

## How to check if git is installed on system-

```
C:\Users\91990>git --version
'git' is not recognized as an internal or external command,
operable program or batch file.
```

This means git is not installed.

## To download git-

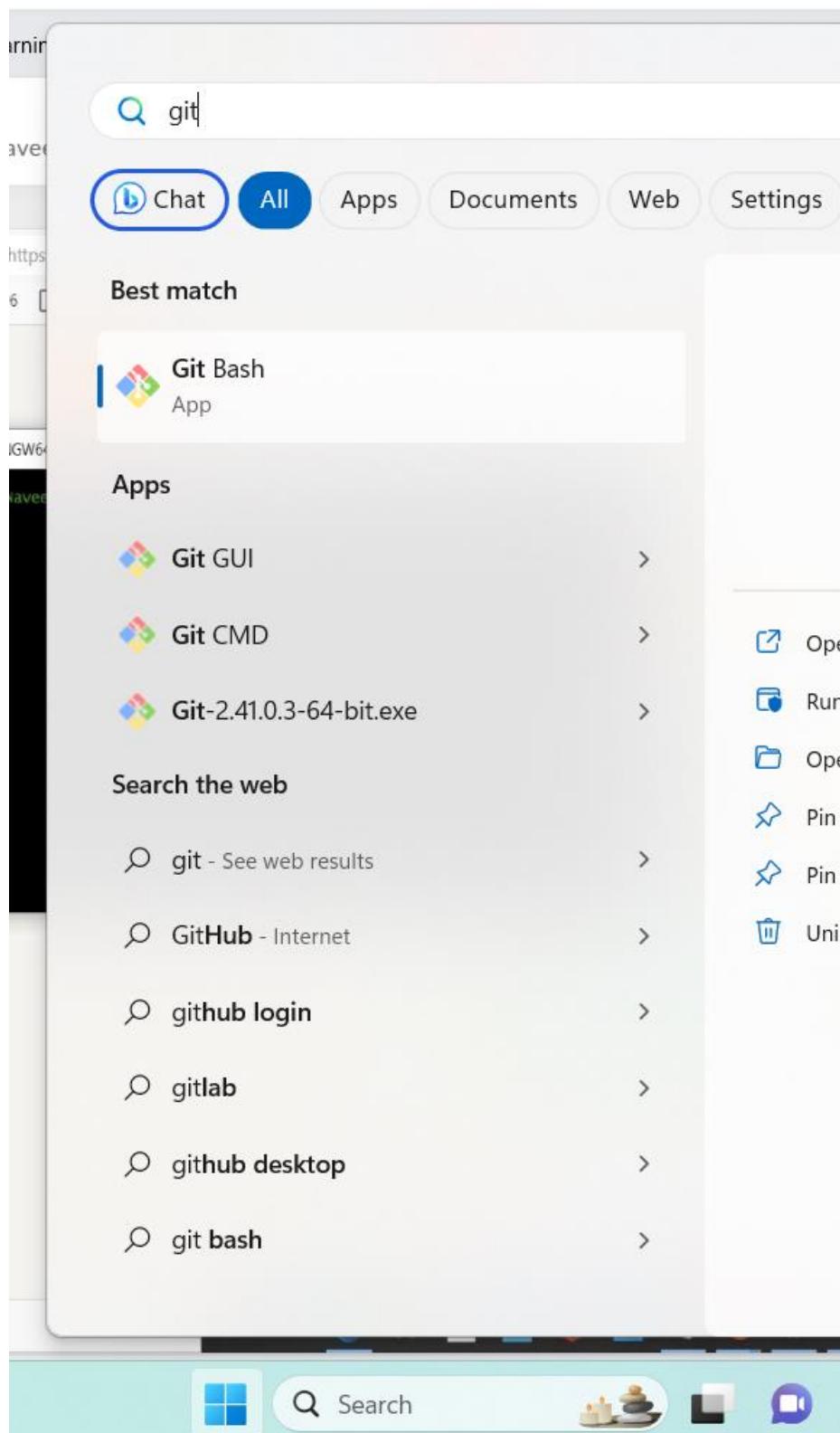
Google search results for "download git". The search bar shows "download git". Below it are several filter buttons: "For Windows", "For Android", "For Mac", "Desktop", "Bash", "GUI", and "Images". The main search result is for "Git SCM" with a link to <https://git-scm.com/downloads>. The result includes a small icon of a red diamond with a white 'G' and a subtitle "Git - Downloads". Below the link, there is a brief description: "Latest source Release. 2.41.0 Release Notes (2023-06-01) Download for Linux. GUI Clients. Git comes with built-in GUI tools (git-gui, gitk), but there are ... Brew install git · Download for Linux and Unix · GUI Clients".

