

Step 1: Install SVN

sudo apt install subversion

```
kali@Unkown-3d6addons: ~/ [x] + v
(kali@Unkown-3d6addons)~[~/case_study]
$ sudo apt install subversion
The following packages were automatically installed and are no longer required:
  libperl5.38t64      libpython3.11-stdlib  perl-modules-5.38  python3.11-minimal
  libpython3.11-minimal  libutempter0         python3.11
Use 'sudo apt autoremove' to remove them.

Installing:
  subversion

Installing dependencies:
  libapr1t64  libaprutil1t64  libserf-1-1  libsvn1  libutf8proc3

Suggested packages:
  db5.3-util  libapache2-mod-svn  subversion-tools

Summary:
  Upgrading: 0, Installing: 6, Removing: 0, Not Upgrading: 0
  Download size: 2,689 kB
  Space needed: 10.5 MB / 1,025 GB available

Continue? [Y/n] y
Get:1 http://kali.download/kali kali-last-snapshot/main amd64 libapr1t64 amd64 1.7.5-1 [104 kB]
Get:2 http://kali.download/kali kali-last-snapshot/main amd64 libaprutil1t64 amd64 1.6.3-3 [89.3 kB]
Get:4 http://http.kali.org/kali kali-last-snapshot/main amd64 libutf8proc3 amd64 2.9.0-1+b2 [61.0 kB]
Get:6 http://http.kali.org/kali kali-last-snapshot/main amd64 subversion amd64 1.14.4-2+b1 [962 kB]
Get:3 http://http.kali.org/kali kali-last-snapshot/main amd64 libserf-1-1 amd64 1.3.10-3+b1 [53.0 kB]
Get:5 http://http.kali.org/kali kali-last-snapshot/main amd64 libsvn1 amd64 1.14.4-2+b1 [1,420 kB]
Fetched 2,689 kB in 22s (121 kB/s)
Selecting previously unselected package libapr1t64:amd64.
```

Step 2: Create an SVN Repository

1. Create a directory for your SVN repository:
`mkdir -p ~/case_study/svn-repo`
2. Initialize the SVN repository:
`svnadmin create ~/case_study/svn-repo/myrepo`

```
(kali@Unkown-3d6addons)~[~/case_study]
$ mkdir -p ~/case_study/svn-repo

(kali@Unkown-3d6addons)~[~/case_study]
$ svnadmin create ~/case_study/svn-repo/myrepo
```

```
(kali@Unkown-3d6addons)~[~/case_study]
$ ls
svn-project  svn-repo
```

Step 3: Add Program Code to the SVN Repository

1. Create a working directory for your SVN project:

```
`mkdir -p ~/case_study/svn-project/trunk`
```

```
(kali@Unkown-3d6addons)~[~/case_study]
$ mkdir -p ~/case_study/svn-project/trunk
```

```
(kali@Unkown-3d6addons)~[~/case_study]
$ cd svn-project

(kali@Unkown-3d6addons)~[~/case_study/svn-project]
$ ls
trunk
```

2. Add some code files to the `trunk` directory:

```
`echo "print('Hello, SVN!')" > ~/case_study/svn-project/trunk/hello.py`
```

```
(kali@Unkown-3d6addons)~[~/case_study]
$ echo "print('Hello, SVN!')" > ~/case_study/svn-project/trunk/hello.py
```

3. Import the code into the SVN repository:

```
`svn import ~/case_study/svn-project file:///home/kali/case_study/svn-repo/myrepo -m "Initial import"`
```

```
(kali@Unkown-3d6addons)~[~/case_study]
$ svn import ~/case_study/svn-project file:///home/kali/case_study/svn-repo/myrepo -m "Initial import"
Adding          svn-project/trunk
Adding          svn-project/trunk/hello.py
Committing transaction...
Committed revision 1.
```

4. Create version labels (tags) in SVN:

Check out the repository:

```
svn checkout file:///home/kali/case_study/svn-repo/myrepo/trunk
~/svn-working-copy
```

Create a tag for version 1.0:

```
svn copy file://$HOME/case_study/svn-repo/myrepo/trunk  
file://$HOME/svn-repo/myrepo/tags/v1.0 -m "Tagging version 1.0"
```

```
(kali@Unkown-3d6addons)~  
$ svn checkout file:///home/kali/case_study/svn-repo/myrepo/trunk ~/case_study/svn-working-copy  
A case_study/svn-working-copy/hello.py  
Checked out revision 1.
```

```
(kali@Unkown-3d6addons)~  
$ svn mkdir file:///home/kali/case_study/svn-repo/myrepo/tags -m "Creating tags directory"  
Committing transaction...  
Committed revision 2.
```

```
(kali@Unkown-3d6addons)~  
$ svn copy file:///home/kali/case_study/svn-repo/myrepo/trunk file:///home/kali/case_study/svn-repo/myrepo/tags/v1.0 -m "Tagging version 1.0"  
Committing transaction...  
Committed revision 3.
```

