Name : Jayanta Sikdar
Discord: Jayanta Sikdar#0477
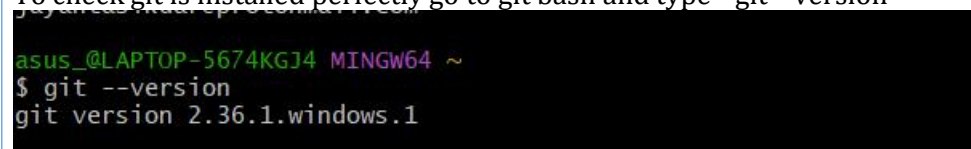
Creating github Account:

```
Welcome to GitHub!
Let's begin the adventure

Enter your email
✓ jayantasikdar@protonmail.com

Create a password
✓ •••••••••

Enter a username
✓ jayan00

Would you like to receive product updates and
announcements via email?
Type "y" for yes or "n" for no

→ y|                                    Continue
```

Installing git:
To check git is installed perfectly go to git bash and type " git --version"

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~
$ git --version
git version 2.36.1.windows.1
```

Setting username and email using git bash:

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~
$ pwd
/c/Users/asus_

asus_@LAPTOP-5674KGJ4 MINGW64 ~
$ git config --global user.name "jayan00"

asus_@LAPTOP-5674KGJ4 MINGW64 ~
$ git config --global user.email "jayantasikdar@protonmail.com"

asus_@LAPTOP-5674KGJ4 MINGW64 ~
$ git config user.name
jayan00

asus_@LAPTOP-5674KGJ4 MINGW64 ~
$ git config user.email
jayantasikdar@protonmail.com
```

Task:
1. **Create a repository with name "Cognizance" on GitHub using Git Bash.**

After sign in to the github account go to Repositories then go to new to create a new repository.

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** *

jayan00 ▾ / Cognizancee ✔

Great repository names are short and memorable. Need inspiration? How about **turbo-doodle**?

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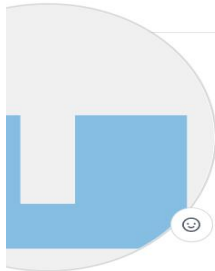
Add .gitignore
Choose which files not to track from a list of templates. Learn more.

.gitignore template: None ▾

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

New repository is created successfully:

📖 **Overview**   🖥 Repositories 1   ⊞ Projects   📦 Packages   ☆ Stars

Popular repositories

Cognizance   Public

4 contributions in the last year

	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Mon											
Wed											
Fri											

Learn how we count contributions   Less ☐

Edit profile

lay   NEW! View your contributions in

Contribution activity

June 2022

Created 2 commits in 1 repository

Create a folder with name "Task-1" in the repository and perform the Git operations using Git Bash.

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~ (master)
$ pwd
/c/Users/asus_