Download as per your machine.

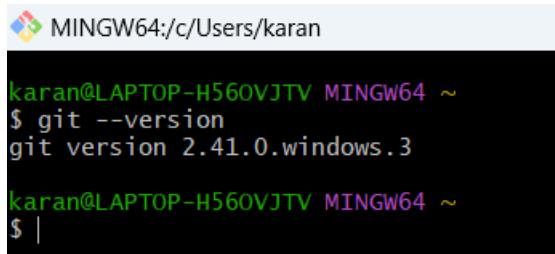
Screenshot of the [Git SCM](https://git-scm.com/downloads) website. The page title is "git --local-branching-on-the-cheap". On the left, there's a sidebar with links for "About", "Documentation", "Downloads" (which is currently selected), and "Community". The "Downloads" section features three large buttons for "macOS", "Windows", and "Linux/Unix". To the right, there's a large monitor icon displaying a teal box with the text: "Latest source Release **2.41.0** Release Notes (2023-06-01) Download for Windows". Below the monitor, a note says "Older releases are available and the Git source repository is on GitHub." At the bottom left, there's a note about the "Pro Git book".

Keep clicking next on exe and it will be installed.

Search for git bash and you will see here this icon once installed-



## Git version-



```
MINGW64:/c/Users/karan
karan@LAPTOP-H560VJTV MINGW64 ~
$ git --version
git version 2.41.0.windows.3
karan@LAPTOP-H560VJTV MINGW64 ~
$ |
```