Make changes and create another tag for version 2.0:

```
echo "print('New feature')" >> ~/case_study/svn-working-copy/hello.py
```

```
(kali@Unkown-3d6addons)~  
$ echo "print('New feature')" >> ~/case_study/svn-working-copy/hello.py  
  
(kali@Unkown-3d6addons)~  
$ cat case_study/svn-working-copy/hello.py  
print('Hello, SVN!')  
print('New feature')
```

```
svn commit -m "Added new feature"
```

```
(kali@Unkown-3d6addons)~/case_study/svn-working-copy  
$ svn commit -m "Added new feature"  
Sending hello.py  
Transmitting file data .done  
Committing transaction...  
Committed revision 4.
```

```
svn copy file://$HOME/case_study/svn-repo/myrepo/trunk  
file://$HOME/case_study/svn-repo/myrepo/tags/v2.0 -m "Tagging version 2.0"
```

```
(kali@Unkown-3d6addons)~/case_study/svn-working-copy  
$ svn copy file:///home/kali/case_study/svn-repo/myrepo/trunk file:///home/kali/case_study/svn-repo/myrepo/tags/v2.0 -m "Tagging version 2.0"  
Committing transaction...  
Committed revision 5.
```

2. Migrate from SVN to Git

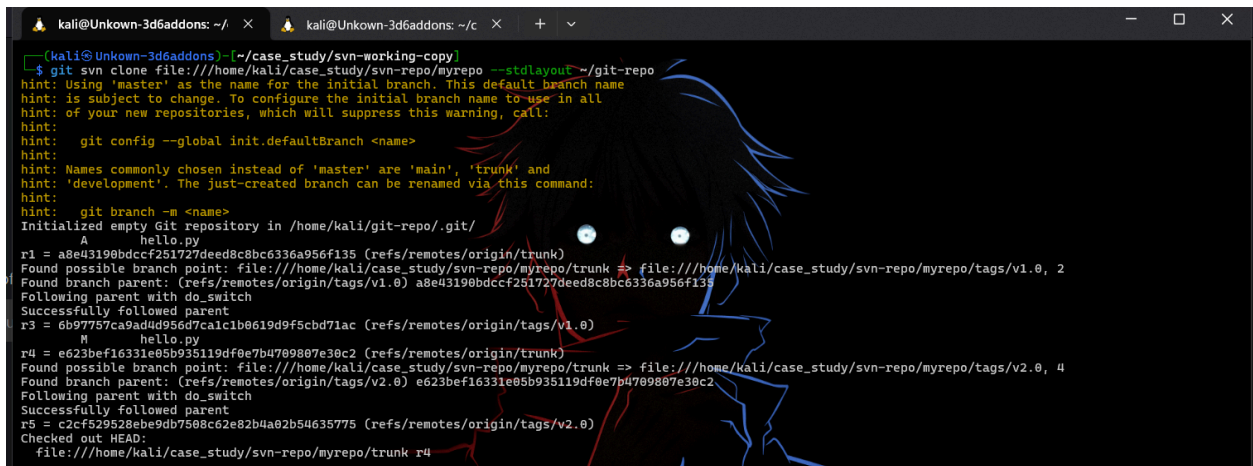
1. Install `git-svn`:

```
`sudo apt install git-svn`
```

2. Clone the SVN repository into a Git repository:

```
git svn clone file://$HOME/case_study/svn-repo/myrepo --stdlayout ~/git-repo
```

- The `--stdlayout` flag assumes the standard SVN layout (`trunk`, `branches`, `tags`).

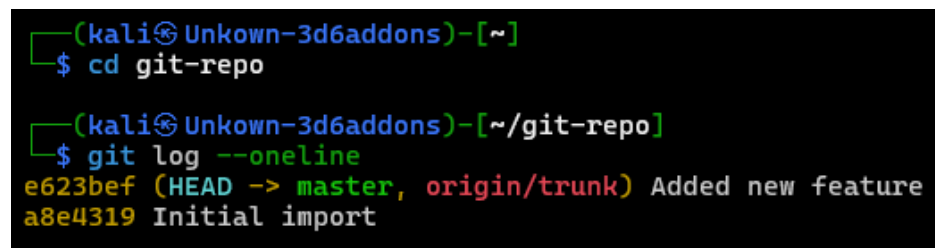


```
(kali@Unkown-3d6addons) [~/case_study/svn-working-copy]
$ git svn clone file:///home/kali/case_study/svn-repo/myrepo --stdlayout ~/git-repo
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
hint:
Initialized empty Git repository in /home/kali/git-repo/.git/
A   hello.py
r1 = a8e43190bdcf251727deed8c8bc6336a956f135 (refs/remotes/origin/trunk)
Found possible branch point: file:///home/kali/case_study/svn-repo/myrepo/trunk => file:///home/kali/case_study/svn-repo/myrepo/tags/v1.0, 2
Found branch parent: (refs/remotes/origin/tags/v1.0) a8e43190bdcf251727deed8c8bc6336a956f135
Following parent with do_switch
Successfully followed parent
r3 = 6b97757ca9ad4d956d7c1c1b0619d9f5cbd71ac (refs/remotes/origin/tags/v1.0)
W   hello.py
r4 = e623bef16331e85b935119df0e7b4709807e30c2 (refs/remotes/origin/trunk)
Found possible branch point: file:///home/kali/case_study/svn-repo/myrepo/trunk => file:///home/kali/case_study/svn-repo/myrepo/tags/v2.0, 4
Found branch parent: (refs/remotes/origin/tags/v2.0) e623bef16331e85b935119df0e7b4709807e30c2
Following parent with do_switch
Successfully followed parent
r5 = c2cf529528ebe9db7508c62e82b4a02b54635775 (refs/remotes/origin/tags/v2.0)
Checked out HEAD:
file:///home/kali/case_study/svn-repo/myrepo/trunk r4
```

