



# git

A Distributed Version Control System

**Presented By: Jalaz Kumar, 14MI528**

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- Introduction
- What is Version Control System
- History of git and Some key concepts
- What is GitHub and using it
- Getting started with git
- Configuring git over Proxy server
- Simple Demonstration:  
Working on a project using git and GitHub



# Introduction

- Git is a distributed version control system
- Git is a directory content management system.
- Git is a tree history storage system
- Git is a content tracker

Git is **SUPER** cool



# What is Version Control System

Version control (or revision control, or source control) is all about managing multiple versions of documents, programs, web sites, etc.

- Almost all “real” projects use some kind of version control
- Essential for team projects, but also very useful for individual projects

Some well-known version control systems are CVS, Subversion, Mercurial, and Git.

- ❖ A system that keeps records of our changes
- ❖ It Allows for collaborative development
- ❖ It Allows us to know who made what changes and when.
- ❖ Allows us to revert any changes and go back to a previous state

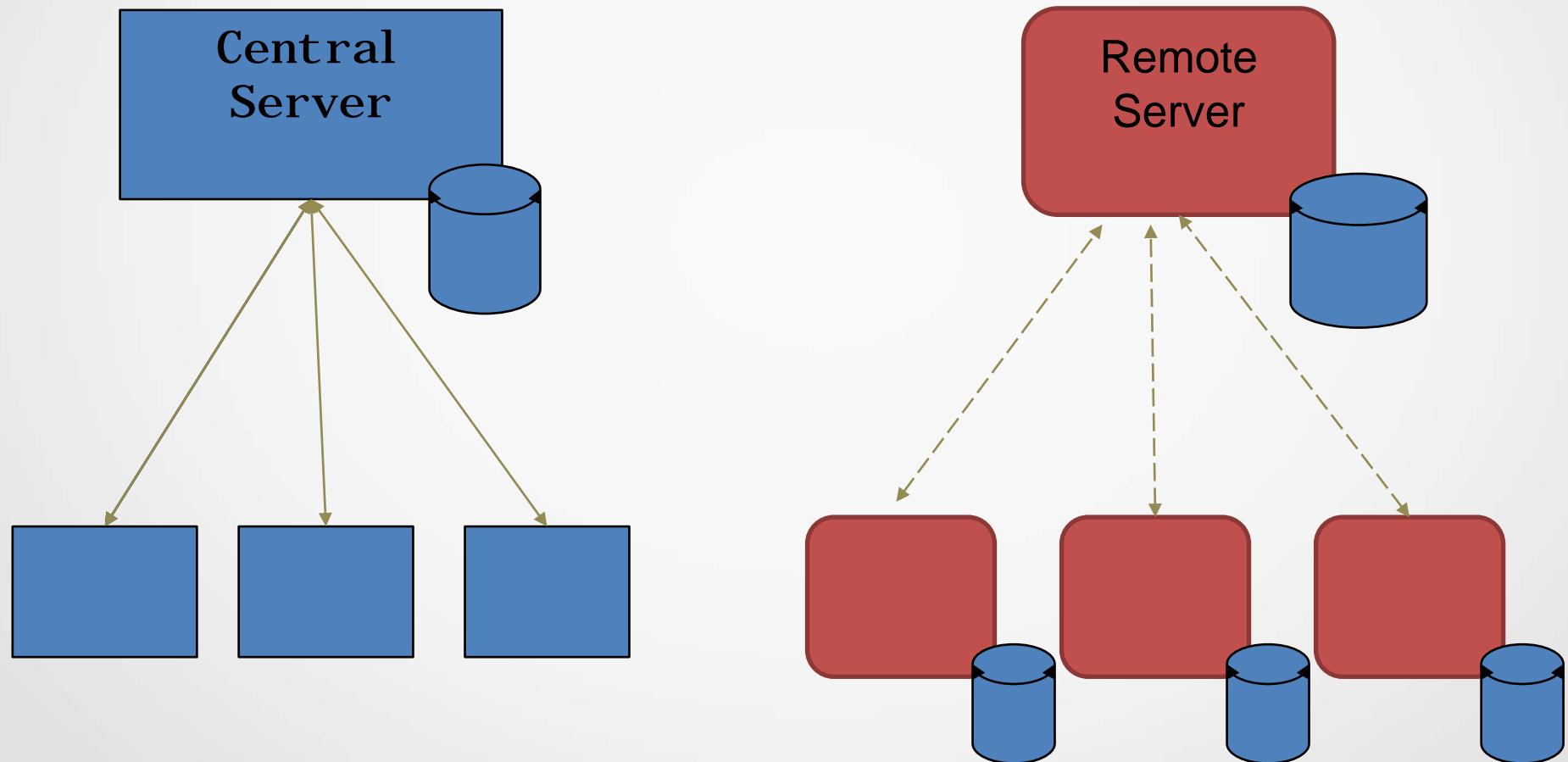


# Distributed Version Control

- Everyone has the complete history
- Everything is done offline
- No central authority
- Changes can be shared without a server



# Centralized VC vs. Distributed VC



# History of git

- The Linux kernel is an open source software project of fairly large scope. In 2002, the Linux kernel project began using a proprietary DVCS called BitKeeper.
- In 2005, the relationship between the community that developed the Linux kernel and the commercial company that developed BitKeeper broke down, and the tool's free-of-charge status was revoked. This prompted the Linux development community (and in particular Linus Torvald, the creator of Linux) to develop their own tool based on some of the lessons they learned while using BitKeeper.
- Some of the goals of the new system were as follows:
  - Speed
  - Simple design
  - Strong support for non-linear development (thousands of parallel branches)
  - Fully distributed
  - Able to handle large projects like the Linux kernel efficiently



Original Authors	Linus Torvald, Junio Hamano
Developer(s)	Linus Torvald and many others
Initial Release	7 April 2005; 11 years ago
Stable Release	2.8.0/ 28 March 2016; 2 days ago
Development status	Active
Written in	C, Shell, Perl, Python
Operating System	Linux, POSIX, Windows, OS X
Type	Version Control
License	GNU General Public License v2 GNU Lesser General Public License 2.1
Website	<a href="http://www.git-scm.com">www.git-scm.com</a>



# Installing git

- Linux (Debian) :

Command: sudo apt-get install git

- Linux (Fedora) :

Command: sudo yum install git

- Mac :

<http://git-scm.com/download/mac>

- Windows :

<http://git-scm.com/download/win>



# Key Concepts: Snapshots

- The way git keeps track of your code history
- Essentially records what all your files look like at a given point in time
- You decide when to take a snapshot, and of what files
- Have the ability to go back to visit any snapshot
- Your snapshots from later on will stay around, too.



