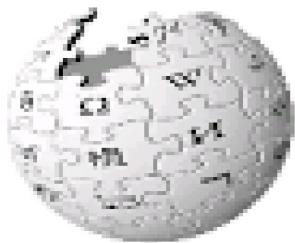
a) Description of Wikipedia

- The free encyclopedia that anyone can edit.
- Wikipedia's articles allow the users to use links that are related to the pages for additional information.
- It allows you to edit for free. It allows you to put your own article on the site.
- It has 270 languages.
- Wikipedia was founded by Nupedia to produce a free Encyclopedia.
- Depending on the topics, wiki's information can be general or very detailed.



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WIKIPEDIA
The Free Encyclopedia

b) Features of Wikipedia

- Wikipedia has many features for the users on the web. Wiki provides pieces of answer from different resources to help the user see it from different perspective.



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- Users around the world are able to add or delete an answer to make the best response .Wiki added a new feature called 'VECTOR' which has stylish tabs at the top of each page telling the user whether they are viewing a document or a decision page.
- If someone doesn't understand what the editor says, there are always a few more editors with the same answer but with a different response.

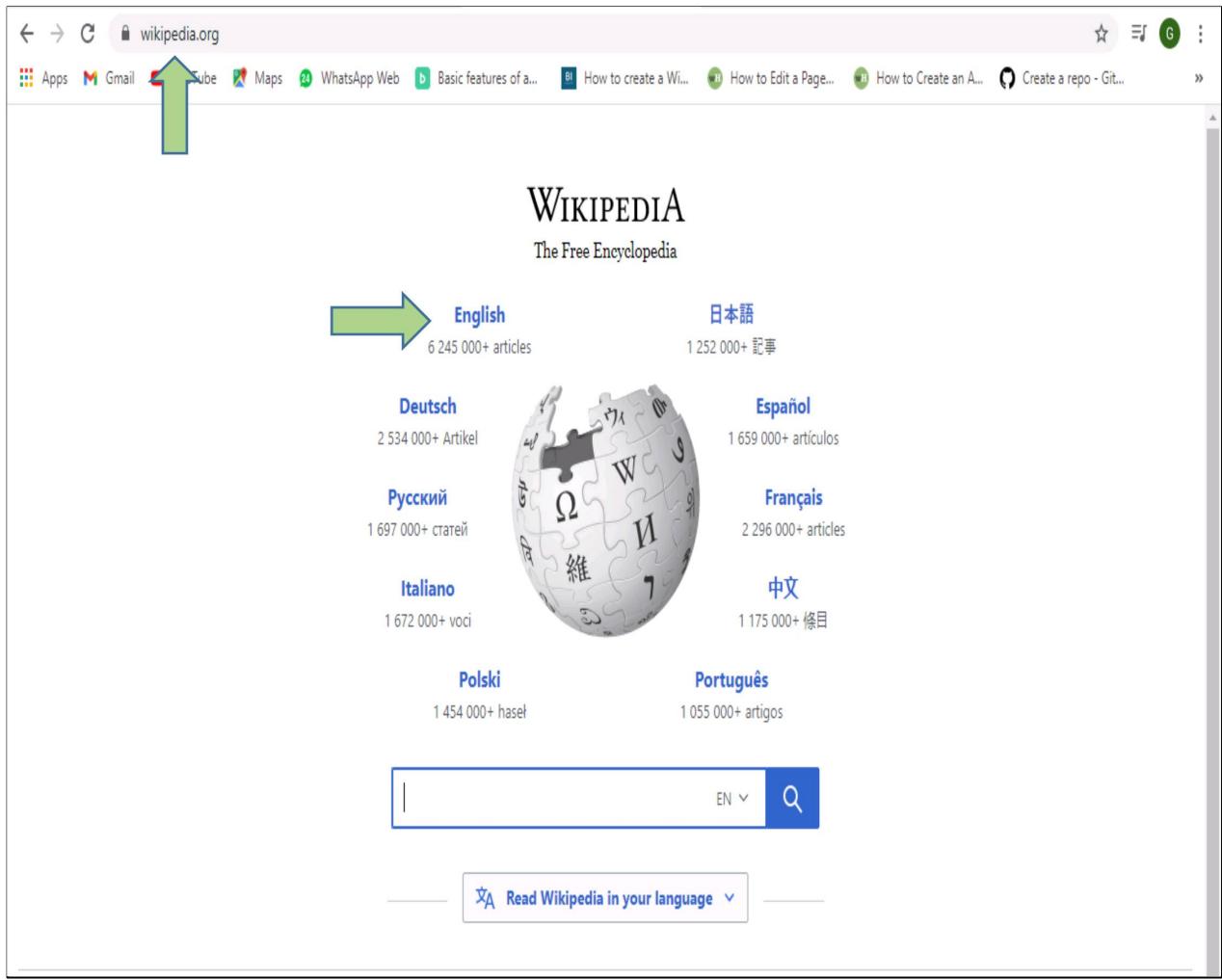
c) Creating account in Wikipedia

❖ Go to www.wikipedia.org and Choose “English”.



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- ❖ Click “CREATE ACCOUNT” on the upper right side of your browser.



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The screenshot shows the English Wikipedia Main Page. At the top right, there is a green arrow pointing towards the 'Create account' link. The page features the Wikipedia logo, a sidebar with various links like 'Main page', 'Talk', 'Read', 'View source', 'View history', and a search bar. The main content area includes sections for 'Welcome to Wikipedia', 'From today's featured article' (about the M113 armoured personnel carrier), 'Did you know ...' (with facts about the Strängnäs stone), 'In the news' (with a photo of the Tianwen-1 launch), and 'On this day' (with a photo of the Death of Captain James). The bottom right corner of the page has a small 'Edit with WPS Office' watermark.

❖ Enter your account information and click “Create Account”.



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en.wikipedia.org/w/index.php?title=Special>CreateAccount&returnto=Main+Page

Apps Gmail YouTube Maps WhatsApp Web Basic features of a... How to create a Wi... How to Edit a Page... How to Create an A... Create a repo - Git...

Create account

Your username will be public.

Please consider using an [anonymous username](#), and not your real name, unless you are comfortable with your identity being public for the entire internet to see and identify you.

Once your account has been created, it is essentially impossible to hide the original username should you later want to change it for privacy reasons.

Username (help me choose) Lidhu

Password

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

Confirm password

Email address (optional) glorylithiyal18@gmail.com

To protect the wiki against automated account creation, we kindly ask you to enter the words that appear below in the box ([more info](#)):

CAPTCHA Security check

shunsgwyn

Refresh

shunsgwyn

Can't see the image? Request an account

Create your account

Wikipedia is made by people like you.