Same command will work on cmd also-

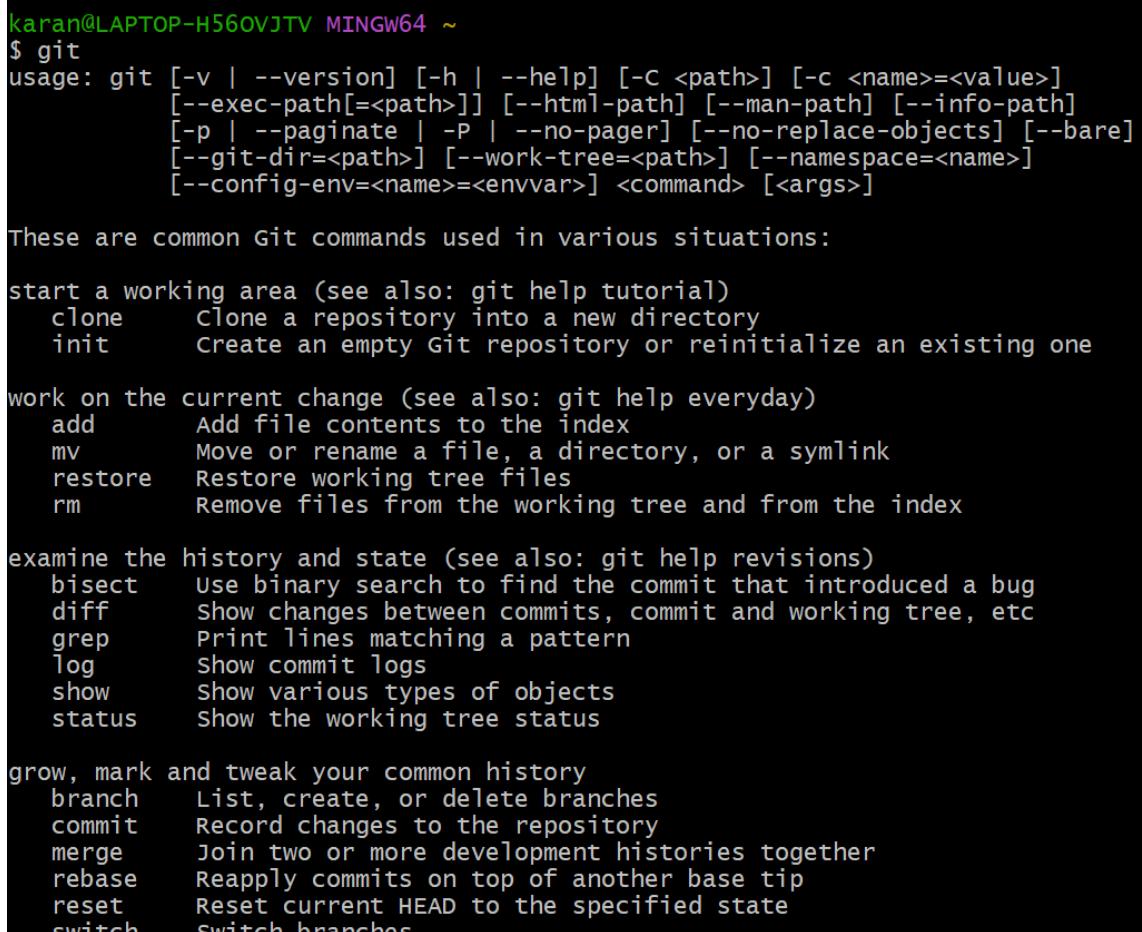
Just open new cmd and run the same command after git installation.



```
C:\Users\91990>git --version
git version 2.33.1.windows.1
```

In git bash we can run unix. Linux commands. So better to use gitbash rather than command prompt.

Just type git and all the commands will be seen-



```
karan@LAPTOP-H560VJTV MINGW64 ~
$ git
usage: git [-v | --version] [-h | --help] [-c <path>] [-c <name>=<value>]
           [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
           [-p | --paginate | -P | --no-pager] [--no-replace-objects] [--bare]
           [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
           [--config-env=<name>=<envvar>] <command> [<args>]

These are common Git commands used in various situations:

start a working area (see also: git help tutorial)
  clone      Clone a repository into a new directory
  init       Create an empty Git repository or reinitialize an existing one

work on the current change (see also: git help everyday)
  add        Add file contents to the index
  mv         Move or rename a file, a directory, or a symlink
  restore    Restore working tree files
  rm         Remove files from the working tree and from the index

examine the history and state (see also: git help revisions)
  bisect    Use binary search to find the commit that introduced a bug
  diff      Show changes between commits, commit and working tree, etc
  grep      Print lines matching a pattern
  log       Show commit logs
  show      Show various types of objects
  status    Show the working tree status

grow, mark and tweak your common history
  branch   List, create, or delete branches
  commit   Record changes to the repository
  merge    Join two or more development histories together
  rebase   Reapply commits on top of another base tip
  reset   Reset current HEAD to the specified state
  switch  Switch branches
```

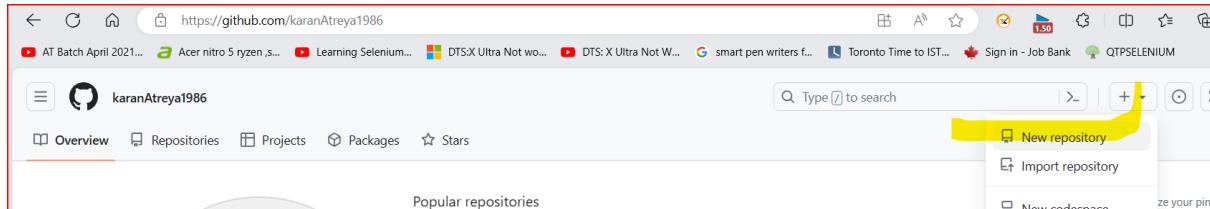
**Clear-**

Will clear screen.

```
karan@LAPTOP-H56OVJTV MINGW64 ~
$ clear|
```

Create free github account.

