

**Follow the following considerations while solving the below problem.**

1. Install git and create a GitHub account. ...
2. Create a local git repository. ...
3. Add a new file to the repo. ...
4. Add a file to the staging environment. ...
5. Create a commit. ...
6. Create a new branch. ...
7. Create a new repository on GitHub. ...
8. Push a branch to GitHub.

### **Problem Statement 1:**

New to git? Follow the steps below to get comfortable making changes to the code base, opening up a pull request (PR), and merging code into the primary branch. Any important git and GitHub terms are in bold with links to the official git reference materials.

### **Solution :**

#### **1. Install Git and create a GitHub account:**

**To install Git on your computer, you can follow the steps appropriate for your operating system. Below are instructions for common operating systems:**

1. Download the Git installer for Windows from the official Git website: **Git for Windows**
2. Run the downloaded installer.
3. Follow the on-screen instructions in the installer. You can generally leave the default settings as they are unless you have specific preferences.
4. During the installation, you will reach a screen titled "Adjusting your PATH environment." Choose the default option "Use Git from the Windows Command Prompt" or select the other option if you prefer using Git from the Git Bash terminal.
5. Continue with the installation, and once it's completed, click "Finish."

6. Open a new command prompt or Git Bash terminal and verify the installation by typing:

```
C:\Users\DELL>git --version  
git version 2.39.2.windows.1
```

## Steps to create a github account :

Visit the GitHub website:

1. Go to **GitHub** in your web browser.
2. Sign Up:
  - a. On the GitHub homepage, you'll find a "**Sign Up**" button. Click on it.
3. Provide Your Information:
  - a. Fill in the required information on the Sign Up page:
    - i. **Username:** Choose a unique username for your GitHub account.
    - ii. **Email address:** Enter your email address.
    - iii. **Password:** Create a strong password for your account.
4. Complete the CAPTCHA:
  - a. Complete any **CAPTCHA** or security checks to verify that you're a human.
5. Choose Your Plan:
  - a. GitHub offers both free and paid plans. For most users, the free plan is sufficient. Choose the plan that suits your needs.
6. Verify Your Email:
  - a. After completing the sign-up process, GitHub will send you an email to verify your email address. Open your email and click on the verification link provided by GitHub.
7. Welcome to GitHub:
  - a. Once your email is verified, you'll be directed to your GitHub dashboard.

## 2. Create a local git repository:

Configure git and create a folder named demo git and change the directory to the demo git folder and initialize a repo:

```
C:\Users\DELL>git config --global user.name "kavin"

C:\Users\DELL>git config --global user.email "gkavinvelavan@gmail.com"

C:\Users\DELL>cd demo git

C:\Users\DELL\demo git>git init
Reinitialized existing Git repository in C:/Users/DELL/demo git/.git/
```

## 3. Add a new file to the repo:

Create a new file named newfile.txt in the demo git folder

touch newfile.txt

## 4. Add a file to the staging environment :

```
C:\Users\DELL\demo git>git add newfile.txt

C:\Users\DELL\demo git>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   newfile.txt
```

## 5. Create a commit

```
C:\Users\DELL\demo git>git commit -m "new file"
[master (root-commit) 6993078] new file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 newfile.txt

C:\Users\DELL\demo git>git status
On branch master
nothing to commit, working tree clean
```

## 6. Create a new branch:

```
C:\Users\DELL\demo git>git branch newbranch  
  
C:\Users\DELL\demo git>git branch  
* master  
  newbranch
```

## 7. Create a new repository on GitHub:

Step 1 : login to github account with valid user name and password

Step 2 : create a new repo on clicking + symbol and name a repo demogit

Step 3 : click finish

## 8. Push a branch to GitHub:

Switch to new branch

```
C:\Users\DELL\demo git>git checkout newbranch  
Switched to branch 'newbranch'  
  
C:\Users\DELL\demo git>git branch  
  master  
* newbranch
```

```
C:\Users\DELL\demo git>git remote add origin https://github.com/kavinvelavan/demogit.git  
  
C:\Users\DELL\demo git>git push -u origin newbranch  
Enumerating objects: 3, done.  
Counting objects: 100% (3/3), done.  
Writing objects: 100% (3/3), 211 bytes | 105.00 KiB/s, done.  
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0  
To https://github.com/kavinvelavan/demogit.git  
  * [new branch]      newbranch -> newbranch  
branch 'newbranch' set up to track 'origin/newbranch'.
```

Pull is a combination of fetch and merge. It is used to pull all changes from a remote repository into the branch you are working on.

```
C:\Users\DELL\demo git>git push origin master
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote:   https://github.com/kavinvelavan/demogit/pull/new/master
remote:
To https://github.com/kavinvelavan/demogit.git
 * [new branch]      master -> master

C:\Users\DELL\demo git>git pull origin master
From https://github.com/kavinvelavan/demogit
 * branch            master       -> FETCH_HEAD
Already up to date.

C:\Users\DELL\demo git>git branch -d newbranch
Deleted branch newbranch (was 6993078).
```