1,001,989,944 edits

6,248,883 articles

148,564 recent contributors



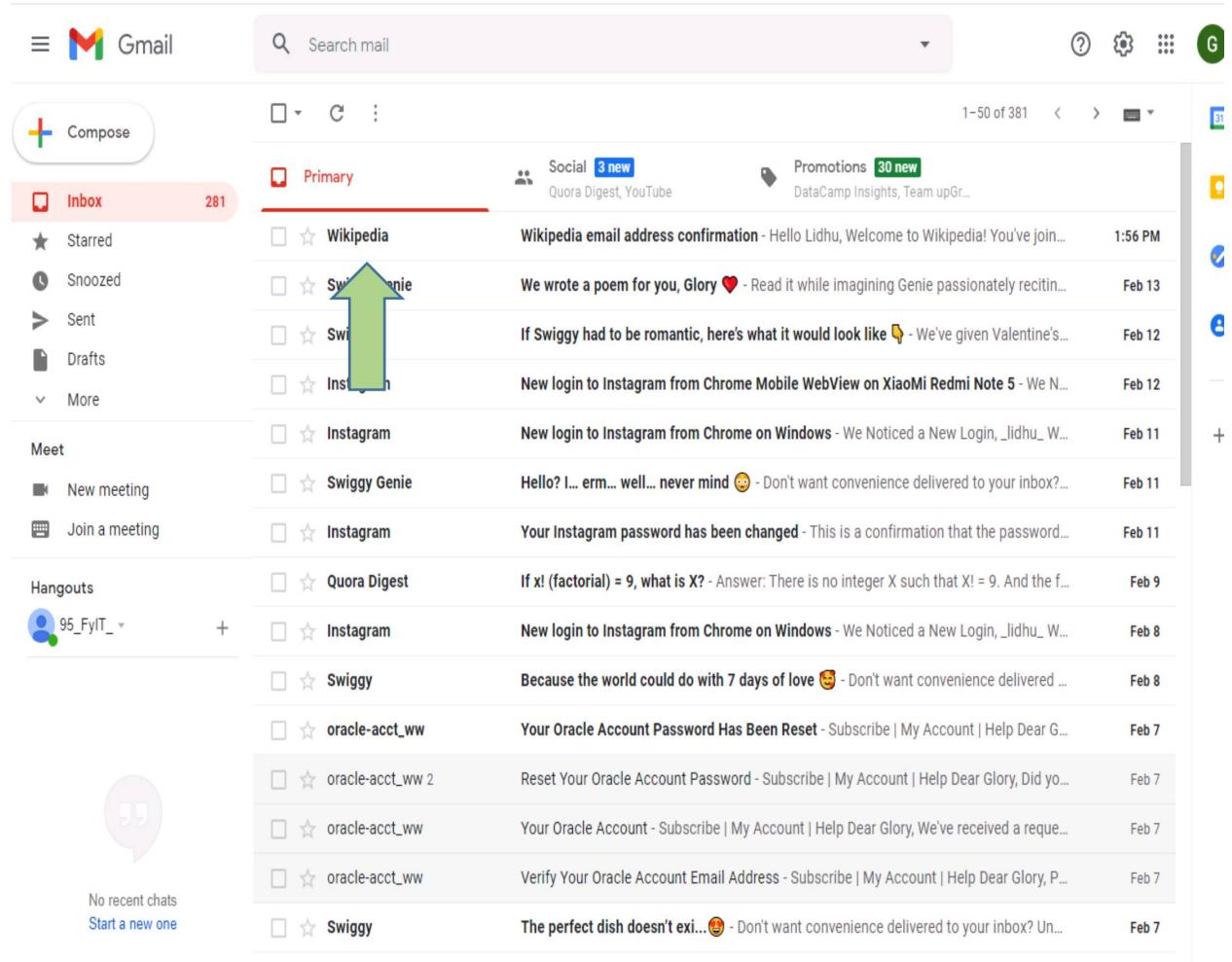
❖ Log in to your email and confirm



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your registration by clicking the link
in the email.



A screenshot of a Gmail inbox. The left sidebar shows navigation links like 'Compose', 'Inbox (281)', 'Starred', 'Snoozed', 'Sent', 'Drafts', 'Meet', 'New meeting', 'Join a meeting', and 'Hangouts'. Below these are sections for 'Social' (3 new) and 'Promotions' (30 new). The main area displays a list of 381 emails. A large green arrow points upwards from the bottom of the list towards the top. The first few visible emails are from 'Swiggy' with subject lines such as 'We wrote a poem for you, Glory ❤️ - Read it while imagining Genie passionately recitin...', 'If Swiggy had to be romantic, here's what it would look like 🍷 - We've given Valentine's...', and 'New login to Instagram from Chrome Mobile WebView on XiaoMi Redmi Note 5 - We N...'. Other senders include 'Wikipedia', 'Quora Digest, YouTube', 'Instagram', 'Quora Digest', and 'oracle-acct_ww'.

If you don't see an email from MediaWiki Mail, check your spam or junk folder.



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← → C mail.google.com/mail/u/0/#inbox/ FMfcgxwLsSfIdGLbkpgchmtGWzQHZRXx

Apps Gmail YouTube Maps WhatsApp Web Basic features of a... How to create a Wi... How to Edit a Page... How to Create an A... Create a repo - Git...

Gmail Search mail

Compose

Inbox 281

Starred Snoozed Sent Drafts More

Meet New meeting Join a meeting

Hangouts 95_FyIT_ +

No recent chats Start a new one

Reply Forward

Enable desktop notifications for Gmail. OK No thanks X

Wikipedia email address confirmation Inbox x

Wikipedia <wiki@wikimedia.org> [Unsubscribe](#) to me 1:56 PM (14 minutes ago)

Hello Lidhu,

Welcome to Wikipedia! You've joined the English-language version of the free encyclopedia that anyone can edit.

To confirm your email address, please open this URL in your browser:

<https://en.wikipedia.org/wiki/Special:ConfirmEmail/8acdffbe7c986dd11be73766a5670136>

This link expires at 08:26, 21 February 2021 (UTC).

Confirming your email address will allow you to:

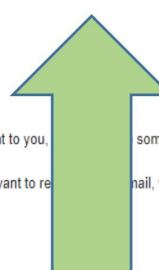
- * reset your password via email
- * exchange emails with other Wikipedia editors
- * receive notifications about activity on Wikipedia relevant to you,

If you wish to be able to recover your account but don't want to receive [Special Preferences](#) email, visit your preferences at: <http://en.wikipedia.org/wiki/Special:Preferences>

Thanks, and once again, welcome!

This email is generated automatically, and does not accept replies. If you didn't register an account on Wikipedia, feel free to disregard this message or click this link:

<https://en.wikipedia.org/wiki/Special:InvalidateEmail/8acdffbe7c986dd11be73766a5670136>



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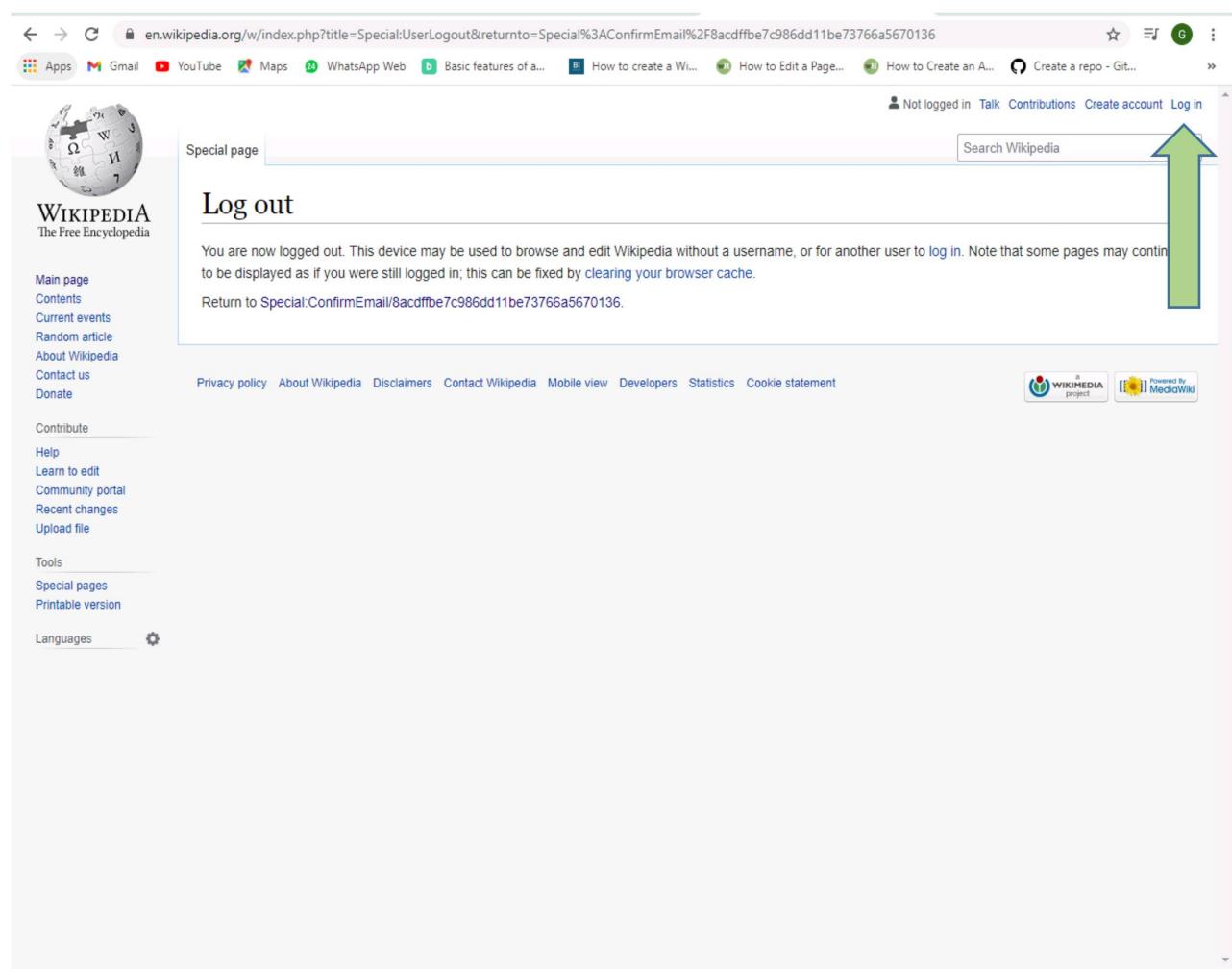
The screenshot shows a web browser displaying a confirmation message from Wikipedia. The URL in the address bar is en.wikipedia.org/wiki/Special:ConfirmEmail/8acdffbe7c986dd11be73766a5670136. The page title is "Confirm email address". The main content area displays the message: "Your email address has now been confirmed." On the left side, there is a sidebar with various links such as Main page, Contents, Current events, Random article, About Wikipedia, Contact us, Donate, Contribute, Help, Learn to edit, Community portal, Recent changes, Upload file, Tools, Special pages, and Printable version. At the bottom right of the page, there are logos for the Wikimedia project and MediaWiki.



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❖ To log in the future, return to the main page and click “Log in” in the upper right corner of your browser.