3. Verify the migration:

```
`cd ~/git-repo`
```

```
`git log --oneline`
```

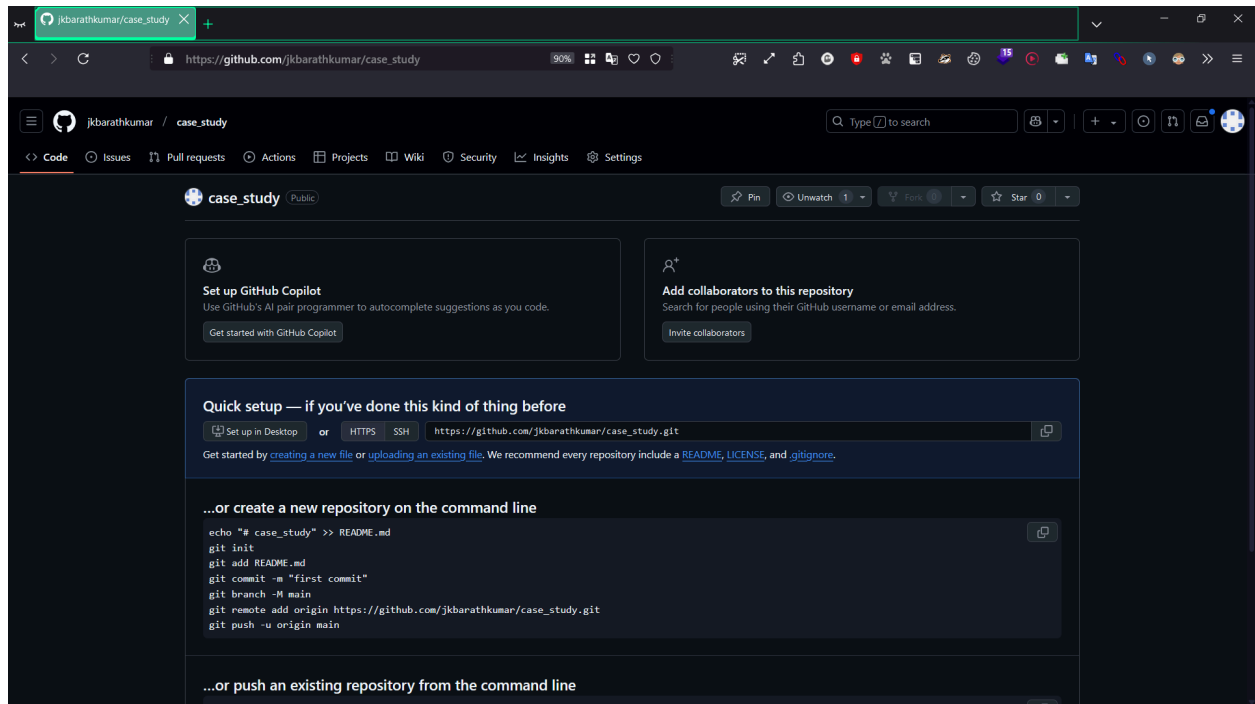


```
(kali@Unkown-3d6addons) [~]
$ cd git-repo

(kali@Unkown-3d6addons) [~/git-repo]
$ git log --oneline
e623bef (HEAD -> master, origin/trunk) Added new feature
a8e4319 Initial import
```

4. Push the Git repository to GitHub:

- a. Create a new repository on GitHub.



- b. Add the remote URL:
`git remote add origin https://github.com/jkbarathkumar/case_study.git`
- c. Push the code:
`git push -u origin master`

```
Barathkumar@Unkown-3d6addons MINGW64 //wsl.localhost/kali-linux/home/kali/git-repo (master)
$ git push -u origin master
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (6/6), 530 bytes | 25.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/jkbarathkumar/case_study.git
 * [new branch]      master -> master
branch 'master' set up to track 'origin/master'.
```