asus_@LAPTOP-5674KGJ4 MINGW64 ~ (master)
$ ls
'3D Objects'/
 AppData/
'Application Data'@
 BullseyeCoverageError.txt
 Contacts/
 Cookies@
 Documents/
 Downloads/
 Favorites/
 Links/
'Local Settings'@
 Music/
'My Documents'@
```

Creating a folder named Task -1 and open git bash in that location.
I have also created a text file in folder Task -1.
The git init command creates a new Git repository. It can be used to convert an existing, unversioned project to a Git repository or initialize a new, empty repository. Most other Git commands are not available outside of an initialized repository, so this is usually the first command you'll run in a new project.

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git init
Initialized empty Git repository in C:/Users/asus_/Documents/Task -1/.git/

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git add file1.txt
fatal: pathspec 'file1.txt' did not match any files

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git add file.txt

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git commit -m "First git"
[master (root-commit) d201b8c] First git
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file.txt

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git remote add origin https://github.com/jayan00/Cognizance.git

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git push -u origin master
info: please complete authentication in your browser...
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 215 bytes | 215.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/jayan00/Cognizance.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```
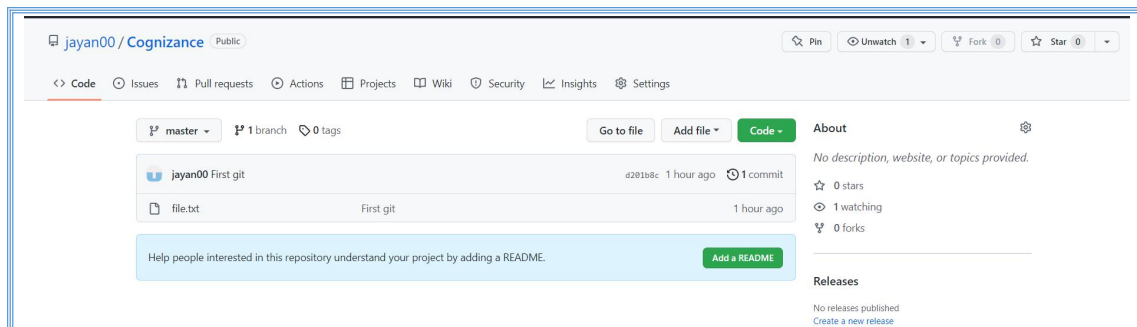
Git add is used to put current working files into stage.

In the above screenshot we can Cognizance repository is created successfully and file.txt and commit added to cognizance repository.

## 2. Performing git operations

Adding Task1 in github:

- ✧ **Git Add**
- ✧ **Git Push**
- ✧ **Git Commit -m**

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git add Task1

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git commit -m "Added Task1"
[master a799a6f] Added Task1
 1 file changed, 1 insertion(+)
 create mode 100644 Task1/fil2 .txt

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 359 bytes | 19.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/jayan00/Cognizance.git
   d201b8c..a799a6f  master -> master
```
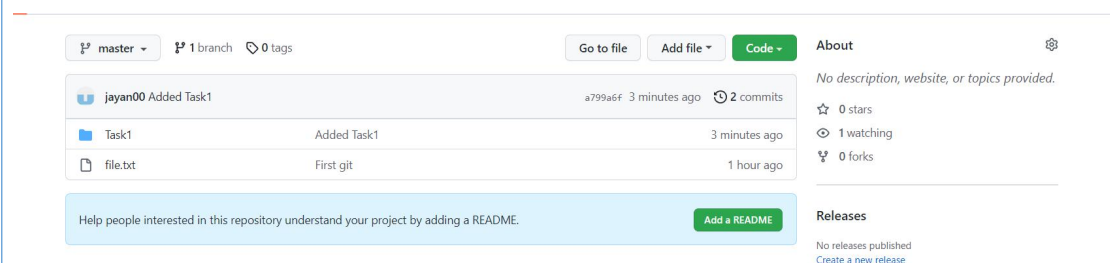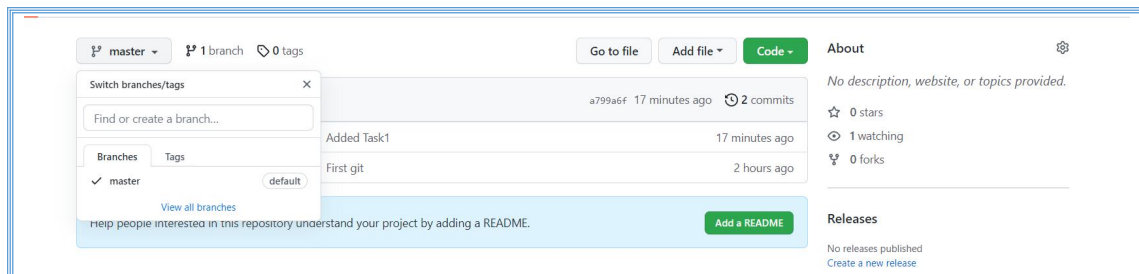

Task 1 folder added successfully.

The git checkout command is **used to switch between branches in a repository**.

One branch is there named master.
- ✧ **Git checkout**
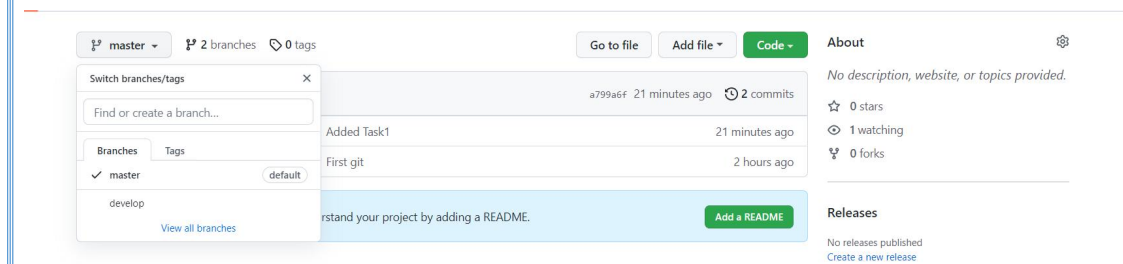- ✧ **Git checkout -b**

Git checkout -b develop: to create a branch named develop.