Edit with WPS Office

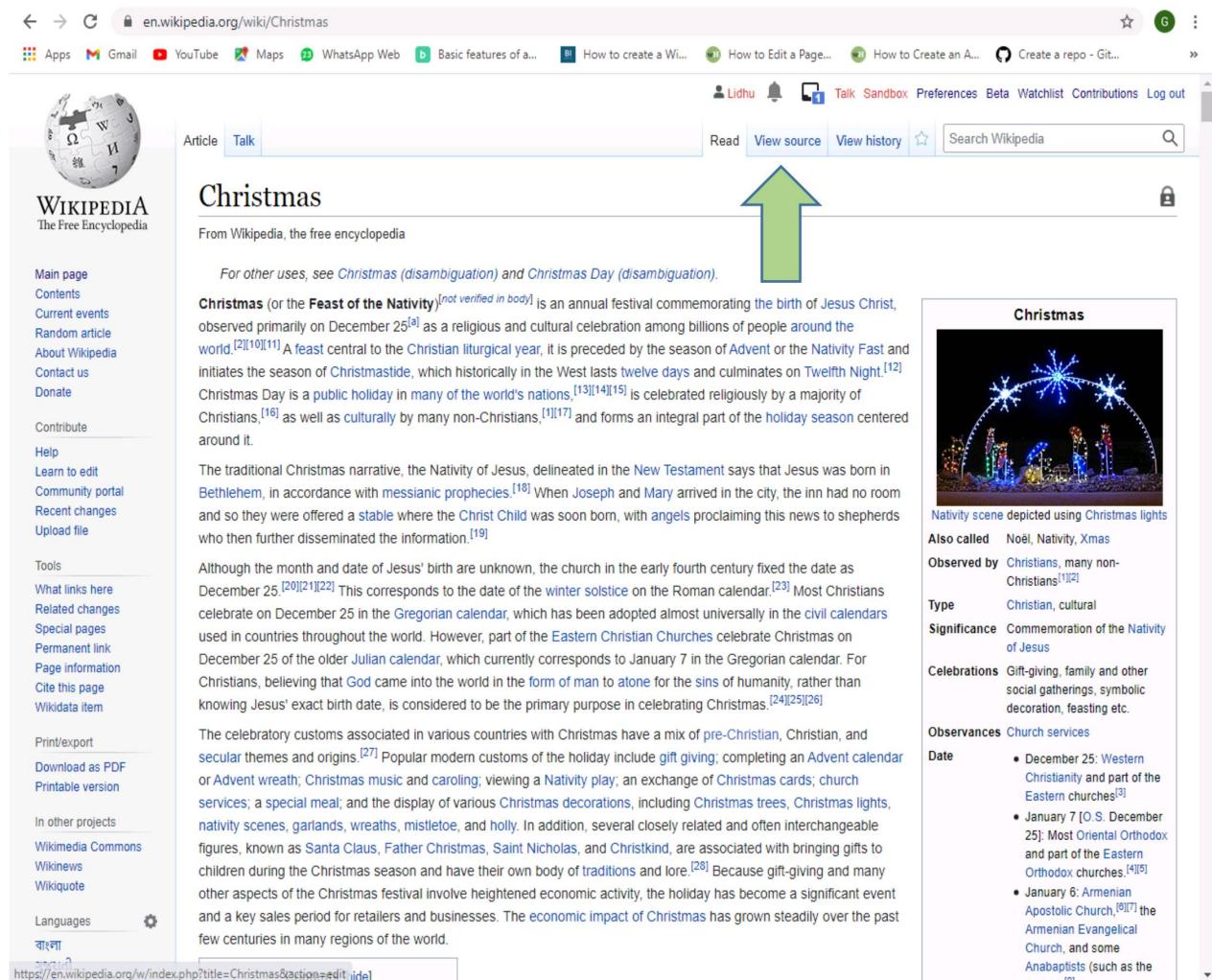
Name:-Glory Lithiyal Roll No:-95 FYIT

d) Editing your page in Wikipedia

For editing a protected page

The following steps should be followed:-

❖ Click on “View source”



The screenshot shows the Wikipedia article for "Christmas". The URL in the address bar is <https://en.wikipedia.org/wiki/Christmas>. The page title is "Christmas". The "View source" button is highlighted with a large green arrow pointing upwards. The page content discusses the history and significance of Christmas, mentioning its observance on December 25 and its status as a public holiday. It also describes various Christmas traditions and customs. A sidebar on the right provides additional information about the date, type, and significance of the holiday.



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❖ Click Submit an edit request.

The screenshot shows the Wikipedia article for 'Christmas'. A prominent semi-protection notice is displayed: 'This page is currently semi-protected so that only established, registered users can edit it.' Below this, under 'Why is the page protected?', there is a list of reasons. To the right, under 'What can I do?', there is a list of actions available to users. At the bottom of the page, there is a 'Submit an edit request' button. A large green arrow points upwards towards this button. The page also includes a code snippet of the page's source code.

You do not have permission to edit this page, for the following reason:

This page is currently semi-protected so that only **established, registered users** can edit it.

Why is the page protected?

- While most articles can be edited by anyone, **semi-protection** is sometimes necessary to prevent **vandalism** to popular pages.
- The reason for protection can be found in the **protection log**. If there are no relevant entries in the protection log, the page may have been moved after being protected.

What can I do?

- If you have a user account, **log in** first. If you do not yet have an account, you may **create one**; after **4 days** and **10 edits**, you will be able to edit semi-protected pages.
- Discuss this page** with others.
- For move-protected pages, see **requested moves**.
- Request that the page's protection level be reduced.
- Find out more about how to get started editing Wikipedia.
- If you have noticed an error or have a suggestion for a simple, non-controversial change, you can submit an edit request, by clicking the button below and following instructions. An established user may then make the change on your behalf. Please check the talk page first in case the issue is already being discussed.

Submit an edit request

```
 {{other uses|Christmas (disambiguation)|Christmas Day (disambiguation)}}
{{pp-protected|reason=See previous logs|small=yes}}
{{short description|Holiday originating in Christianity, usually December 25}}
{{Use mdy dates|date=December 2020}}
{{Infobox holiday
|holiday_name = Christmas
|image = NativityChristmasLights2.jpg
|caption = [[Nativity scene]] depicted using [[Christmas lights]]
|nickname = Noel, Nativity, [[Xmas]]
|observedby = [[Christians]], many non-Christians<ref name="nonXians">{{Cite journal |date=December 29, 2005 |title=Christmas as a Multi-Faith Festival |url=http://downloads.bbc.co.uk/worldservice/learningenglish/entertainment/scripts/multifaith_christmas.pdf |journal=BBC Learning English |access-date=January 20, 2008 |script=}}
```

❖ Fill in the space between
{subst:trim|1=and} stating
unambiguously what you want to



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do.

 Content that violates any copyrights will be deleted. Encyclopedic content must be verifiable. Any work submitted to Wikipedia can be edited, used, and redistributed—by anyone—subject to certain terms and conditions.

Subject/headline

Semi-protected edit request on 15 February 2021



B I  Advanced Special characters Help Cite

`{{edit semi-protected|Christmas|answered=no}}`

`{{subst:trim|1=`

`<!-- State UNAMBIGUOUSLY your suggested changes below this line, preferably in a "change X to Y" format. Other editors need to know what to add or remove. Blank edit requests will be declined. -->`

`<!-- Write your request ABOVE this line and do not remove the tildes and curly brackets below. -->`

`}} ~~~~`

Insert   Sign your posts on talk pages:  Cite your sources: 

Watch this page Permanent 

By publishing changes, you agree to the [Terms of Use](#), and you irrevocably agree to release your contribution under the [CC BY-SA 3.0 License](#) and the [GFDL](#). You agree that a hyperlink or URL is sufficient attribution under the Creative Commons license.

Publish changes Show preview Show changes Cancel

❖ Click on Show preview. This allows you to view how the changes will appear on the page.



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 Content that violates any copyrights will be deleted. Encyclopedic content must be verifiable. Any work submitted to Wikipedia can be edited, used, and redistributed—by anyone—subject to certain terms and conditions.

Subject/headline

Semi-protected edit request on 15 February 2021

B I *x*     > Advanced > Special characters > Help > Cite

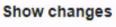
```
 {{edit semi-protected|Christmas|answered=no}}
{{subst:trim|1=
<!-- State UNAMBIGUOUSLY your suggested changes below this line, preferably in a "change X to Y" format. Other editors need to know what to add or remove. Blank edit requests will be declined. -->

<!-- Write your request ABOVE this line and do not remove the tildes and curly brackets below. -->
}} ~~~~
```

Insert                     Sign your posts on talk pages: ~~~~ Cite your sources: <ref></ref>

Watch this page  

By publishing changes, you agree to the [Terms of Use](#), and you irrevocably agree to release your contribution under the [CC BY-SA 3.0 License](#) and the [GFDL](#). You agree that a hyperlink or URL is sufficient attribution under the Creative Commons license.



❖ Click Publish changes.



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B I ~~L~~ ⊖ > Advanced > Special characters > Help > Cite

{{edit semi-protected|Christmas|answered=no}}
 {{subst:trim|1=}}
 <!-- State UNAMBIGUOUSLY your suggested changes below this line, preferably in a "change X to Y" format. Other editors need to know what to add or remove. Blank edit requests will be declined. -->

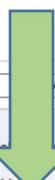
<!-- Write your request ABOVE this line and do not remove the tildes and curly brackets below. -->
 }} ~~~~

Insert Sign your posts on talk pages: ~~~~ Cite your sources: <ref></ref>

Wait for review Permanent

By publishing changes, you agree to the [Terms of Use](#), and you irrevocably agree to release your contribution under the [CC BY-SA 3.0 License](#) and the [GFDL](#). You agree that a hyperlink or URL is sufficient attribution under the Creative Commons license.