# Key concepts: Commits

The act of creating a snapshot

Can be a noun or verb

- “I committed code”
- “I just made a new commit”

Essentially, a project is made up of a bunch of commits

Commits contain three pieces of information:

1. Information about how the files changed from previously
2. A reference to the commit that came before it, called the “parent commit”
3. A hash code name will look something like:

`fb2d2ec5069fc6776c80b3ad6b7cbde3cade4e`



# Key concepts: Repositories

Often shortened to ‘repo’

- A collection of all the files and the history of those files.
- Consists of all our commits and stores our complete content.

Can live on a local machine or on a remote server (Github)

- The act of copying a repository from a remote server is called **cloning**
- Cloning from a remote server allows teams to work together

The process of downloading commits that don’t exist on your machine from a remote repository is called **pulling changes**

The process of adding your local changes to the remote repository in which we are contributing is called **pushing changes**



# What is GitHub

The image shows the GitHub homepage. On the left, there's a large, semi-transparent watermark of a person working on a laptop. In the bottom left corner, a small, brown, cartoonish GitHub cat figurine stands on a silver base. The main content area has a dark, blurred background. On the right side, there's a sign-up form with three input fields: 'Pick a username' containing 'jaykay12', and '.....'. Below the fields is a note: 'Use at least one letter, one numeral, and seven characters.' A large green button at the bottom right says 'Sign up for GitHub'. At the very bottom, a small note states: 'By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy policy](#). We'll occasionally send you account related emails.'

Personal Open source Business Explore Pricing Blog Support Search GitHub Sign in Sign up

# How people build software

Millions of developers use GitHub to build personal projects, support their businesses, and work together on open source technologies.

Pick a username

jaykay12

.....

Use at least one letter, one numeral, and seven characters.

Sign up for GitHub

By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy policy](#). We'll occasionally send you account related emails.

# Welcome home, developers

GitHub fosters a fast, flexible, and collaborative development process that lets you work on your own or with others.



## For everything you build

Host and manage your code on GitHub. You can keep your work private or share it with the world.



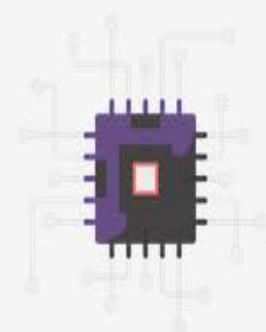
## A better way to work

From hobbyists to professionals, GitHub helps developers simplify the way they build software.



## Millions of projects

GitHub is home to millions of open source projects. Try one out or get inspired to create your own.



## One platform, from start to finish

With hundreds of integrations, GitHub is flexible enough to be at the center of your development process.

# Who uses GitHub?

## Individuals >

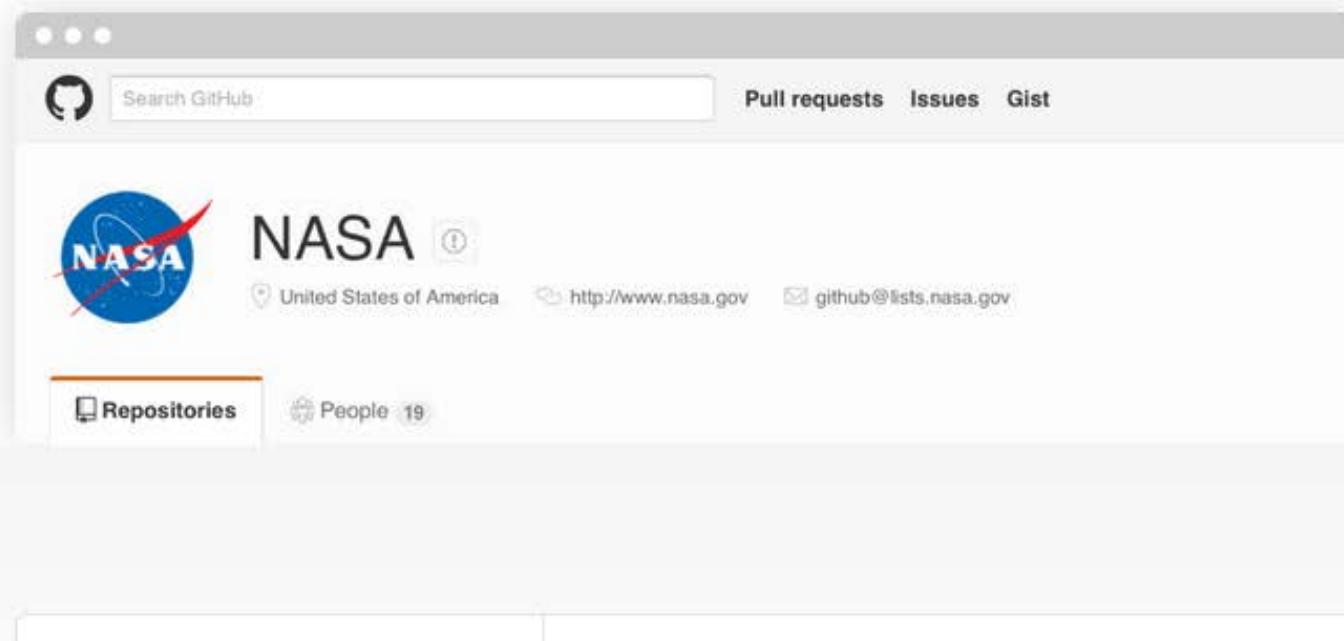
Use GitHub to create a personal project, whether you want to experiment with a new programming language or host your life's work.

## Communities >

GitHub hosts one of the largest collections of open source software. Create, manage, and work on some of today's most influential technologies.

## Businesses >

Businesses of all sizes use GitHub to support their development process and securely build software.



A screenshot of a web browser showing the GitHub organization profile for NASA. The profile page includes the NASA logo, basic organization information (United States of America, website, email), and navigation links for Repositories and People. The 'Repositories' tab is currently selected.

GitHub is proud to host projects and organizations like [NASA](#).