Two branches are there now.

✧ **Git clone:** Clone an existing repository into a new directory.
Git clone https://github.com/jayan00/Cognizance.git

Cognizance folder is
created.

Name	Date modified	Type	Size
📁 Cognizance	10-06-2022 16:15	File folder	
📁 Task1	10-06-2022 02:51	File folder	
📄 file.txt	10-06-2022 01:24	Text Document	0 KB

« Users › asus_ › Documents › Task -1 › Cognizance   ⌄   C   🔎 Search Cognizance

Name	Date modified	Type	Size
📁 Task1	10-06-2022 16:15	File folder	
📄 file.txt	10-06-2022 16:15	Text Document	0 KB

Task1 folder and file.txt automatically cloned into cognizance.

✧ **Git pull:** Fetches remote changes on the current branch into the local clone, and
merges them into the current working files.

In remote repository

```
7 lines (7 sloc)   108 Bytes

1    first code
2    def fib(n):
3        a, b = 0, 1
4            print(a, end=' ')
5            a, b =
6    print()
7      fib(1000)
```

In local:
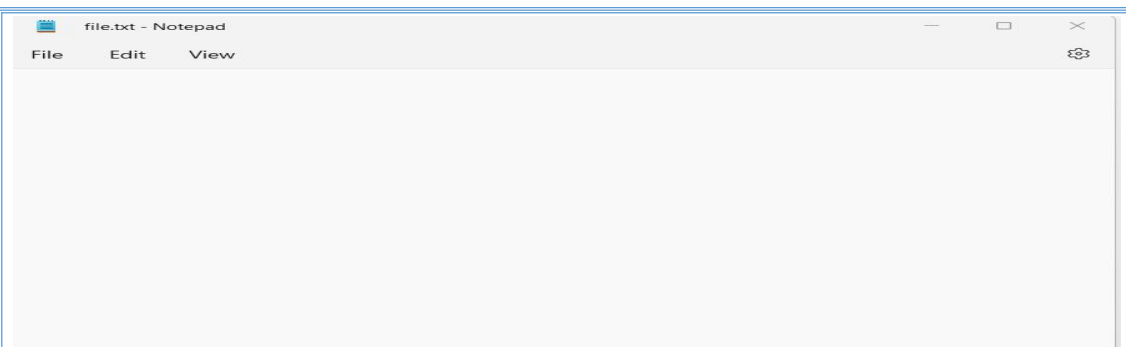
After performing git pull:


```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git pull origin master
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 6 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), 1.35 KiB | 26.00 KiB/s, done.
From https://github.com/jayan00/Cognizance
 * branch            master      -> FETCH_HEAD
   a799a6f..1052528   master      -> origin/master
Updating a799a6f..1052528
Fast-forward
 file.txt | 7 +++++++
 1 file changed, 7 insertions(+)
```



```
first code
def fib(n):
    a, b = 0, 1
       print(a, end=' ')
       a, b =
print()
 fib(1000)
```
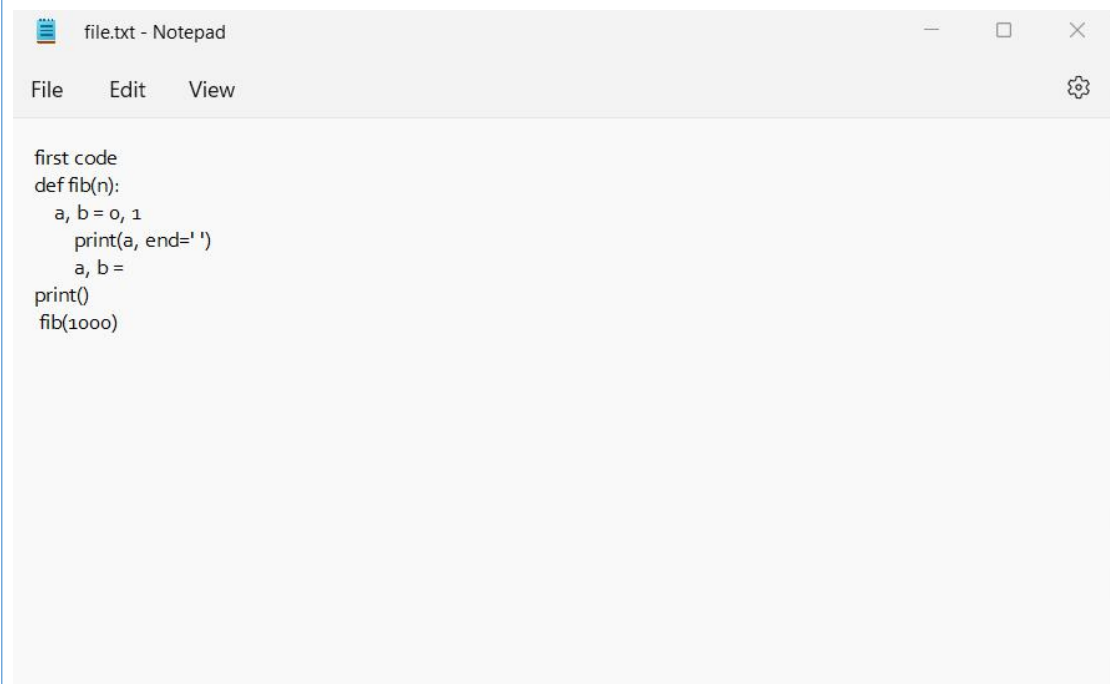
✦ **Git Merge:** Merging files from the given branch to current branch.
Creating a new file in branch develop:

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (develop)
$ touch a.txt

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (develop)
$ git add -A
```

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (develop)
$ git commit -m "file new'
>
> "
[develop 0a30c68] file new'
 2 files changed, 1 insertion(+)
 create mode 160000 Cognizance
 create mode 100644 a.txt

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (develop)
$ git log -3
commit 0a30c68c3753d440009873cb7df6ce8c8c133d (HEAD -> develop)
Author: jayan00 <jayantasikdar@protonmail.com>
Date:   Fri Jun 10 17:27:15 2022 +0530

    file new'

commit a799a6fcff02e9e4f2f77860f743865a3517585d (origin/develop)
Author: jayan00 <jayantasikdar@protonmail.com>
Date:   Fri Jun 10 02:55:01 2022 +0530

    Added Task1

commit d201b8c08ece507ba685329c89cc6754a564b424
Author: jayan00 <jayantasikdar@protonmail.com>
Date:   Fri Jun 10 01:31:34 2022 +0530

    First git
```

Merging the file in branch master:

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (develop)
$ git checkout master
warning: unable to rmdir 'Cognizance': Directory not empty
Switched to branch 'master'
Your branch is behind 'origin/master' by 1 commit, and can be fast-forwarded.
  (use "git pull" to update your local branch)

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git merge develop
Merge made by the 'ort' strategy.
 Cognizance | 1 +
 a.txt      | 0
 2 files changed, 1 insertion(+)
 create mode 160000 Cognizance
 create mode 100644 a.txt
```

✧ Git rebase:

Integrates changes from one branch into another. It is an alternative to the better known "merge" command.

✧ Git Fetch:
Downloads changes from a remote repository into the local clone.

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git fetch
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (5/5), 1.24 KiB | 42.00 KiB/s, done.
From https://github.com/jayan00/Cognizance
   f5aee52..d78ffc2  master     -> origin/master

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git rebase origin/master
warning: unable to rmdir 'Cognizance': Directory not empty
Successfully rebased and updated refs/heads/master.
```

Before performing rebase

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git log -3 --graph
*   commit 6351ced37dc7e93d334dce5d0166034f2d94f7c5 (HEAD -> master)
|\  Merge: 1052528 0a30c68
| | Author: jayan00 <jayantasikdar@protonmail.com>
| | Date:   Fri Jun 10 17:28:38 2022 +0530
| |
| |     Merge branch 'develop'
| |
| * commit 0a30c68c3753d440009873cb7df6ce8c8c133d (develop)
| | Author: jayan00 <jayantasikdar@protonmail.com>
| | Date:   Fri Jun 10 17:27:15 2022 +0530
| |
| |     file new'
| |
* | commit 1052528e948617923889cbe9754c2eefe7b523c6
| | Author: jayan00 <107148194+jayan00@users.noreply.github.com>
| | Date:   Fri Jun 10 16:54:19 2022 +0530
| |
| |     Update file.txt
```

After performing rebase:

```
Successfully rebased and updated refs/heads/master.