Publish changes Show preview Show changes Cancel



► Templates used in this preview ([help](#)):

► This page is a member of 6 hidden categories ([help](#)):



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Practical 2:-Creating account,repository on Github and cloning repository on Github.

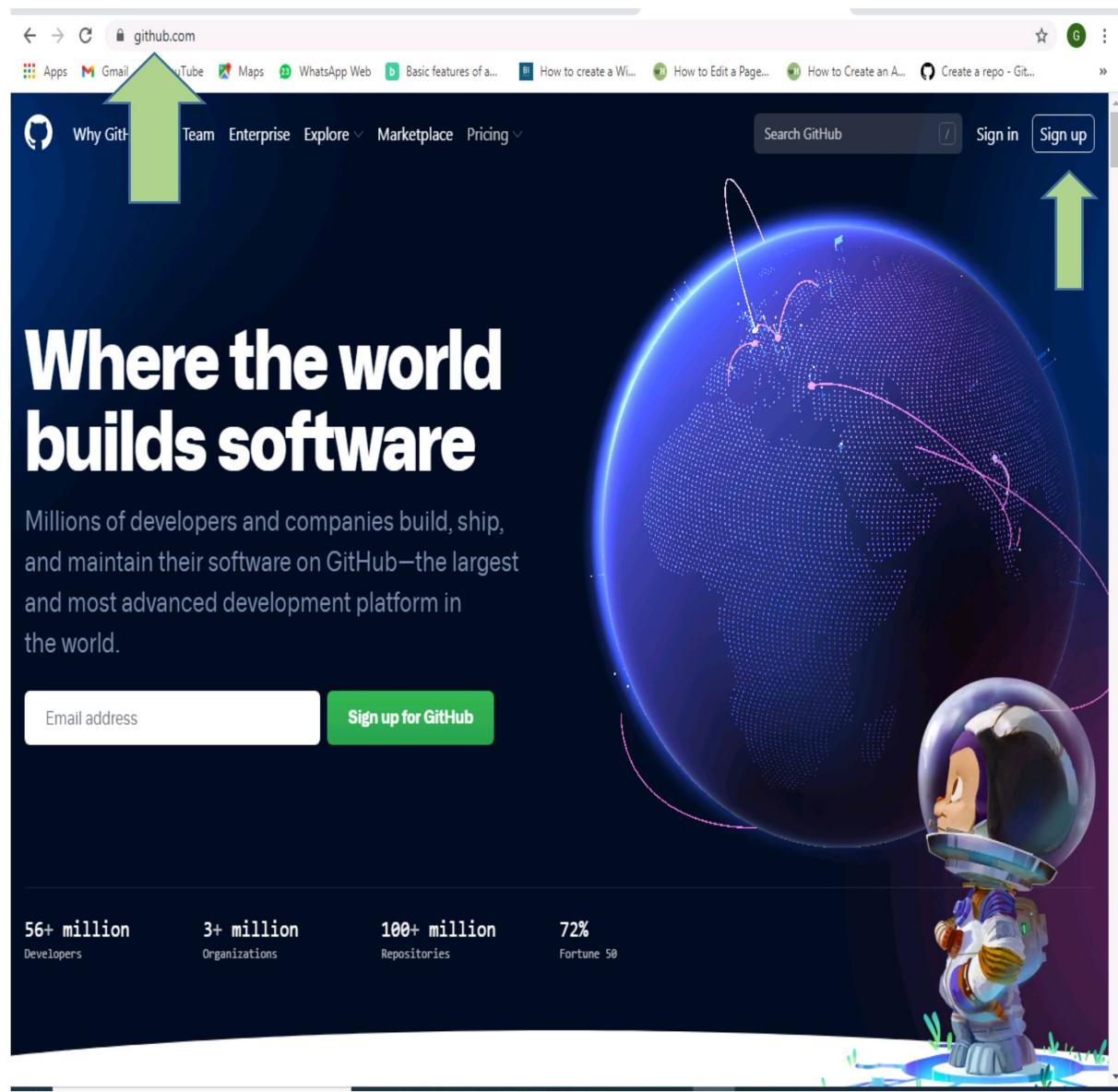
a) Creating an account on Github

- ❖ Go to <http://github.com/join> in a web browser and “Sign up” for creating a new account.



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❖ Enter your personal details.



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The screenshot shows the GitHub account creation page. At the top, there is a navigation bar with links to various Google services like Apps, Gmail, YouTube, Maps, WhatsApp Web, and basic features. Below the navigation bar, the GitHub logo and navigation links for Why GitHub?, Team, Enterprise, Explore, Marketplace, and Pricing are visible. On the right side of the header, there is a search bar and a 'Sign in' button. The main content area has a heading 'Create your account' and a 'Join GitHub' link. It includes fields for 'Username *' (with a placeholder), 'Email address *' (with a placeholder), and 'Password *' (with a placeholder). A note below the password field says 'Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter.' There is also a 'Learn more.' link. Under 'Email preferences', there is a checked checkbox for 'Send me occasional product updates, announcements, and offers.' Below that, there is a section titled 'Verify your account' with a CAPTCHA challenge: 'Please solve this puzzle so we know you are a real person' and a 'Verify' button.



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----- , -----

Username *

 ✓

Email address *

 ✓

Password *

 ✓

Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter.
[Learn more.](#)

Email preferences

Send me occasional product updates, announcements, and offers.

Verify your account

✓

[Create account](#)



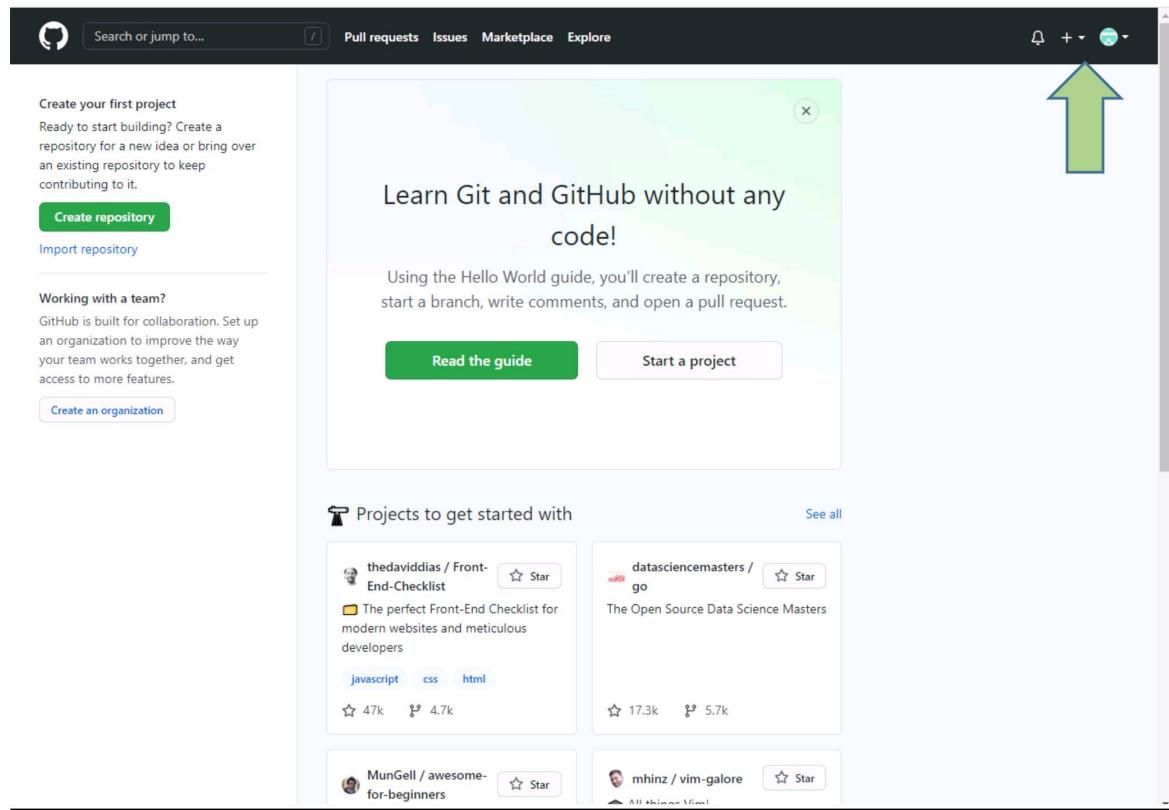
b) Creating a repository on Github.

- ❖ In the upper-right corner of any page, use the drop-down menu, and select.