## Create new repo-



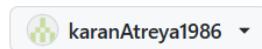
Just make changes to this areas, rest keep it as is.

### Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

*Required fields are marked with an asterisk (\*).*

Owner \*



Repository name \*

sampleRepo is available.

Great repository names are short and memorable. Need inspiration? How about [curly-fortnight](#) ?

Description (optional)

this is a sample repository

 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.

Create repo.

 **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:**

**Add a README file**  
This is where you can write a long description for your project. [Learn more about READMEs](#).

**Add .gitignore**

.gitignore template: **None** ▾

Choose which files not to track from a list of templates. [Learn more about ignoring files](#).

**Choose a license**

License: **None** ▾

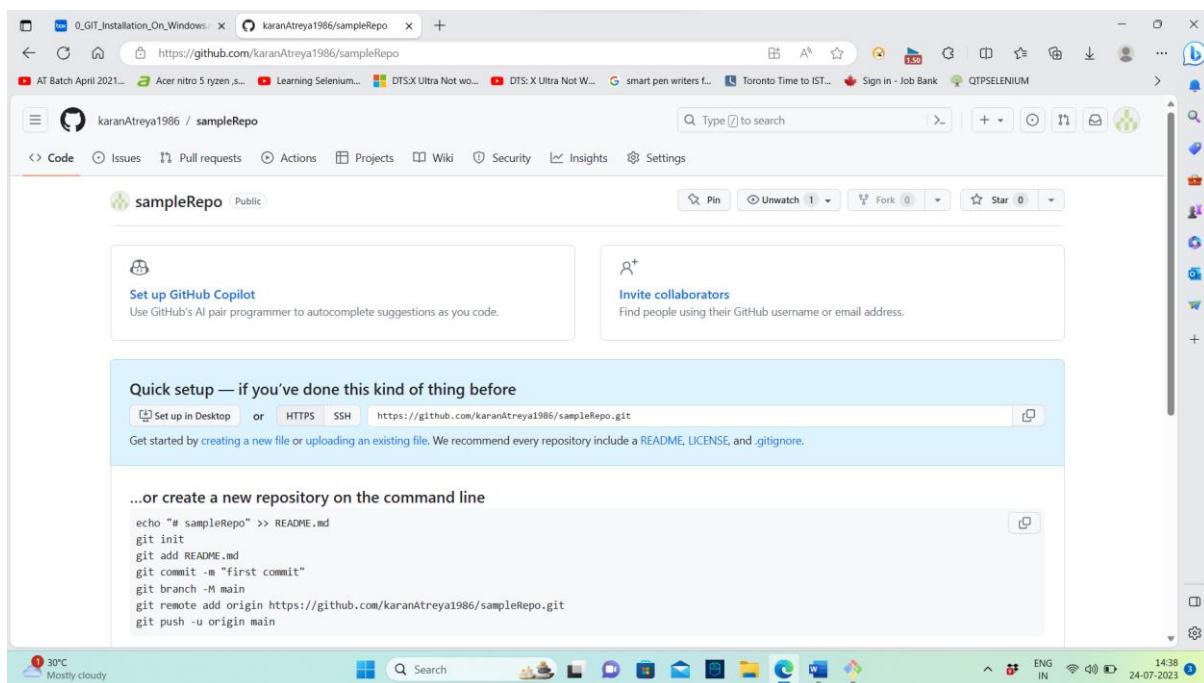
A license tells others what they can and can't do with your code. [Learn more about licenses](#).

---

 You are creating a public repository in your personal account.

**Create repository**

Hurray your first repo is ready.



Pwd-

Gives current directory path.

```
karan@LAPTOP-H56OVJTV MINGW64 ~
$ pwd
/c/Users/karan
```

Lets try to push same sample items -

We created normal text file.