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git log -3 --graph
* commit 8c9033a6f82d1dde63c9523e2403525b3cf60030 (HEAD -> master)
| Author: jayan00 <jayantasikdar@protonmail.com>
| Date:   Fri Jun 10 17:27:15 2022 +0530
|
|     file new'
|
* commit d78ffc25252cfb63d8186a322c99ea91f7e01b0b (origin/master)
| Author: jayan00 <107148194+jayan00@users.noreply.github.com>
| Date:   Fri Jun 10 17:48:08 2022 +0530
|
|     file deleted
|
* commit 0009ef588417e5a12ba8a3d4523f771bda8cb856
| Author: jayan00 <107148194+jayan00@users.noreply.github.com>
| Date:   Fri Jun 10 17:45:55 2022 +0530
|
|     new file created
```

So rebase command is performed seccessfully.

✧ Git Reset:

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git log --oneline
ad06b2d (HEAD -> master, origin/master) New folder added
8c9033a file new'
d78ffc2 file deleted
0009ef5 new file created
f5aee52 Update fil2 .txt
1052528 Update file.txt
432dc3f Update file.txt
a799a6f (origin/develop) Added Task1
d201b8c First git

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git reset --hard Head~1
HEAD is now at 8c9033a file new'

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git log --oneline
8c9033a (HEAD -> master) file new'
d78ffc2 file deleted
0009ef5 new file created
f5aee52 Update fil2 .txt
1052528 Update file.txt
432dc3f Update file.txt
a799a6f (origin/develop) Added Task1
d201b8c First git
```

✧ Git fork:

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git remote -v
origin  https://github.com/jayan00/Cognizance.git (fetch)
origin  https://github.com/jayan00/Cognizance.git (push)

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git clone https://github.com/octocat/Hello-World.git
Cloning into 'Hello-World'...
remote: Enumerating objects: 13, done.
remote: Total 13 (delta 0), reused 0 (delta 0), pack-reused 13
Receiving objects: 100% (13/13), done.

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git remote add upstream https://github.com/octocat/Hello-World.git

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git remote -v
origin  https://github.com/jayan00/Cognizance.git (fetch)
origin  https://github.com/jayan00/Cognizance.git (push)
upstream        https://github.com/octocat/Hello-World.git (fetch)
upstream        https://github.com/octocat/Hello-World.git (push)
```

Git commit:
Commits staged changes to a local branch.

Git commit -a:

Commits all modified files to a local branch(shorthand for "git add" followed by "git commit" for each modified file).

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git commit -a
On branch master
Your branch is up to date with 'origin/master'.

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

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

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git commit
On branch master
Your branch is up to date with 'origin/master'.

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

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

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git commit
On branch master
Your branch is up to date with 'origin/master'.

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

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

3. **git config --list --show-origin**

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git config --list --show-origin
file:E:/Git/etc/gitconfig        diff.astextplain.textconv=astextplain
file:E:/Git/etc/gitconfig        filter.lfs.clean=git-lfs clean -- %f
file:E:/Git/etc/gitconfig        filter.lfs.smudge=git-lfs smudge -- %f
file:E:/Git/etc/gitconfig        filter.lfs.process=git-lfs filter-process
file:E:/Git/etc/gitconfig        filter.lfs.required=true
file:E:/Git/etc/gitconfig        http.sslbackend=openssl
file:E:/Git/etc/gitconfig        http.sslcainfo=E:/Git/mingw64/ssl/certs/ca-bundle.crt
file:E:/Git/etc/gitconfig        core.autocrlf=true
file:E:/Git/etc/gitconfig        core.fscache=true
file:E:/Git/etc/gitconfig        core.symlinks=false
file:E:/Git/etc/gitconfig        pull.rebase=false
file:E:/Git/etc/gitconfig        credential.helper=manager-core
file:E:/Git/etc/gitconfig        credential.https://dev.azure.com.usehttppath=true
file:E:/Git/etc/gitconfig        init.defaultbranch=master
file:C:/Users/asus_/.gitconfig   user.name=jayan00
file:C:/Users/asus_/.gitconfig   user.email=jayantasikdar@protonmail.com
file:.git/config        core.repositoryformatversion=0
file:.git/config        core.filemode=false
file:.git/config        core.bare=false
file:.git/config        core.logallrefupdates=true
file:.git/config        core.symlinks=false
file:.git/config        core.ignorecase=true
file:.git/config        remote.origin.url=https://github.com/jayan00/Cognizance.git
file:.git/config        remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
file:.git/config        branch.master.remote=origin
file:.git/config        branch.master.merge=refs/heads/master
file:.git/config        remote.upstream.url=https://github.com/octocat/Hello-World.git
file:.git/config        remote.upstream.fetch=+refs/heads/*:refs/remotes/upstream/*
```