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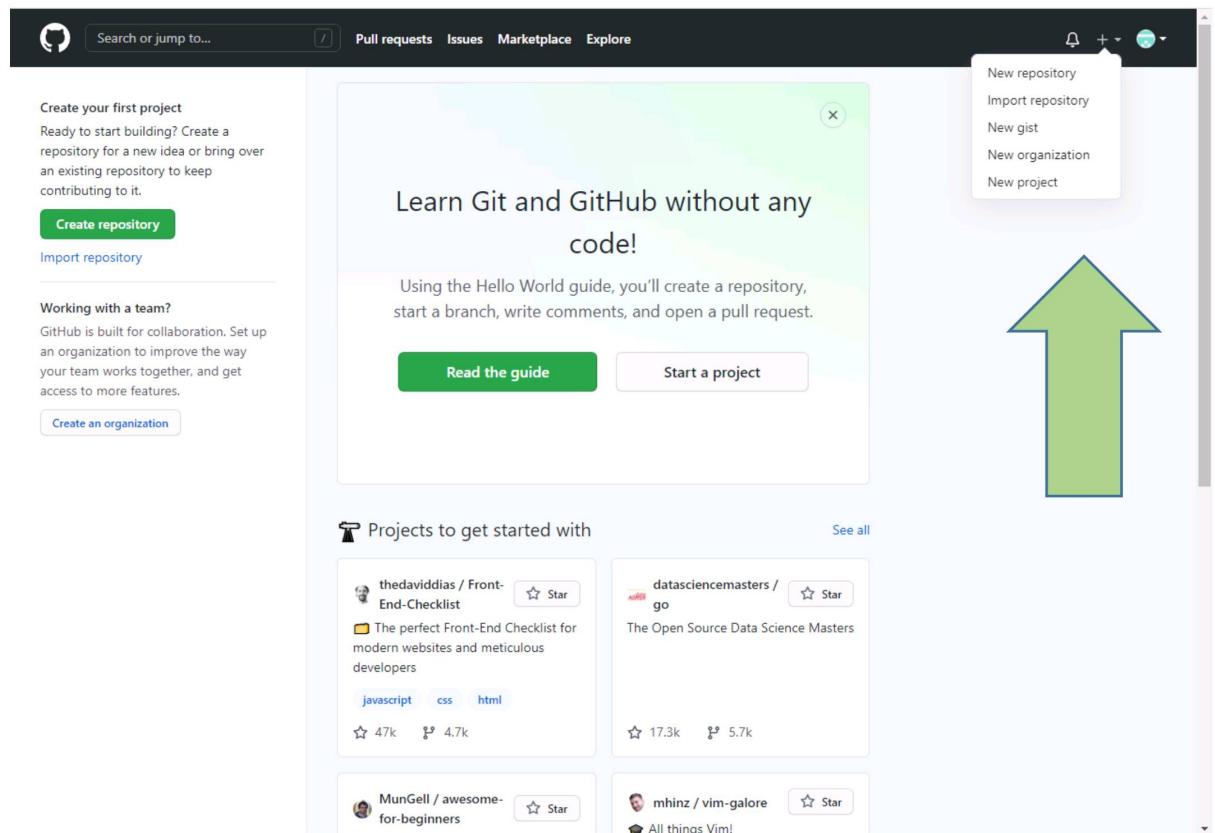


- ❖ Give name to your repository and choose one from private or public. Then click on create repository.



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❖ Fill the repository name and make it to public.
Then click to Create repository.



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Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

Owner * Repository name *

gloryfyit95 / IT TOOLS

Great repository names are Your new repository will be created as IT-TOOLS. about ubiquitous-umbrella?

Description (optional)

Public Anyone on the internet can see this repository. You choose who can commit.

Private You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

Add a README file This is where you can write a long description for your project. Learn more.

Add .gitignore Choose which files not to track from a list of templates. Learn more.

Choose a license A license tells others what they can and can't do with your code. Learn more.

This will set `main` as the default branch. Change the default name in your settings.

Create repository

c) Creating a cloning repository on Github.

- ❖ Click on add files and then you have to choose upload files

gloryfyit95 / IT-TOOLS

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main · 1 branch · 0 tags

gloryfyit95 Add files via upload

README.md Initial commit 29 minutes ago

github.pdf Add files via upload 4 minutes ago

README.md

IT-TOOLS

About

No description, website, or topics provided.

Readme

Releases

No releases published Create a new release

Packages

No packages published Publish your first package

Go to file Add file · Code · Create new file Upload files 2 commits

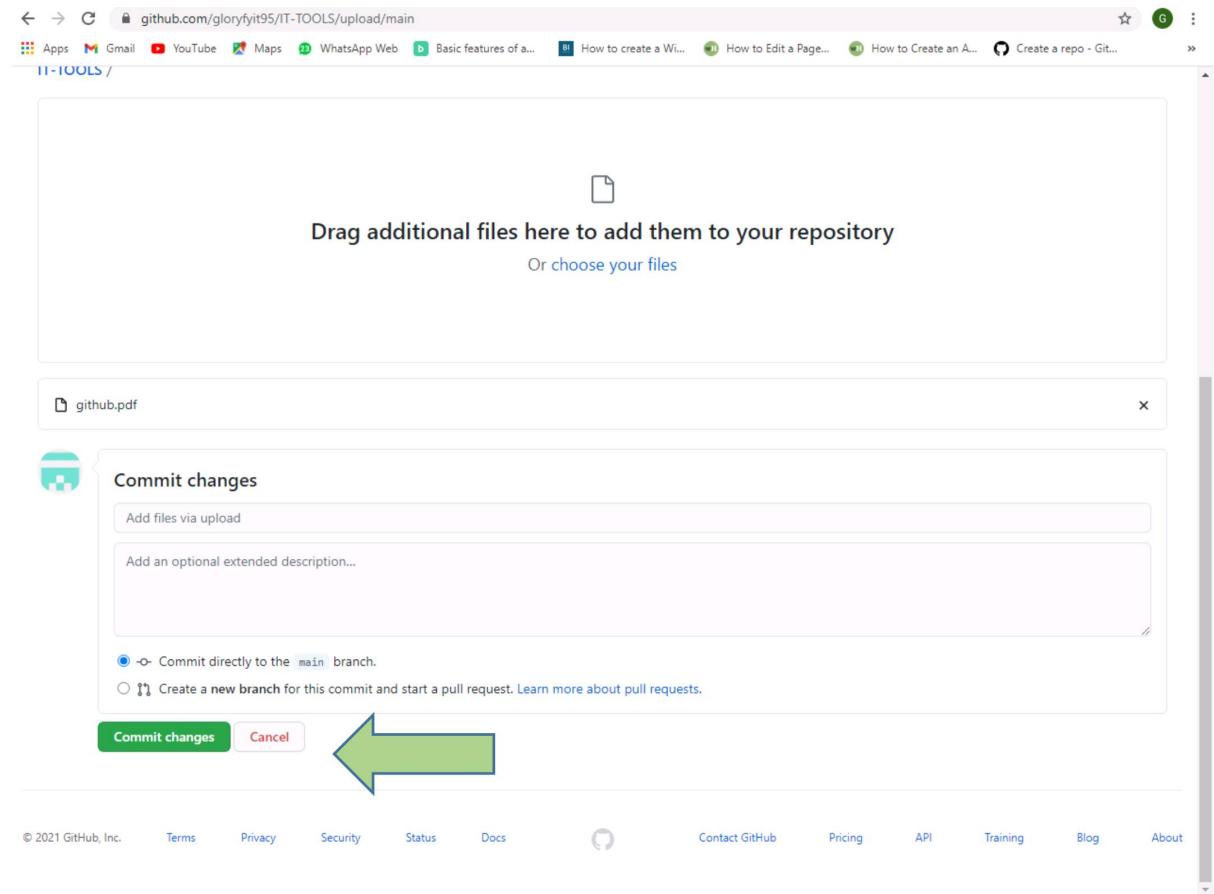
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❖ After uploading click on commit changes



❖ After that click on code and copy the link



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Learn Git and GitHub without any code!

Using the Hello World guide, you'll start a branch, write comments, and open a pull request.

Read the guide

gloryfyit95 / IT-TOOLS

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main · 1 branch · 0 tags

gloryfyit95 Add files via upload

README.md Initial commit

github.pdf Add files via upload

README.md

IT-TOOLS

Clone

HTTPS SSH GitHub CLI (New)

https://github.com/gloryfyit95/IT-TOOLS

Use Git or checkout with SVN using the web URL.

Hub Desktop

No description, website, or topics provided.

Readme

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package



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Roll no:-95
FYIT

PRACTICAL 3

BASIC UNDERSTANDING ON FREE AND OPEN-SOURCE SOFTWARE

1. Describe Open Source Software with Example.

⑦ 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

- ⑦ 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

NAME:- GLORY LITHIYAL

FYIT 95

Regarding for Extension of Time for Practical Submission



sweety@nkc.ac.in

Regarding for Extension of Time for Practical Submission

Respected ma'am

Good Afternoon

I am Glory Lithiyal,student of FYIT Roll no.95. I am facing some problems in my computer due to which i am unable to download softwares(oracle 10g,my sql,etc) due to which I write each and every practicals in my book .I write each and every coding with their output so i will not be able to submit the practical during lecture time.

I request you to please extend the timings of the Submission .I am sure I will submit on that day only before the due time.

Looking forward to your positive response.

regards,
Glory Lithiyal
FYIT-95



Edit with WPS Office

PRACTICAL-5

Describe green computing. List and explain the steps that you take to contribute to 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, engineering, manufacturing, using and disposing of computing devices in a way that reduces their environmental impact.