# Getting Started with GitHub :

Hub · GitHub - Mozilla Firefox

Connecting... Connecting... Proposal Summary | Google ... Join GitHub · GitHub

(1:10, 43%) 3:43 PM Jalaz Kumar

GitHub, Inc. (US) https://github.com/join?source=header-home Search

## Join GitHub

The best way to design, build, and ship software.

Step 1: Set up a personal account Step 2: Choose your plan Step 3: Go to your dashboard

### Create your personal account

**Username**  
  
This will be your username — you can enter your organization's username next.

**Email Address**  
  
You will occasionally receive account related emails. We promise not to share your email with anyone.

**Password**  
  
Use at least one lowercase letter, one numeral, and seven characters.

By clicking on "Create an account" below, you are agreeing to the [Terms of Service](#) and the [Privacy Policy](#).

You'll love GitHub

- ✓ Unlimited collaborators
- ✓ Unlimited public repositories
- ✓ Great communication
- ✓ Friction-less development
- ✓ Open source community

Create an account

# Introducing yourself with git

In your terminal, enter these lines (with appropriate changes):

```
git config --global user.name "jaykay12"  
git config --global user.email "jalazkumar1208@gmail.com"
```

You only need to do this once

If you want to use a different name/email address for a particular project, you can change it for just that project

`cd` to the project directory

Use the above commands, but leave out the `--global`



# Configuring git over the proxy server



jaykay12@jalaznith: ~

```
jaykay12@jalaznith:~$ git config --global http.proxy
```

```
jaykay12@jalaznith:~$ git config --global https.proxy
```

```
jaykay12@jalaznith:~$ _
```

jaykay12@jalaznith:~

```
jaykay12@jalaznith:~$ git config --global http.proxy
```

```
jaykay12@jalaznith:~$ git config --global https.proxy
```

```
jaykay12@jalaznith:~$ git config --global http.proxy "172.16.24.3:3128"
```

```
jaykay12@jalaznith:~$ git config --global https.proxy "172.16.24.3:3128"
```

```
jaykay12@jalaznith:~$ _
```

jaykay12@jalaznith:~

```
jaykay12@jalaznith:~$ git config --global http.proxy
```

```
jaykay12@jalaznith:~$ git config --global https.proxy
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```
jaykay12@jalaznith:~$ git config --global https.proxy "172.16.24.3:3128"
```

```
jaykay12@jalaznith:~$ git config --global http.proxy
```

```
172.16.24.3:3128
```

```
jaykay12@jalaznith:~$ git config --global https.proxy
```

```
172.16.24.3:3128
```

```
jaykay12@jalaznith:~$ _
```

```
jaykay12@jalaznith:~$ git config --global http.proxy  
jaykay12@jalaznith:~$ git config --global https.proxy  
jaykay12@jalaznith:~$ git config --global http.proxy "172.16.24.3:3128"  
jaykay12@jalaznith:~$ git config --global https.proxy "172.16.24.3:3128"  
jaykay12@jalaznith:~$ git config --global http.proxy  
172.16.24.3:3128  
jaykay12@jalaznith:~$ git config --global https.proxy  
172.16.24.3:3128  
jaykay12@jalaznith:~$ git config --global http.proxy ""  
jaykay12@jalaznith:~$ git config --global https.proxy ""  
jaykay12@jalaznith:~$ _
```

```
jaykay12@jalaznith:~$ git config --global http.proxy  
jaykay12@jalaznith:~$ git config --global https.proxy  
jaykay12@jalaznith:~$ git config --global http.proxy "172.16.24.3:3128"  
jaykay12@jalaznith:~$ git config --global https.proxy "172.16.24.3:3128"  
jaykay12@jalaznith:~$ git config --global http.proxy  
172.16.24.3:3128  
jaykay12@jalaznith:~$ git config --global https.proxy  
172.16.24.3:3128  
jaykay12@jalaznith:~$ git config --global http.proxy ""  
jaykay12@jalaznith:~$ git config --global https.proxy ""  
jaykay12@jalaznith:~$ git config --global http.proxy  
jaykay12@jalaznith:~$ git config --global https.proxy  
jaykay12@jalaznith:~$ _
```

# **Demonstration:**

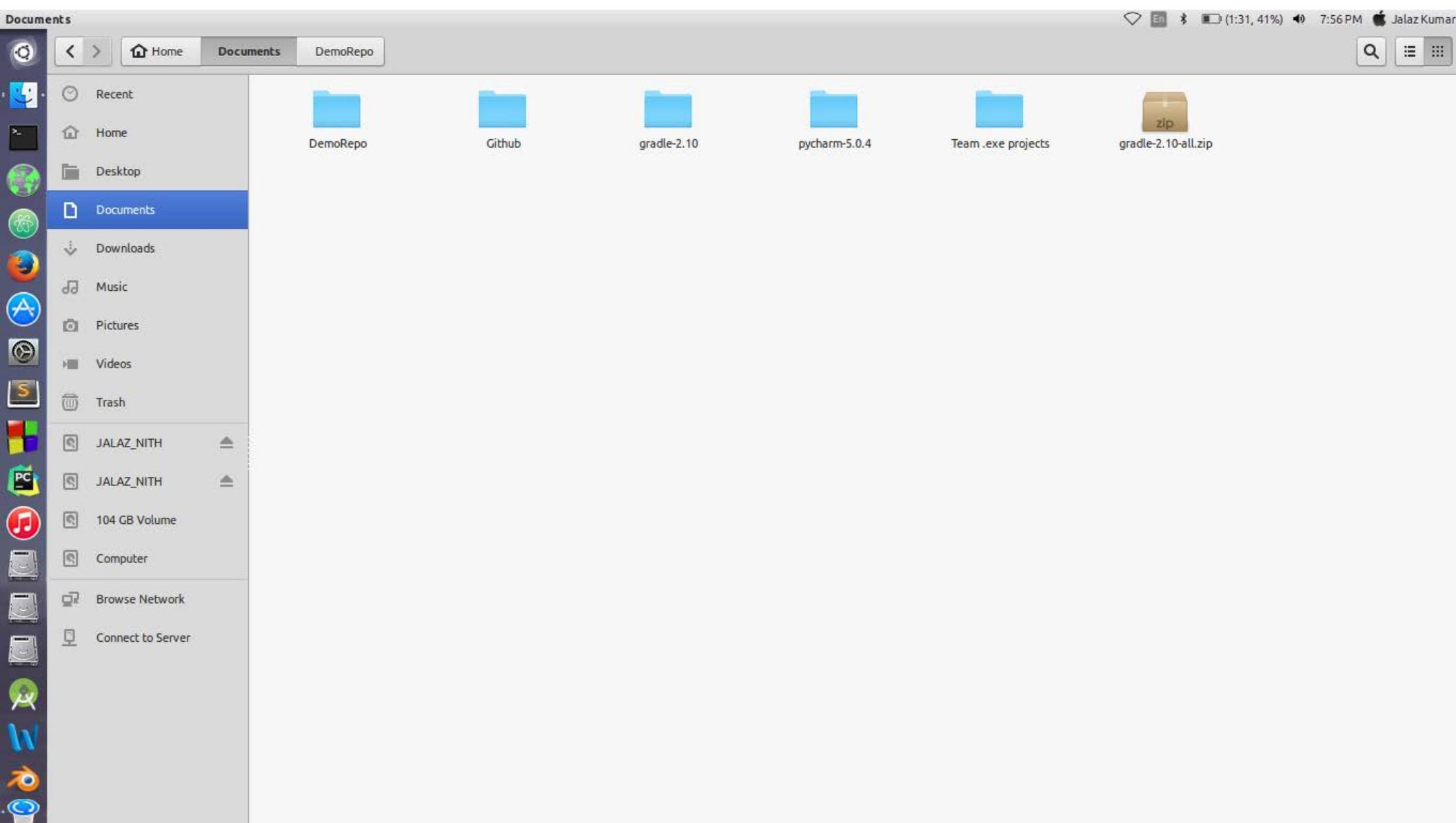
## **How to work on a project using git and GitHub**