Uploading the Screenshots using the command:

```
asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git add sc

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git commit -m "New folder added"
[master ad06b2d] New folder added
 29 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 sc/adding folder.png
 create mode 100644 sc/adding repository.png
 create mode 100644 sc/after checkout.png
 create mode 100644 sc/after pull 0.png
 create mode 100644 sc/after pull.png
 create mode 100644 sc/after rebase.png
 create mode 100644 sc/before checkout.png
 create mode 100644 sc/before pull 1.png
 create mode 100644 sc/before pull.png
 create mode 100644 sc/before rebase.png
 create mode 100644 sc/checkout.png
 create mode 100644 sc/cognizance in git.png
 create mode 100644 sc/create repository 1.png
 create mode 100644 sc/create repository 2.png
 create mode 100644 sc/creating a new file in develop 2.png
 create mode 100644 sc/creating a new file in develop.png
 create mode 100644 sc/git clone.png
 create mode 100644 sc/git commit -a.png
 create mode 100644 sc/git commit.png
 create mode 100644 sc/git download.png
 create mode 100644 sc/git fetch.png
 create mode 100644 sc/git fork.png
 create mode 100644 sc/git merge.png
 create mode 100644 sc/git rebase.png
 create mode 100644 sc/github sign up.png
 create mode 100644 sc/ls file.png
 create mode 100644 sc/output folder task 1.png
 create mode 100644 sc/pwd.png
 create mode 100644 sc/user and email in  git bash.png

asus_@LAPTOP-5674KGJ4 MINGW64 ~/Documents/Task -1 (master)
$ git push
Enumerating objects: 36, done.
Counting objects: 100% (36/36), done.
Delta compression using up to 16 threads
Compressing objects: 100% (34/34), done.
Writing objects: 100% (35/35), 752.32 KiB | 22.80 MiB/s, done.
Total 35 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/jayan00/Cognizance.git
   d78ffc2..ad06b2d  master -> master
```
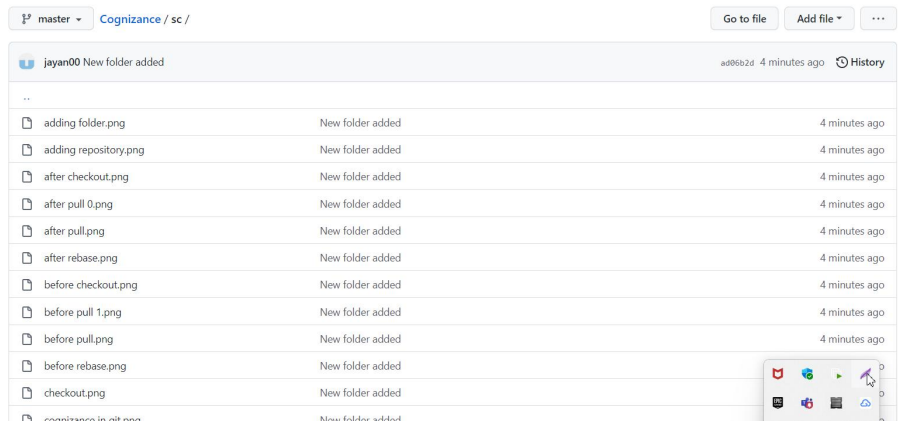
Screenshots uploaded successfully.