To promote green computing concepts at all possible levels, the following four approaches are employed:

- Green use: Minimizing the electricity consumption of computers and their peripheral devices and using them in an eco-friendly manner.
- Green disposal: repurposing existing equipment or appropriately disposing of or recycling unwanted electronic equipment.
- Green design: Designing energy-efficient computers, server, printers, projectors and other digital devices.
- Green manufacturing: Minimizing waste during the manufacture of computers and other subsystem to reduce the environmental impact of these activities.

Steps to contribute green computing:

- 1) Power down when not in use: Seems simple but many of us leave computers powered up for a long time when not in use. A large amount of power is being wasted, so if you're not using the computer press the power button to shut it off until needed. This can be done if the computer is working on something. Screensavers do not save power. Same goes for computer, you don't have to shut it down completely if you don't want to.



reboot, just use sleep or hibernation mode. This will help save energy and keep the system to its current state when you need it again.

- 2) Use the power saving features: All computers include power saving options. Using these features you can command the computer to do various energy-saving tasks automatically, including shutting off unused hard disks, powering off a monitor after a given time or even placing the computer into sleep mode when not in use. This is very useful on laptops to help preserve battery life.
- 3) Purchase energy saving hardware: If you don't need super-fast computing power then look out for energy efficient components when buying a new computer, such as green hard drives and low-energy processors. While performance is slower they can use remarkably less power .Purchasing an energy saving power supply unit for a desktop PC can help the environment and save money, they're often quickly too.
- 4) Use a laptop instead of desktop: Laptops are much better for the environment than desktop computers as they have components which require less power. If you don't need a desktop computer consider buying a laptop instead, or if you have both use the laptop as much as possible before considering the desktop.
- 5) Recycle responsibly: Computer hardware is filled with different material which can be hazardous to the environment so make sure you dispose of old components effectively. Don't just throw broken technology in the bin, take the time to trace local recycling organization. There should be companies which can remove the metals which may fix or furnish items.You should check with your local



authorities to find out what facilities they offer for safe disposal of old computing parts.



Edit with WPS Office

PRACTIAL-6: WRITING A BLOG

LINK FOR BLOG: - <https://glorylithiyal.blogspot.com/2021/03/friends-friend-is-one-who-overlooks.html>

March 15, 2021



FRIENDS ❤️



"A Friend is one who overlooks your broken fence & admires the flowers in your garden 🌸".

Friendship is a connection that lasts longer than any other because of one strong element in it which even a love relationship lacks & that is "**NO EXCEPTIONS 😊**". The most amazing hugs 😍, the resounding laughter 😂, the sometimes threatening to walk away & yet stay back without the need of any persuading, the hangouts 😊朋, the peaking at each other, the calling by funny names 😜Monkey, the sharing of secrets 🎯, clicking weird photos of each other 😂, making fun of everyone 😅 & so much more without serious & weighty expectation or demands, friendship truly is the best relationship we make in this world ❤️ हाथ :-

"Friends care for each other, understand each other, stay with each other forever beyond word beyond distance, beyond time 🌎 🍀 😊!"



Edit with WPS Office

Practical-7: IMPLEMENTING CODING PRACTICES IN PYTHON USING PEP8

```
[ ] x=10  
if (x < 15 and  
    x > 5):  
    #Both the conditions satisfied  
    print(x)
```

10

```
x=20  
if x>8 and x%2== 0:  
    print('x is larger than 8 and divisible by 2!')
```

x is larger than 8 and divisible by 2!

```
x = 8 #This is an inline comment  
if x%2 ==0:  
    print(x,"is an even number")  
else:  
    print(x,"is odd number")
```

8 is an even number



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PEP 8 STYLE GUIDE

GROUP No. 8

ANNE VERONICA	1
PRIYA GUPTA	20
SHUBH PATEL	60
BHAVANA PRAJAPATI	66
POOJA PRAMANIK	67
HEETA TALAVIYA	92
GLORY LITHIYAL	95
NITESH GUPTA	111
AMAN UPADHYAY	132
DEEPAK KESHRI	134
SURYASEN VISHWAKARMA	139



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PEP8

PEP8 is a style guide for python code.

- PEP stands for Python Enhancement Proposal, and they describe and document the way python language evolves.
- It was written in 2001 by Guido van Rossum, Barry Warsaw, and Nick Coghlan.
- A PEP is a document that describes new features proposed for Python and documents aspects of Python, like design and style, for the community.
- They also provide a reference point (and a standard) for the pythonic way to write code

- It also has a lot of programming recommendations and useful tips on various topics, which aim to improve readability and reliability of your code.

- PEP8 features:-

1. Plugin architecture: Adding new checks is easy.
2. Parseable output: Jump to error location in your editor.
3. Small: Just one Python file, requires only stdlib. You can use just the pep8.py file for this purpose.



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Naming Conventions

Naming Conventions:

- 1.Variable
- 2.Function
- 3.Class
- 4.Method
- 5.Constant
- 6.Module
- 7.Package
- `



Edit with WPS Office

Variable: A variable is created the moment you first assign a value to it

```
#Wrong Way to Initialize or assigning a name to a variable
#Name Should not start with a number
#Name should be intuitive and not too common.

1variable=2 #Variable name started with a number (Wrong Way)
print(1variable)

File "<ipython-input-1-d1860915d72c>", line 5
 1variable=2
^
SyntaxError: invalid syntax
```

```
#Wrong Way to Initialize or assigning a name to a variable
#Name Should not start with a number
#Name should be intuitive and not too common.

x='Bhavana' #Variable name is too common and not intuitive (Not a Good Way)
print(x)

Bhavana
```

```
#Wrong Way to Initialize or assigning a name to a variable
#Name Should not start with a number
#Name should be intuitive and not too common.

first_name='Bhavana' #Variable name is self-explanatory and has a readability, and it is seperated using underscores
print(x)
```

Bhavana



Edit with WPS Office

Function: A function is a block of code which only runs when it is called.

```
#Wrong Way to Initialize or assigning a name to a function
#Name Should not start with a number
#Name should be intuitive and not too common.

def ^function(): #Function name should not be started with a Number or special characters
    print("Not a correct way to represent a function name")

^function()

File "<ipython-input-5-5f84f1733e34>", line 5
    ^
SyntaxError: invalid syntax
```

```
#Wrong Way to Initialize or assigning a name to a function
#Name Should not start with a number
#Name should be intuitive and not too common.

def x(): #Function name is too generic and it can create a confusion in enterprise programming|
    print("Function Name is too generic, you can use it but it is not recommended as it is not self-explanatory and intuitive")

x()

Function Name is too generic, you can use it but it is not recommended as it is not self-explanatory and intuitive
```

```
#Wrong Way to Initialize or assigning a name to a function
#Name Should not start with a number
#Name should be intuitive and not too common.

def display_function(): #Function name is self explanatory
    print("Function Name is self explanatory, name can be more intuitive in case of proper functionality")

display_function()

Function Name is self explanatory, name can be more intuitive in case of proper functionality
```



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Class: class definitions begin with a class keyword.

```
#Wrong Way to Initialize or assigning a name to a class
#Name Should not start with a number
#Name should be intuitive and not too common.

class x:
    def display_function(): #Function name is self explanatory
        print("Function Name is self explanatory, name can be more intuitive in case of proper functionality")

    display_function()

File "<ipython-input-9-0547726683a1>", line 5
    1class x:
          ^
SyntaxError: invalid syntax
```

```
class Employee:
    def accept(self):
        print("Enter Id:")
        self.Id=int(input())
        print("Enter Name:")
        self.name= str(input())
    def display(self):
        print("ID: %d \nName: %s"%(self.Id,self.name))

emp=Employee()
emp.accept()
emp.display()
```

Enter Id:
66
Enter Name:
bhavana
ID: 66
Name: bhavana



Edit with WPS Office

Method: A Python method is a label that you can call on an object; it is a piece of code to execute on that object.

```
#Wrong Way to Initialize or assigning a name to a method
#Name Should not start with a number
#Name should be intuitive and not too common.

class Method:
    def display(self):
        print("This is method function. ")

c = Method()
c.display()

File "<ipython-input-26-3e88b14da450>", line 6
 1class Method:
      ^
SyntaxError: invalid syntax

#Wrong Way to Initialize or assigning a name to a class
#Name Should not start with a number
#Name should be intuitive and not too common

class Product:
    def __init__(self):
        self.prod_id = input("Enter the Product ID: ")
        self.prod_name = input("Enter the Product Name: ")
        self.total_no = int(input("Enter the total no. of Items Purchase: "))
        self.unit_price=float(input("Enter the unit Price: "))
    def display(self):
        print("Total Price of %d units of Product %s is: %0.2f" %(self.total_no,self.prod_name,self.total_no*self.unit_price))

p1=Product()
p1.display()

Enter the Product ID: A20134
Enter the Product Name: Choclate
Enter the total no. of Items Purchase: 7
Enter the unit Price: 75.50
Total Price of 7 units of Product Choclate is: 528.50
```



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Constant: A constant is a type of variable whose value cannot be changed.

```
pi = 3.14          #pi is constant
radius=5
print("Area of circle: %0.2f" %(pi*radius*radius))

Area of circle: 78.50
```

Modules: Modules refer to a file containing Python statements and definitions.

```
# to import standard module math

import math
print("The value of pi is", math.pi)
```

The value of pi is 3.141592653589793

Packages: A package is basically a directory with Python files and a file with the name `__init__.py`



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Code layout

WITHOUT SPACE

These conventions lead to text that you can read easily, like this:

This would become increasingly hard to read. For example have a look at the example below

```
howwillitlookifwedonothavethespace
```

WITH SPACE

Now here, we will use space and write it in regular English language, so it will be very easy to read.