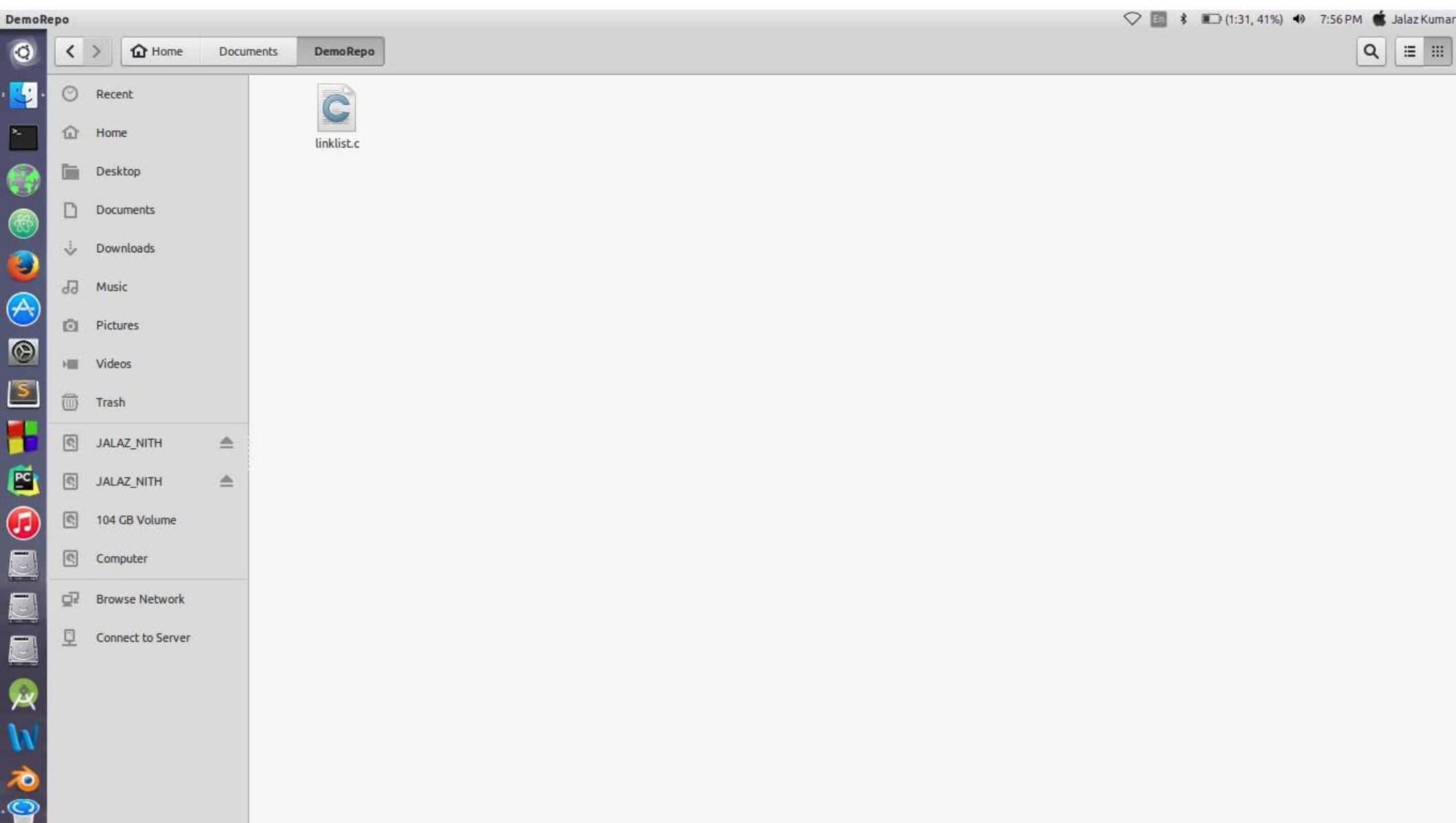


# PHASE 1 :

Creating a Repository on  
GitHub  
&  
Starting with git on our  
workspace







Sublime Text

~/Documents/DemoRepo/linklist.c - Sublime Text (UNREGISTERED)

```
linklist.c
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 struct student{
5     int roll;
6     struct student *next;
7 };
8
9 struct student *createlist(struct student *);
10 void display(struct student *);
11
12
13 int main()
14 {
15     struct student *start=NULL;
16     int data,item,pos;
17
18     /* Creating the linked list */
19     start=createlist(start);
20     display(start);
21
22     return 0;
23 }
24
25 struct student *createlist(struct student *start)
26 {
27     int i,n,data;
28     printf("\n Enter the number of nodes:");
29     scanf("%d",&n);
30     printf("\n Roll no.?:");
31     scanf("%d",&data);
32     start=addbeg(start,data);
33     for(i=2;i<=n;i++)
34     {
35         printf("\n Roll no.: ?");
36         scanf("%d",&data);
37         start=addend(start,data);
38     }
39     return start;
40 }
41
42
43 void display(struct student *start)
44 {
45     struct student* p;
46     if(start==NULL)
47     {   printf("\n List is empty"); return; }
48
49     p=start;
50     printf("\n List is:\n");
51     while(p!=NULL)
```