First thing we need to go to the path of the text file we created-

```
MINGW64:/e/Naveen_Java_Training/GIT/git-sample
karan@LAPTOP-H560VJTV MINGW64 ~
$ cd e:
karan@LAPTOP-H560VJTV MINGW64 /e
$ cd Naveen_Java_Training/
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training
$ ls
'2022 lessons'/           Cucumber/      Java_01_JDKSetup_Eclipse_JRE_JDK_JVM.docx 'Test Automation Interview Preparation - 2023 (1).pdf'
'2023JanJavaSessions/'    GIT/          Java_02_DataTypes_Range_Size.docx
'Basic Git Commands for GitHub.docx' 'Java Codes' 'New Microsoft Word Document.docx'

karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training
$ cd GIT/
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT
$ ls
'Comparing the sequence with the normal video playlist.xlsx' 'Introduction.docx' 'New Microsoft Word Document.docx' git-sample/
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT
$ cd git-sample/
```

Git init is the first one-

```
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample
$ git init
Initialized empty Git repository in E:/Naveen_Java_Training/GIT/git-sample/.git/
```

To view hidden and non hidden content-

```
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ ls -alt
total 9
drwxr-xr-x 1 karan 197121 0 Jul 24 14:43 .git/
drwxr-xr-x 1 karan 197121 0 Jul 24 14:43 ../
drwxr-xr-x 1 karan 197121 0 Jul 24 14:42 ../
-rw-r--r-- 1 karan 197121 21 Jul 24 14:39 test.txt
```

Now we want to connect our local to remote repo-

Copy this command from github.

The screenshot shows a browser window with the URL <https://github.com/karanAtreya1986/sampleRepo>. The page content includes two sections of terminal commands:

**...or create a new repository on the command line**

```
echo "# sampleRepo" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/karanAtreya1986/sampleRepo.git
git push -u origin main
```

**...or push an existing repository from the command line**

```
git remote add origin https://github.com/karanAtreya1986/sampleRepo.git
git branch -M main
```

We need to map our local folder with this remote git repo.

```
MINGW64:/e/Naveen_Java_Training/GIT/git-sample
karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git remote add origin https://github.com/karanAtreya1986/sampleRepo.git

karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$
```

Git status-

```
karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    test.txt

nothing added to commit but untracked files present (use "git add" to track)

karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$
```

By default master branch created in local.

For adding untracked files-

```
karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git add .

karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ |
```