How will it look if we do not have the space



Edit with WPS Office

Maximum line length and line breaking

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.

CORRECT

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

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

#WRONG

```
#Perform some math and do some things
a=1+2
b=3+4
c=a+b
data=pd.readcsv("precip-2019.csv")
data.plot()
```



Edit with WPS Office

Should a line break Before or After a Binary Operator

Here, it's harder to see which variable is being added and which is subtracted.

WRONG

```
Total = (Number 1+
          Number 2-
          Number 3)
```

You can immediately see which variable is being added or subtracted, as the operator is right next to the variable being operated on.

In the below Example

#CORRECT

```
Total = (Number 1
          + Number 2
          - Number 3)
```



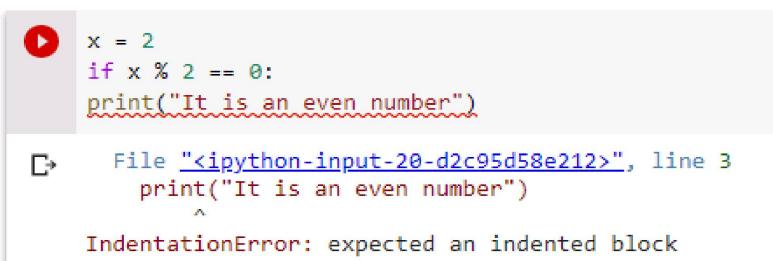
Edit with WPS Office

Indentation

- Indentation is extremely important in Python.
- The Indentation level of lines of code in python determines how statements are grouped together.



1. Expected an indented block

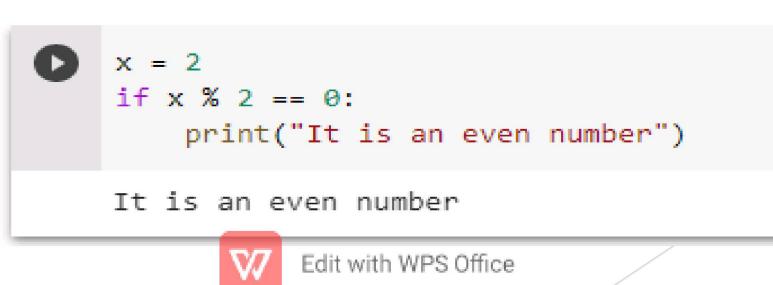


A screenshot of a Jupyter Notebook cell. The code is:

```
x = 2
if x % 2 == 0:
    print("It is an even number")
```

The line `print("It is an even number")` is underlined in red, indicating a syntax error. A tooltip below the cell shows the error message:

File "<ipython-input-20-d2c95d58e212>", line 3
 print("It is an even number")
 ^
IndentationError: expected an indented block



A screenshot of a Jupyter Notebook cell showing the code running successfully. The code is:

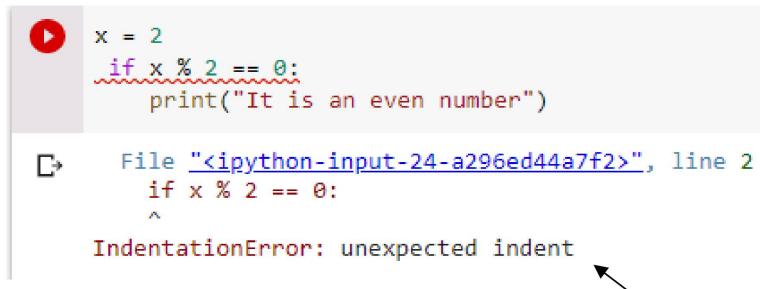
```
x = 2
if x % 2 == 0:
    print("It is an even number")
```

The output is:

It is an even number

Below the cell is a "Edit with WPS Office" button.

2. Unexpected Indent



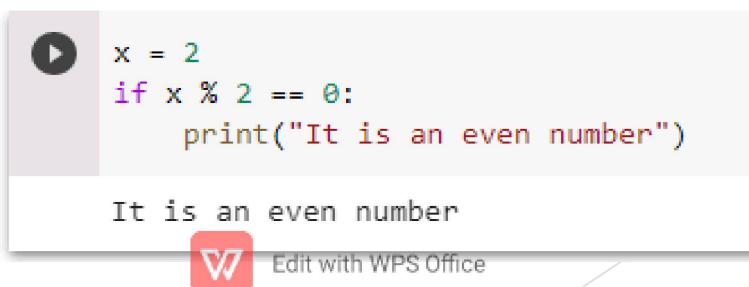
A screenshot of a Jupyter Notebook cell. The code is:

```
x = 2
if x % 2 == 0:
    print("It is an even number")
```

The line `if x % 2 == 0:` is highlighted in red, indicating a syntax error. A tooltip below the cell shows the error message:

File "<ipython-input-24-a296ed44a7f2>", line 2
if x % 2 == 0:
^
IndentationError: unexpected indent

An arrow points from the word "IndentationError" in the tooltip to the space before the colon in the line `if x % 2 == 0:`.



A screenshot of a Jupyter Notebook cell showing the result of the execution. The code is:

```
x = 2
if x % 2 == 0:
    print("It is an even number")
```

The output is:

It is an even number

Below the cell is a "WPS Office" edit button.

3. Unindent does not match any outer indentation level

A screenshot of a Jupyter Notebook cell. The code is:

```
def greeting():
    print("Greetings of the day")
    return

greeting()
```

The line "return" is underlined with a red wavy line. An arrow points from the error message below to this underlined line. The error message is:

File "<ipython-input-30-698032a46f85>", line 3
 return ^
IndentationError: unindent does not match any outer indentation level

A screenshot of a Jupyter Notebook cell. The code is:

```
def greeting():
    print("Greetings of the day")
    return

greeting()
```

The output is:

Greetings of the day

Tabs vs. Spaces

► Tabs vs. Spaces

The key indentation rules laid out by PEP 8 are the following:

- Use 4 consecutive spaces to indicate indentation.
- Prefer spaces over tabs.

► Indentation following line breaks

- Add a comment after the final condition. Due to syntax highlighting in most editors, this will separate the conditions from the nested code:



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Not Recommended

```
▶ x = 5
  if (x > 3 and
      x < 10):
    print(x)
```

Recommended

```
▶ x = 5
  if (x > 3 and
      x < 10):
    # Both conditions satisfied
    print(x)
```

```
▶ x = 5
  if (x > 3 and
      x < 10):
    print(x)
```

 Edit with WPS Office

Not Recommended

```
▶ var = function(arg_one, arg_two,  
                 arg_three, arg_four)
```

Recommended

```
▶ var = function(  
                 arg_one, arg_two,  
                 arg_three, arg_four)
```

Not Recommended

```
▶ def function(  
                 arg_one, arg_two,  
                 arg_three, arg_four):  
                 return arg_one|
```

Recommended

```
def function(  
            arg_one, arg_two,  
            arg_three, arg_four);  
return arg_one
```

► Where to put the closing Braces

Not Recommended

```
▶ list_of_numbers = [ 1, 2, 3,  
                      4, 5, 6,  
                      7, 8, 9]
```

1. Method

```
▶ list_of_numbers = [  
                      1, 2, 3,  
                      4, 5, 6,  
                      7, 8, 9  
]
```

2. Method

```
▶ list_of_numbers = [  
                      1, 2, 3,  
                      4, 5, 6,  
                      7, 8, 9
```



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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.



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BLOCK COMMENTS:

Each line of block comments starts with a # and a single space

Paragraphs inside a block comment are separated by a line containing a single #.

Anti-pattern

```
#This comment needs a space
def print_name(self):
    print(self.name)
```

Best practice

```
# Comment is correct now
def print_name(self):
    print(self.name)
```



Edit with WPS Office

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

Anti-pattern

```
def print_name(self):  
    print(self.name) #This comment needs a space
```

Best practice

```
def print_name(self):  
    print(self.name) # Comment is correct now
```



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DOCSTRING COMMENTS:

A docstring is added as a comment string right below the function,module,or object

RULES:

A docstring is either a single line, or a multi-line comment
In latter case, the first line is short description, and after the first line an empty line follows

This is a basic example of what it looks like:

```
def add(value1, value2):
    """Calculate the sum of value1 and value2."""
    return value1 + value2
```

In the Python interactive help system, the docstring is then made available via the `__doc__` attribute.

```
>>> print add.__doc__
Calculate the sum of value1 and value2.
```



Edit with WPS Office

Inline Comments vs Block Comments

Inline comments look like this

```
x = x + 1          # Compensate for border
```

While block comments look like this

```
# Compensate for border. These comments  
# often cover multiple lines.  
x = x + 1
```



Edit with WPS Office

Whitespace in Expressions and Statements

1) Whitespace Around Binary Operators

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)

Note: When = is used to assign a default value to a function argument, do not surround it with spaces.