Line 24, Column 1

"linklist.c" selected (3.9 kB)

Tab Size: 4

C

Terminal

jaykay12@jalaznith: ~/Documents/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git init
```

The image shows a Mac OS X desktop environment. A terminal window is open in the foreground, displaying the command 'git init' in green text. The status bar at the top of the screen shows the user 'jaykay12@jalaznith', the path '/Documents/DemoRepo', the time '8:09 PM', and a battery level of '35%'. The dock on the left side of the screen contains icons for various applications, including Finder, Mail, Safari, and other system utilities. The desktop background is a dark grey color.

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git init
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```



```
jaykay12@jalaznith:~/Documents/DemoRepo$ git init  
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/  
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c  
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```



```
jaykay12@jalaznith:~/Documents/DemoRepo$ git init  
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/  
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c  
jaykay12@jalaznith:~/Documents/DemoRepo$ git commit -m "Basic Layout"  
[master (root-commit) 196c74c] Basic Layout  
1 file changed, 245 insertions(+)  
create mode 100755 linklist.c  
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```

Terminal

jaykay12@jalaznith: ~/Documents/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git init
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git commit -m "Basic Layout"
[master (root-commit) 196c74c] Basic Layout
 1 file changed, 245 insertions(+)
 create mode 100755 linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git init  
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/  
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c  
jaykay12@jalaznith:~/Documents/DemoRepo$ git commit -m "Basic Layout"  
[master (root-commit) 196c74c] Basic Layout  
1 file changed, 245 insertions(+)  
create mode 100755 linklist.c  
jaykay12@jalaznith:~/Documents/DemoRepo$ git log
```

Terminal

jaykay12@jalaznith: ~/Documents/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git init
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git commit -m "Basic Layout"
[master (root-commit) 196c74c] Basic Layout
 1 file changed, 245 insertions(+)
   create mode 100755 linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git log
commit 196c74c9b0292a900981c78676c998b64f776458
Author: jaykay12 <jalazkumar1208@gmail.com>
Date:   Mon Mar 14 20:11:59 2016 +0530

    Basic Layout
jaykay12@jalaznith:~/Documents/DemoRepo$
```

```
Terminal jaykay12@jalaznith: ~/Documents/DemoRepo
jaykay12@jalaznith:~/Documents/DemoRepo$ git init
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git commit -m "Basic Layout"
[master (root-commit) 196c74c] Basic Layout
 1 file changed, 245 insertions(+)
   create mode 100755 linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git log
commit 196c74c9b0292a900981c78676c998b64f776458
Author: jaykay12 <jalazkumar1208@gmail.com>
Date:   Mon Mar 14 20:11:59 2016 +0530

    Basic Layout
jaykay12@jalaznith:~/Documents/DemoRepo$ git status
```

```
Terminal jaykay12@jalaznith: ~/Documents/DemoRepo
jaykay12@jalaznith:~/Documents/DemoRepo$ git init
Initialized empty Git repository in /home/jaykay12/Documents/DemoRepo/.git/
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git commit -m "Basic Layout"
[master (root-commit) 196c74c] Basic Layout
 1 file changed, 245 insertions(+)
   create mode 100755 linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git log
commit 196c74c9b0292a900981c78676c998b64f776458
Author: jaykay12 <jalazkumar1208@gmail.com>
Date:   Mon Mar 14 20:11:59 2016 +0530

    Basic Layout
jaykay12@jalaznith:~/Documents/DemoRepo$ git status
On branch master
nothing to commit, working directory clean
jaykay12@jalaznith:~/Documents/DemoRepo$
```

GitHub - Mozilla Firefox

GitHub

GitHub, Inc. (US) https://github.com

Search GitHub

Pull requests Issues Gist

**jaykay12**

- ferbncode starred Semantic-Org/Semantic-UI a day ago
- sukhbir-singh starred petrnohejl/Android-Templates-And-Utilities 2 days ago
- saurabh0402 starred saurabh0402/Parallax 2 days ago
- Rishabh04-02 added milindra to Teamexe/Team-Exe-website 4 days ago
- milindra forked Teamexe/Team-Exe-website to milindra/Team-Exe-website 7 days ago
- sukhbir-singh starred afollestad/polar-dashboard 7 days ago
- sukhbir-singh starred wasabeef/awesome-android-ui 7 days ago
- sukhbir-singh starred chrisjenx/Calligraphy 7 days ago
- sukhbir-singh forked VikramTiwari/vikramtiwari.github.com to sukhbir-singh/vikramtiwari.github.com 8 days ago
- sukhbir-singh starred VikramTiwari/vikramtiwari.github.com 8 days ago
- sukhbir-singh starred wasabeef/awesome-android-libraries 8 days ago

Repositories you contribute to

 appteam-nith/festnimbus	4 ★
 xsf/xmpp.org	14 ★
 Teamexe/Team-Exe-website	0 ★
 swift/swift	55 ★

Your repositories 9 + New repository

Find a repository...

All Public Private Sources Forks

-  **Tikinoid**
-  **Registration-portal**
-  **festnimbus**
-  **TeamexeApp**
-  **swift**
-  **xmpp.org**
-  **Team-Exe-website**
-  **jaykay12.github.io**
-  **first**

jaykay12 (Jalaz Kumar) - Mozilla Firefox

jaykay12 (Jalaz Kumar)

GitHub, Inc. (US) https://github.com/jaykay12?tab=repositories

Search GitHub Pull requests Issues Gist

Contributions Repositories Public activity Edit profile

Find a repository... Search All Public Private Sources Forks Mirrors New

**Tikinoid** C++ ★ 0 0 0  
Open Source game developed for windows and linux platform using OpenGL library in C++  
Updated 5 days ago

**Registration-portal** CSS ★ 0 0 2  
forked from Teamexe/Registration-portal  
This repo will hold the registration portal project  
Updated 6 days ago

**festnimbus** Java ★ 0 0 20  
forked from appteam-nith/festnimbus  
This is the official repository for the android app of Nimbus, the tech-fest of NIT Hamirpur  
Updated 19 days ago

Jalaz Kumar  
jaykay12

National Institute of Technolo...  
Hamirpur, Himachal Pradesh  
Joined on 24 Aug 2015

6 Followers 3 Starred 8 Following

Create a New Repository - Mozilla Firefox

GitHub, Inc. (US) | https://github.com/new

Search GitHub Pull requests Issues Gist

## Create a new repository

A repository contains all the files for your project, including the revision history.

**Owner** jaykay12 / **Repository name** DemRepo ✓

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

**Description (optional)**

A testing Repository for System Software presentation

**Public**  
Anyone can see this repository. You choose who can commit.

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

**Initialize this repository with a README**  
This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** Add a license: **None**

**Create repository**

jaykay12/DemoRepo - Mozilla Firefox

jaykay12/DemoRepo

GitHub, Inc. (US) https://github.com/jaykay12/DemoRepo

This repository Search Pull requests Issues Gist

jaykay12 / DemoRepo

Code Issues 0 Pull requests 0 Wiki Pulse Graphs Settings

Quick setup — if you've done this kind of thing before  
or HTTPS SSH <https://github.com/jaykay12/DemoRepo.git>

We recommend every repository include a README, LICENSE, and .gitignore.

Copy to clipboard

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