Git commit-

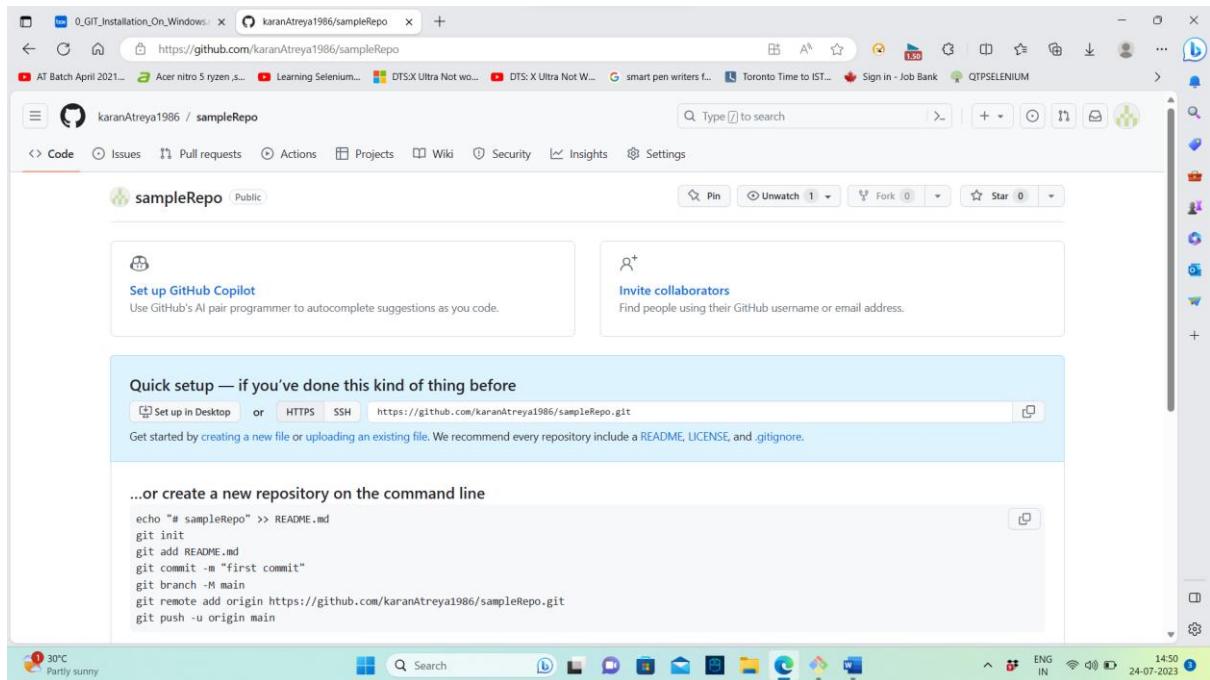
```
karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git add .

karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git commit -m "first commit"
[master (root-commit) 8ca36d8] first commit
 1 file changed, 1 insertion(+)
 create mode 100644 test.txt

karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ |
```

Commit will never push code to repo.

Code is not present in remote repo.



Commit only pushes code to the local cloud or repo.

To push the code to remote repo or github or gitlab cloud-

```
MINGW64:/e/Naveen_Java_Training/GIT/git-sample
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git push origin master
remote: Invalid username or password.
fatal: Authentication failed for 'https://github.com/karanAtreya1986/sampleRepo.git/'

karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$
```

Origin is the remote side. Branch name in remote is master.

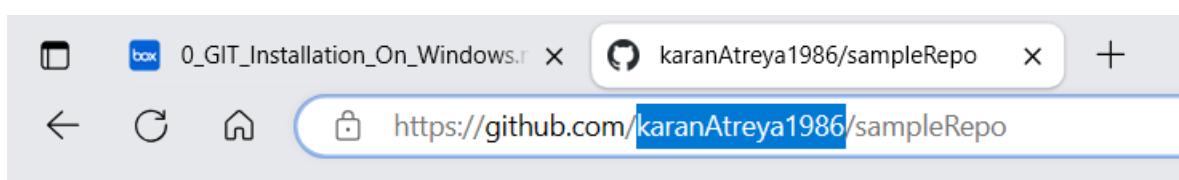
Git wont allow you to push to any repo due to security reason, you have to authenticate yourself.

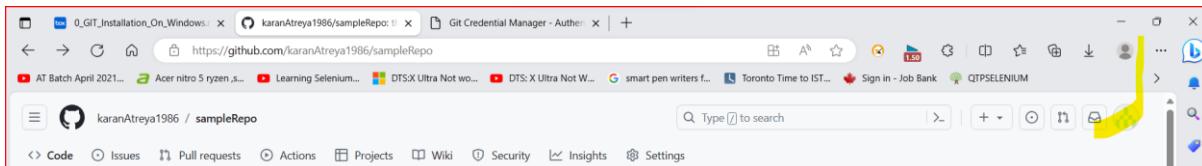
Configure user name –

```
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git config --global user.name "karanAtreya1986"

karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ |
```

Add your github username which is present in url or when you click on your profile.