Python

```
# Recommended
def function(default_parameter=5):
    # ...

# Not recommended
def function(default_parameter = 5):
    # ...
```



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

```
Python
```

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

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

- Adding space to if statements where there are multiple conditions.

```
Python
```

```
# Not recommended
if x > 5 and x % 2 == 0:
    print('x is larger than 5 and divisible by 2!')
```

```
Python
```

```
# Recommended
if x>5 and x%2==0:
    print('x is larger than 5 and divisible by 2!')
```



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Note : Use the same amount of whitespace either side of the operator.

The following is not acceptable :

Python

```
# Definitely do not do this!
if x >5 and x% 2== 0:
    print('x is larger than 5 and divisible by 2!')
```



Edit with WPS Office

When to Avoid Adding Whitespace

- Trailing space
- Immediately inside parentheses, brackets, or braces:

```
Python
# Recommended
my_list = [1, 2, 3]

# Not recommended
my_list = [ 1, 2, 3, ]
```

- Before a comma, semicolon, or colon:

```
Python
x = 5
y = 6

# Recommended
print(x, y)

# Not recommended
print(x , y)
```



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Before the open parenthesis that starts the argument list of a function call:

```
Python

def double(x):
    return x * 2

# Recommended
double(3)

# Not recommended
double (3)
```

Before the open bracket that starts an index or slice:

```
Python

# Recommended
list[3]

# Not recommended
list [3]
```



Edit with WPS Office

- Between a trailing comma and a closing parenthesis:

```
Python

# Recommended
tuple = (1,)

# Not recommended
tuple = (1, )
```

- To align assignment operators:

```
Python

# Recommended
var1 = 5
var2 = 6
some_long_var = 7

# Not recommended
var1      = 5
var2      = 6
some_long_var = 7
```



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Programming Recommendations

❖ Two Programming Recommendations by PEP-8

A) # Not recommended

```
my_bool = 6 > 5
if my_bool == True:
    return '6 is bigger than 5'
```

B) # Recommended

```
if my_bool:
    return '6 is bigger than 5'
```

In the above program B is recommended over A by the PEP-8

C) # Not recommended

```
my_list = []
if not len(my_list):
    print('List is empty!')
```



Edit with WPS Office

```
D) # Recommended  
my_list = []  
if not my_list:  
    print('List is empty!')
```

In the above program D is recommended over C by the PEP-8



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Q. When to Ignore PEP-8

ANSWER: NEVER

Though, there are some guidelines in PEP-8 that are inconvenient in some instances:

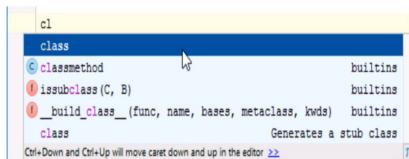
- Complying with PEP-8
- Code surrounding
- Code compatibility



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Tips and Tricks to Help Ensure Your Code Follows PEP 8

Highlighting code style violations:

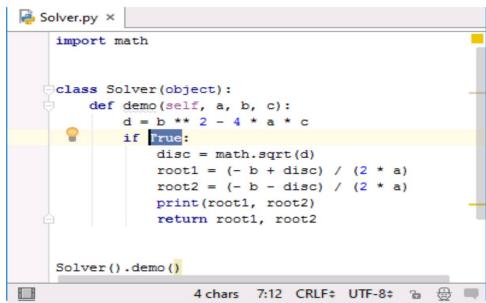


(Refer to Code Completion page of the product documentation for details.)

Generating Source code:

Select `if` option from the suggestion list. As you see, PyCharm automatically adds `if True:` and indents the selected lines:





```
Solver.py x
import math

class Solver(object):
    def demo(self, a, b, c):
        d = b ** 2 - 4 * a * c
        if True:
            disc = math.sqrt(d)
            root1 = (-b + disc) / (2 * a)
            root2 = (-b - disc) / (2 * a)
            print(root1, root2)
        return root1, root2

Solver().demo()
```

Linter-python-pep8 package

This linter-python-pep8 plugin or Linter provides an interface to pep8. It will be used with files that have the Python syntax.

Installation:

Before using this plugin, you should make sure that pep8 is installed on your system. You can follow following instructions to install pep8:

Install python.

Install pep8 by typing the following in a terminal:

```
pip install pep8
```



Edit with WPS Office

Black

Black can be installed by running pip install black. It requires Python 3.6.0+ to run. Once Black is installed, you will have a new command-line tools called black available to you in your shell, and you're ready to start.

```
$ pip install black
```

Format a Single File:

Let's look at this simple example: here are my two python functions in my python file called sample_code.py.

```
def add(a,      b):
    answer = a + b
    return answer

def sub(c,      d):
    answer = c - d
    return answer
```



Edit with WPS Office

You can use black sample_code.py in the terminal to change the format. After running Black, you will see the following output:

```
reformatted sample_code.py
All done! ✨✨
1 file reformatted.
```

Then you open sample_code.py to see formatted python code:

```
def add(a, b):
    answer = a + b

    return answer

def sub(c, d):
    answer = c - d

    return answer
```



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Example of code and layout.

With space and without space.

WITH SPACE.

*ex- MY NAME IS NITESH

WITHOUT SPACE.

*ex- MYNAMEISNITESH



Edit with WPS Office

Maximum line length and line breaking.

Recommended

Python

```
def function(arg_one, arg_two,
             arg_three, arg_four):
    return arg_one
```

Not Recommended

Python

```
from mypkg import example1, \
example2, example3
```



Edit with WPS Office

Should a line break Before or After A Binary Operator.

- Ex-

```
Python
```

```
# Recommended
total = (first_variable
         + second_variable
         - third_variable)
```

```
Python
```

- Ex-

```
# Not Recommended
```

```
total = (first_variable +
          second_variable -
          third_variable)
```



Edit with WPS Office

Example of comments.

block comment.

Anti-partten.

Example

```
#This is a comment  
print("Hello, World!")
```

Best-pratice.

Example

```
#This is a comment  
#written in  
#more than just one line  
print("Hello, World!")
```



Edit with WPS Office

Inline comments.

Anti-pattern.

Python

```
x = 5 # This is an inline comment
```

Best practice.

Python

```
x = 'John Smith' # Student Name
```



Edit with WPS Office

Documentation string comment.

```
"""Return a foobang

Optional plotz says to
frobinate the bizbaz first.

"""
```

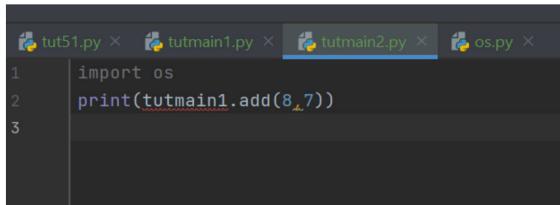


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EXAMPLE OF NAMING CONVENTION

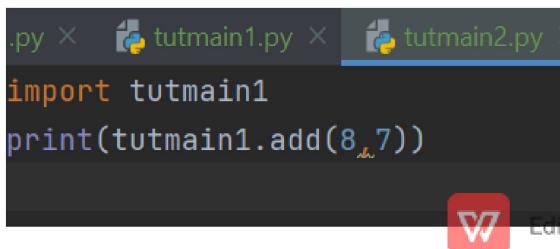
NAMING MODULE WITH HELP OF PEP8

Not recommended



```
tut51.py × tutmain1.py × tutmain2.py × os.py ×  
1 import os  
2 print(tutmain1.add(8,7))  
3
```

Recommended



```
.py × tutmain1.py × tutmain2.py >  
import tutmain1  
print(tutmain1.add(8,7))
```

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NAMING VARIABLE WITH HELP OF PEP8

Variable:

```
>>> # Not recommended
>>> x = 'John Smith'
>>> y, z = x.split()
>>> print(z, y, sep=', ')
'Smith, John'
```

>>>

```
>>> # Recommended
>>> name = 'John Smith'
>>> first_name, last_name = name.split()
>>> print(last_name, first_name, sep=', ')
'Smith, John'
```



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EXAMPLES OF INDENTATION

❖ METHODS OF WHERE TO PUT CLOSING BRACES:- # Recommended

```
list_of_flowers = []
    rose,sunflower,
    marigold,jasmine,
    tulips,lavender
]
```

```
list_of_flowers = []
    rose,sunflower,
    marigold,jasmine,
    tulips,lavender
[]
```



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❖ Methods for following line breaks

Recommended

```
▶ x=10
  if (x < 15 and
      x > 5):
        #Both the conditions satisfied
        print(x)
```

```
▶ x=10
  if (x < 15 and
      x > 5):
        print(x)
```



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EXAMPLE OF WHITESPACING

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

#recommended
b = a**8 + 5
c = (a+b) * [(a-b)]

#not recommended
b = a ** 8 + 5
c = (a + b) * (a - b)



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1. Adding space to if statements where there are multiple conditions.

```
#Recommended  
if x>8 and x%2== 0:  
    print('x is larger than 8 and divisible by 2!')
```

```
#not Recommended  
if x > 8 and x % 2 == 0:  
    print('x is larger than 8 and divisible by 2!')
```



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THANK YOU



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