```
echo "# DemoRepo" >> README.md
git init
git add README.md
git commit -m "first commit"
git remote add origin https://github.com/jaykay12/DemoRepo.git
git push -u origin master
```

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

```
git remote add origin https://github.com/jaykay12/DemoRepo.git
git push -u origin master
```

...or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

Import code

En (1:02, 28%) 8:27 PM Jalaz Kumar

jaykay12 (Jalaz Kumar) - Mozilla Firefox

jaykay12 (Jalaz Kumar)

GitHub, Inc. (US) | https://github.com/jaykay12?tab=repositories

Search GitHub

Pull requests Issues Gist

+ Contributions Repositories Public activity Edit profile

Find a repository... Search All Public Private Sources Forks Mirrors New

**DemoRepo** ★ 0 ⚡ 0

A testing Repository for System Software presentation  
Updated 2 minutes ago

**Tikinoid** C++ ★ 0 ⚡ 0

Open Source game developed for windows and linux platform using openGL library in C++  
Updated 5 days ago

**Registration-portal** CSS ★ 0 ⚡ 2

forked from Teamexe/Registration-portal  
This repo will hold the registration portal project  
Updated 6 days ago

**festnimbus** Java ★ 0 ⚡ 20

Jalaz Kumar  
jaykay12

National Institute of Technolo...  
Hamirpur, Himachal Pradesh  
Joined on 24 Aug 2015

6 Followers 3 Starred 8 Following

Terminal

jaykay12@jalaznith: ~/Documents/DemoRepo

```
git remote add origin https://github.com/jaykay12/DemoRepo.git
```

jaykay12@jalaznith: ~/Documents/DemoRepo\$ \_

Rows: 16.11

Close

jaykay12@jalaznith: ~/Documents/DemoRepo

jaykay12@jalaznith:~/Documents/DemoRepo\$ git remote -v



jaykay12@jalaznith: ~/Documents/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git remote -v
origin  https://github.com/jaykay12/DemoRepo.git (fetch)
origin  https://github.com/jaykay12/DemoRepo.git (push)
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```



jaykay12/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git remote -v
origin  https://github.com/jaykay12/DemoRepo.git (fetch)
origin  https://github.com/jaykay12/DemoRepo.git (push)
jaykay12@jalaznith:~/Documents/DemoRepo$ git push -u origin master
```

jaykay12/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git remote -v
origin https://github.com/jaykay12/DemoRepo.git (fetch)
origin https://github.com/jaykay12/DemoRepo.git (push)
jaykay12@jalaznith:~/Documents/DemoRepo$ git push -u origin master
Username for 'https://github.com': 
```

Terminal

jaykay12/DemoRepo