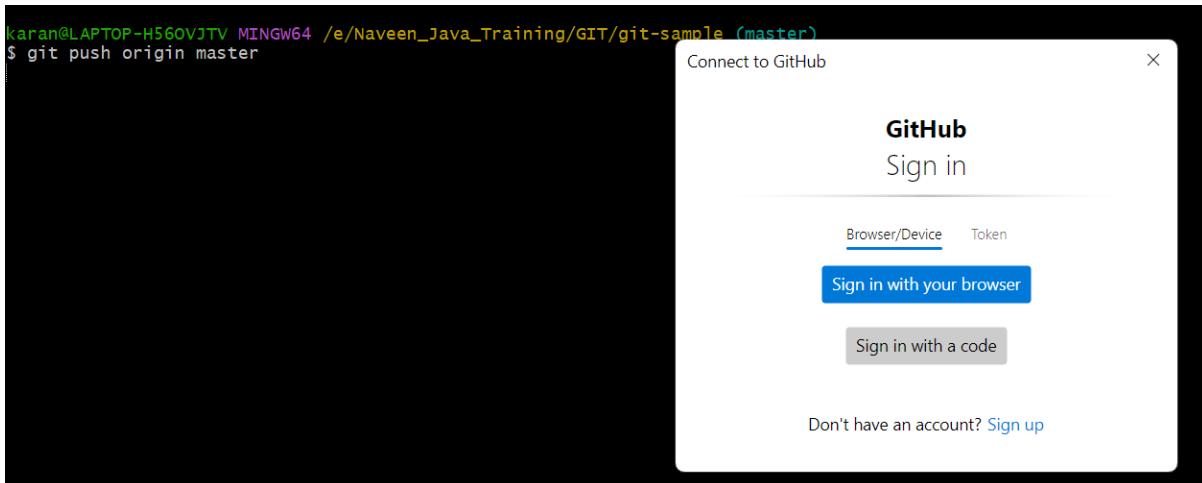
Global is for setting globally. Configuration is usually done at global level to avoid hassles later.