```
jaykay12@jalaznith: ~/Documents/DemoRepo$ git remote -v
origin https://github.com/jaykay12/DemoRepo.git (fetch)
origin https://github.com/jaykay12/DemoRepo.git (push)
jaykay12@jalaznith:~/Documents/DemoRepo$ git push -u origin master
Username for 'https://github.com': jaykay12
Password for 'https://jaykay12@github.com': 
```

Terminal

jaykay12/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git remote -v
origin https://github.com/jaykay12/DemoRepo.git (fetch)
origin https://github.com/jaykay12/DemoRepo.git (push)
jaykay12@jalaznith:~/Documents/DemoRepo$ git push -u origin master
Username for 'https://github.com': jaykay12
Password for 'https://jaykay12@github.com':
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 1.30 KiB | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/jaykay12/DemoRepo.git
 * [new branch] master -> master
Branch master set up to track remote branch master from origin.
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```

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GitHub, Inc. (US) https://github.com/jaykay12/DemoRepo

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1 commit 1 branch 0 releases 1 contributor

Branch: master New pull request New file Upload files Find file HTTPS https://github.com/jaykay12/DemoRepo Download ZIP

**jaykay12** Basic Layout Latest commit 196c74c 25 minutes ago

linklist.c Basic Layout 25 minutes ago

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## PHASE 2

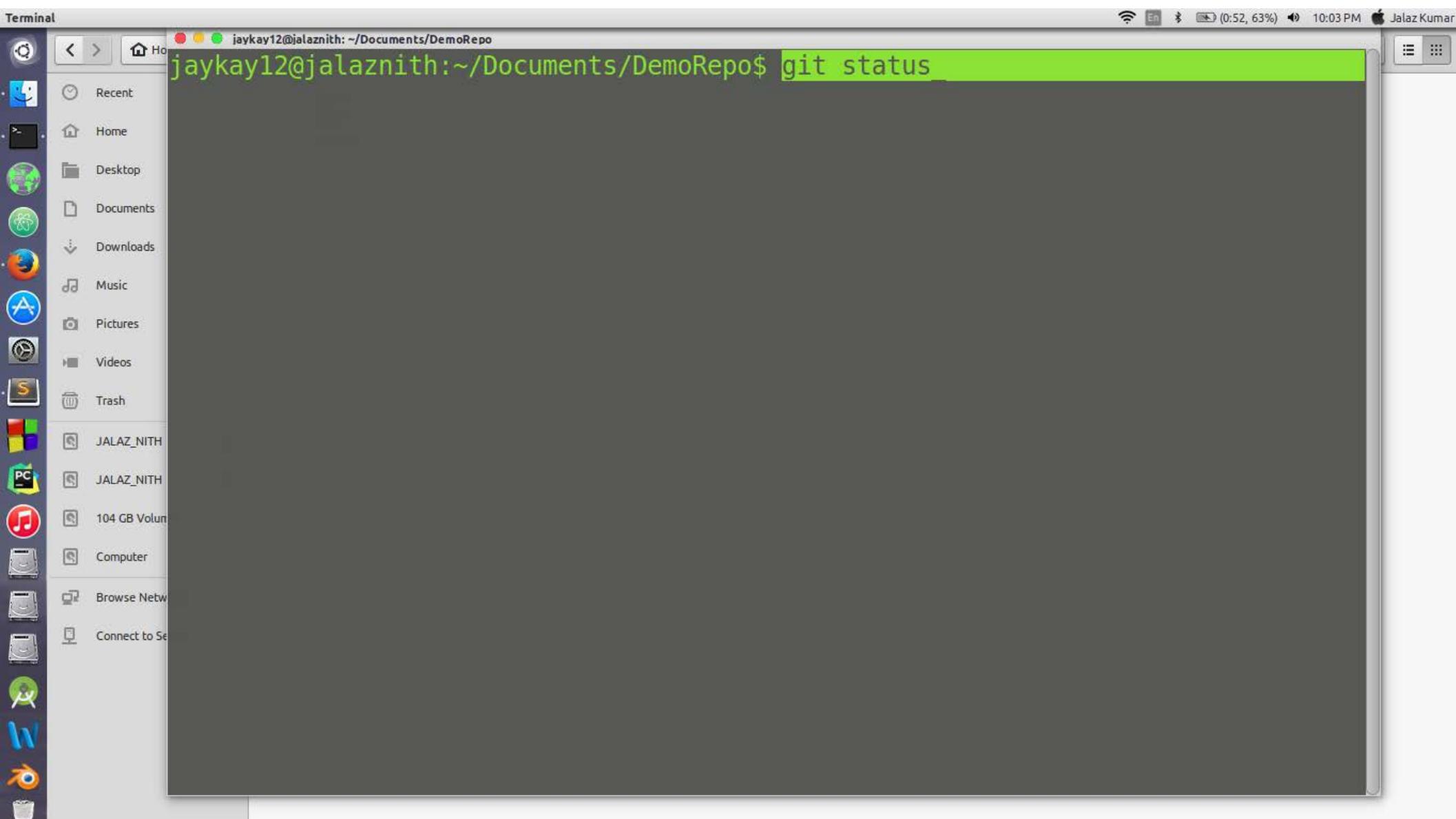
Making changes in the  
project

&

Updating the GitHub Repo



```
jalaz_llall.c x linklist.c
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 struct student{
5     int roll;
6     struct student *next;
7 };
8
9 struct student *createlist(struct student *);
10 void display(struct student *);
11 struct student *addbeg(struct student *,int);
12 struct student *addend(struct student *,int);
13 struct student *addpos(struct student *,int,int);
14
15
16 int main()
17 {
18     struct student *start=NULL;
19     int data,item,pos;
20
21     /* Creating the linked list */
22     start=createlist(start);
23
24     /* Performing the different operations on linked list created */
25
26     int ch;
27     while(1)
28     {
29         printf("\n Menu-Based Program:\n");
30         printf(" 1-Traversing the linked list\n");
31         printf(" 2-Inserting a new node at the beginning\n");
32         printf(" 3-Inserting a new node at the end\n");
33         printf(" 4-Inserting a new node at a specific position\n");
34         printf(" 5-Exit\n");
35         printf(" Provide the desired choice");
36
37         scanf("%d",&ch);
38
39         switch(ch)
40         {
41             case 1: display(start); break;
42             case 2: scanf("%d",&data);
43             start=addbeg(start,data); break;
44             case 3: scanf("%d",&data);
45             start=addend(start,data); break;
46             case 4: scanf("%d",&data);
47             scanf("%d",&pos);
48             start=addpos(start,data,pos); break;
49             default:printf("\n Give the appropriate choices"); break;
50         }
51
52         if(ch==5) break;
53     }
54
55 }
```



```
Terminal jaykay12@jalaznith: ~/Documents/DemoRepo
jaykay12@jalaznith:~/Documents/DemoRepo$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   linklist.c

no changes added to commit (use "git add" and/or "git commit -a")
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
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        modified:   linklist.c

no changes added to commit (use "git add" and/or "git commit -a")
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$
```

"Git user commands" selected (3.1 kB)

```
Terminal jaykay12@jalaznith: ~/Documents/DemoRepo
jaykay12@jalaznith:~/Documents/DemoRepo$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   linklist.c

no changes added to commit (use "git add" and/or "git commit -a")
jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c
jaykay12@jalaznith:~/Documents/DemoRepo$ git commit -m "Insertion allowed"
[master 5304c8f] Insertion allowed
 1 file changed, 9 insertions(+), 112 deletions(-)
jaykay12@jalaznith:~/Documents/DemoRepo$
```

"Git user commands" selected (3.1 kB)

```
Terminal jaykay12@jalaznith: ~/Documents/DemoRepo
jaykay12@jalaznith:~/Documents/DemoRepo$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
    (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   linklist.c

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jaykay12@jalaznith:~/Documents/DemoRepo$ git add linklist.c
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[master 5304c8f] Insertion allowed
 1 file changed, 9 insertions(+), 112 deletions(-)
jaykay12@jalaznith:~/Documents/DemoRepo$
```

"Git user commands" selected (3.1 kB)

~/Documents/DemoRepo/linklist.c - Sublime Text (UNREGISTERED)

```
linklist.c
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 struct student{
5     int roll;
6     struct student *next;
7 };
8
9 struct student *createlist(struct student *);
10 void display(struct student *);
11 struct student *addbeg(struct student *,int);
12 struct student *addend(struct student *,int);
13 struct student *addpos(struct student *,int,int);
14 struct student *delbeg(struct student *);
15 struct student *delend(struct student *);
16 struct student *delpos(struct student *,int);
17
18
19 int main()
20 {
21     struct student *start=NULL;
22     int data,item,pos;
23
24     /* Creating the linked list */
25     start=createlist(start);
26
27
28     /* Performing the different operations on linked list created */
29
30     int ch;
31     while(1)
32     {
33         printf("\n Menu Based Program:-\n");
34         printf("    \n 1- Traversing the linked list\n");
35         printf("    \n 2- Inserting a new node at the beginning\n");
36         printf("    \n 3- inserting a new node at the end\n");
37         printf("    \n 4- Inserting a new node at a specific position\n");
38         printf("    \n 5-Delete the starting node\n");
39         printf("    \n 6-Delete the last node\n");
40         printf("    \n 7-Delete the Node at a specific position\n");
41         printf("    \n 8- Exit\n");
42         printf("    \n Provide the desired choice");
43         scanf("%d",&ch);
44
45         switch(ch)
46         {
47             case 1: display(start); break;
48             case 2: scanf("%d",&data);
49                     start=addbeg(start,data); break;
50             case 3: scanf("%d",&data);
51                     start=addend(start,data); break;
52             case 4: scanf("%d",&data);
53                     scanf("%d",&pos);
54                     start=addpos(start,data,pos); break;
55             case 5: start=delbeg(start); break;
56         }
57     }
58 }
```

2 selection regions

Tab Size: 4

jaykay12@jalaznith: ~/Documents/DemoRepo

jaykay12@jalaznith:~/Documents/DemoRepo\$ git status

On branch master

Your branch is ahead of 'origin/master' by 1 commit.

(use "git push" to publish your local commits)

Changes not staged for commit:

(use "git add <file>..." to update what will be committed)

(use "git checkout -- <file>..." to discard changes in working directory)

modified: linklist.c

no changes added to commit (use "git add" and/or "git commit -a")

jaykay12@jalaznith:~/Documents/DemoRepo\$ git add linklist.c

jaykay12@jalaznith:~/Documents/DemoRepo\$ git commit -m "Deletion allowed"

jaykay12@jalaznith: ~/Documents/DemoRepo

jaykay12@jalaznith:~/Documents/DemoRepo\$ git status

On branch master

Your branch is ahead of 'origin/master' by 1 commit.

(use "git push" to publish your local commits)

Changes not staged for commit:

(use "git add <file>..." to update what will be committed)

(use "git checkout -- <file>..." to discard changes in working directory)

modified: linklist.c

no changes added to commit (use "git add" and/or "git commit -a")

jaykay12@jalaznith:~/Documents/DemoRepo\$ git add linklist.c

jaykay12@jalaznith:~/Documents/DemoRepo\$ git commit -m "Deletion allowed"

[master 2462043] Deletion allowed

1 file changed, 115 insertions(+), 3 deletions(-)

jaykay12@jalaznith:~/Documents/DemoRepo\$ \_

jaykay12@jalaznith: ~/Documents/DemoRepo

jaykay12@jalaznith:~/Documents/DemoRepo\$ git log

jaykay12@jalaznith: ~/Documents/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git log
commit 2462043689e70ecec5b9ddf9a4d1cf7b61f84280
Author: jaykay12 <jalazkumar1208@gmail.com>
Date:   Mon Mar 14 22:12:42 2016 +0530
```

Deletion allowed

```
commit 5304c8f080a9d7ad64bdb4787a0f3619c6aee9c9
Author: jaykay12 <jalazkumar1208@gmail.com>
Date:   Mon Mar 14 22:07:49 2016 +0530
```

Insertion allowed

```
commit 196c74c9b0292a900981c78676c998b64f776458
Author: jaykay12 <jalazkumar1208@gmail.com>
Date:   Mon Mar 14 20:11:59 2016 +0530
```

Basic Layout

```
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```

jaykay12@jalaznith: ~/Documents/DemoRepo

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git log
commit 2462043689e70ecec5b9ddf9a4d1cf7b61f84280
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Basic Layout

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jaykay12@jalaznith:~/Documents/DemoRepo$ _
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jaykay12@jalaznith: ~/Documents/DemoRepo

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Deletion allowed

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Insertion allowed

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Author: jaykay12 <jalazkumar1208@gmail.com>

Date: Mon Mar 14 20:11:59 2016 +0530

Basic Layout

jaykay12@jalaznith:~/Documents/DemoRepo\$ \_

jaykay12@jalaznith: ~/Documents/DemoRepo

jaykay12@jalaznith:~/Documents/DemoRepo\$ git status

On branch master

Your branch is ahead of 'origin/master' by 2 commits.  
(use "git push" to publish your local commits)

nothing to commit, working directory clean

jaykay12@jalaznith:~/Documents/DemoRepo\$ \_

jaykay12@jalaznith: ~/Documents/DemoRepo

jaykay12@jalaznith:~/Documents/DemoRepo\$ git status

On branch master

Your branch is ahead of 'origin/master' by 2 commits.

(use "git push" to publish your local commits)

nothing to commit, working directory clean

jaykay12@jalaznith:~/Documents/DemoRepo\$ git push -u origin master

Den Inc.

```
jaykay12@jalaznith:~/Documents/DemoRepo$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
  (use "git push" to publish your local commits)
nothing to commit, working directory clean
jaykay12@jalaznith:~/Documents/DemoRepo$ git push -u origin master
Username for 'https://github.com': jaykay12
Password for 'https://jaykay12@github.com':
Counting objects: 6, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 631 bytes | 0 bytes/s, done.
Total 6 (delta 2), reused 0 (delta 0)
To https://github.com/jaykay12/DemoRepo.git
  196c74c..2462043  master -> master
Branch master set up to track remote branch master from origin.
jaykay12@jalaznith:~/Documents/DemoRepo$ _
```

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## jaykay12 / DemoRepo

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3 commits 1 branch 0 releases 1 contributor

Branch: master New pull request New file Upload files Find file HTTPS https://github.com/jaykay12/DemoRepo Download ZIP

Jaykay12 Deletion allowed Latest commit 2462043 11 minutes ago

linklist.c Deletion allowed 11 minutes ago

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Branch: master

Commits on Mar 14, 2016

 **Deletion allowed**  
jaykay12 committed 12 minutes ago

 **Insertion allowed**  
jaykay12 committed 17 minutes ago

 **Basic Layout**  
jaykay12 committed 2 hours ago

2462043 5304c8f 196c74c

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# Thank You . . .

**Jalaz Kumar  
14MI528**