Use the same email registered for github-

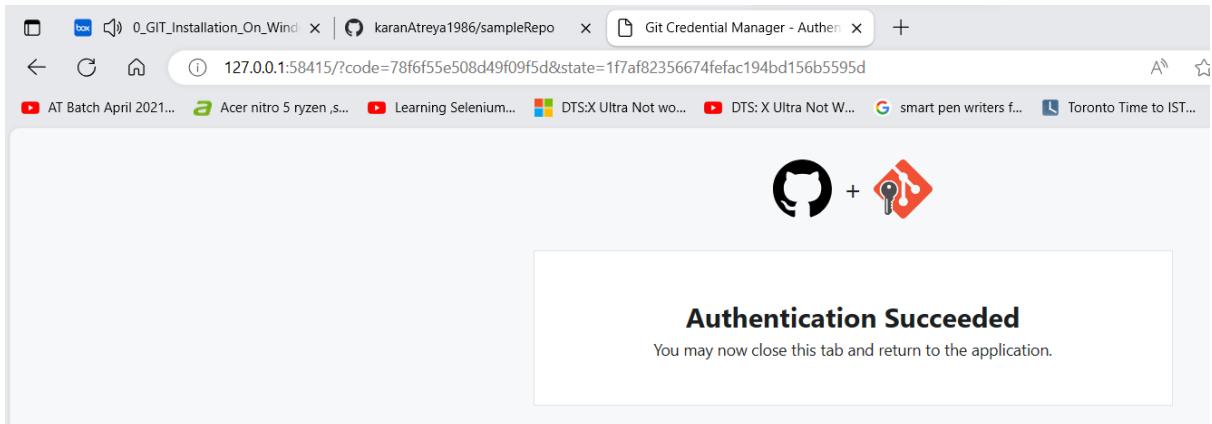
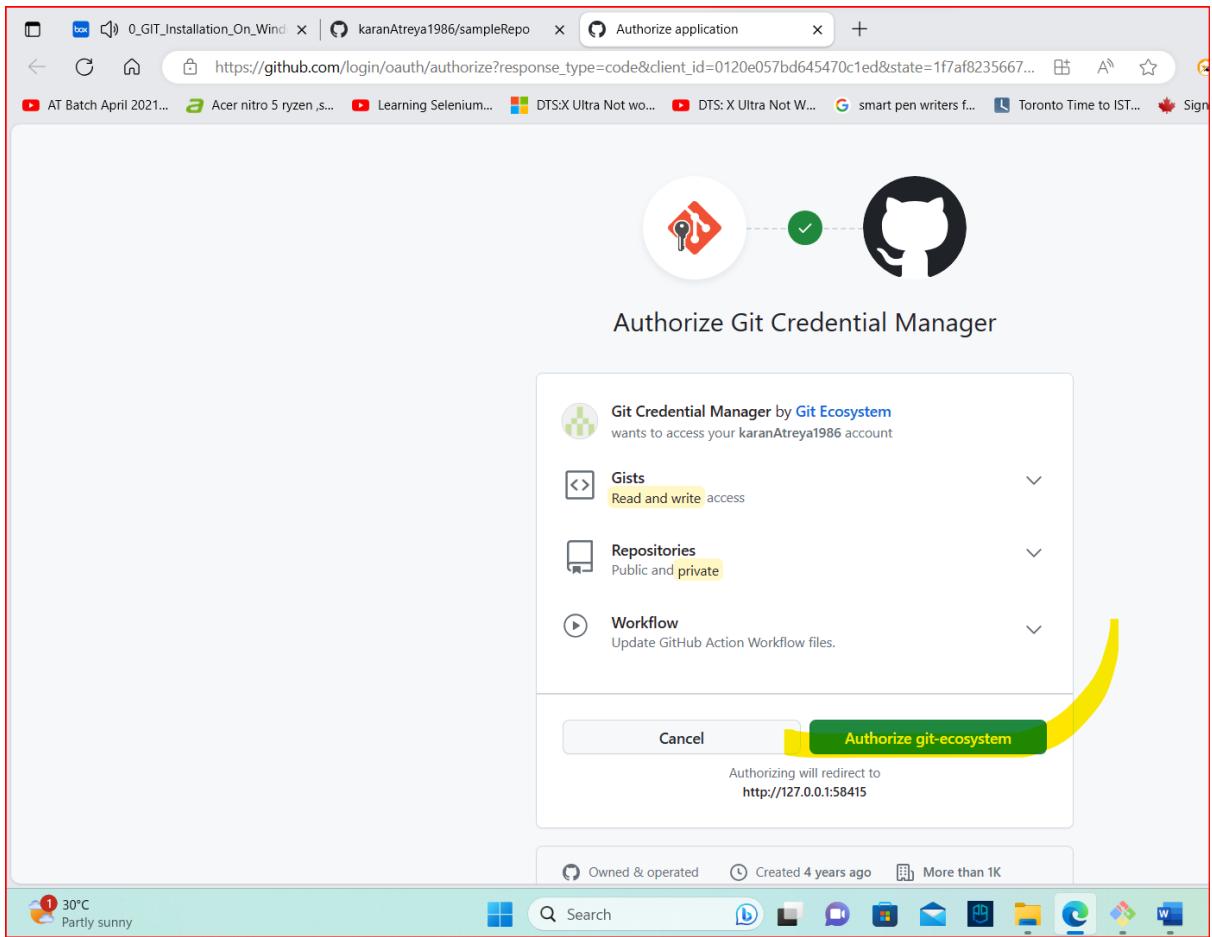
```
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git config --global user.email "karan1988@gmail.com"

karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ |
```

Now try to push the code-



First time we need to authenticate.



Code pushed-

```
karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git push origin master
info: please complete authentication in your browser...
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 232 bytes | 232.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/karanAtreya1986/sampleRepo.git
 * [new branch]      master -> master

karan@LAPTOP-H56OVJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ |
```

We can also see master local to master remote.

```
karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$ git push origin master
info: please complete authentication in your browser...
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 232 bytes | 232.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/karanAtreya1986/sampleRepo.git
 * [new branch]      master -> master

karan@LAPTOP-H560VJTV MINGW64 /e/Naveen_Java_Training/GIT/git-sample (master)
$
```

This configuration is one time activity.

Refresh github and we can see our documents and contents-

