Git Case Study

1)Check your current working directory

2) Before starting the migration, ensure you have the following tools installed:

Git

Subversion (SVN)

Git-svn

3) Create an empty directory for your new Git repository and initialize it:

4) Install subversion(SVN) to create a SVN repository

```
hruthin@4f7e8c7e4ccb5e3:~/newsvn$ sudo apt-get install subversion
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
subversion is already the newest version (1.14.3-1build4).
0 upgraded, 0 newly installed, 0 to remove and 63 not upgraded.
hruthin@4f7e8c7e4ccb5e3:~/newsvn$ svnadmin create svnrepo
```

5) Create a SVN repository and repository structure

```
hruthin@4f7e8c7e4ccb5e3:~/newsvn$ svnadmin create svnrepo
hruthin@4f7e8c7e4ccb5e3:~/newsvn$ cd ..
hruthin@4f7e8c7e4ccb5e3:~$ svn mkdir file:///home/hruthin/svnrepo/trunk file:///home/hruthin/svnrepo/branches file:///home/hruthin/svnrepo/tags -m "initial s
tructure"
Committing transaction...
Committed revision 1.
```

6) Create a test directory called my-working-copy and add files like test-file.txt and file.txt.

```
hruthin@4f7e8c7e4ccb5e3:~$ mkdir working-copy
hruthin@4f7e8c7e4ccb5e3:~$ cd working-cpoy
-bash: cd: working-cpoy: No such file or directory
hruthin@4f7e8c7e4ccb5e3:~$ cd working-copy
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn checkout file:///home/hruthin/svnrepo/trunk file:///home/hruthin/workingcopy
Checked out revision 1.
svn: E170013: Unable to connect to a repository at URL 'file:///home/hruthin/workingcopy'
svn: E180001: Unable to open repository 'file:///home/hruthin/workingcopy'
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn checkout file:///home/hruthin/svnrepo/trunk /home/hruthin/workingcopy
Checked out revision 1.
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ echo "this is a simple test file">>testfile.txt
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn add testfile.txt
svn: E155007: '/home/hruthin/working-copy' is not a working copy
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn checkout file:///home/hruthin/svnrepo/trunk /home/hruthin/working-copy
Checked out revision 1.
```
Activate Windows
Go to Settings to activate Windows.

7) Add the new files to svn and commit the changes using svn add and svn commit commands.

```
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn checkout file:///home/hruthin/svnrepo/trunk /home/hruthin/workingcopy
Checked out revision 1.
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ echo "this is a simple test file">>testfile.txt
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn add testfile.txt
svn: E155007: '/home/hruthin/working-copy' is not a working copy
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn checkout file:///home/hruthin/svnrepo/trunk /home/hruthin/working-copy
Checked out revision 1.
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ echo "this is a simple test file">>testfile.txt
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn add testfile.txt
A         testfile.txt
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn status
A         testfile.txt
?         trunk
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn commit -m "added a  testfile"
Adding         testfile.txt
Transmitting file data .done
Committing transaction...
Committed revision 2.
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn log file file:///home/hruthin/svnrepo
svn: E200007: When specifying working copy paths, only one target may be given
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn log file:///home/hruthin/svnrepo
------------------------------------------------------------------------
r2 | hruthin | 2025-01-30 12:30:43 +0000 (Thu, 30 Jan 2025) | 1 line

added a  testfile
------------------------------------------------------------------------
r1 | hruthin | 2025-01-30 12:10:00 +0000 (Thu, 30 Jan 2025) | 1 line

initial structure
------------------------------------------------------------------------
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ echo "another chnange">>testfile2.txt
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn add testfile2.sh
svn: warning: W155010: '/home/hruthin/working-copy/testfile2.sh' not found
svn: E200009: Could not add all targets because some targets don't exist
svn: E200009: Illegal target for the requested operation
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn add testfile2.txt
A         testfile2.txt
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn checkout file:///home/hruthin/svnrepo/trunk /home/hruthin/working-copy
Checked out revision 2.
```
Activate Windows
Go to Settings to activate Windows.

8) Verify the changes using svn log command

```
Committed revision 3.
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn log file:///home/hruthin/svnrepo
------------------------------------------------------------------------
r3 | hruthin | 2025-01-30 12:35:21 +0000 (Thu, 30 Jan 2025) | 1 line

new chnage
------------------------------------------------------------------------
r2 | hruthin | 2025-01-30 12:30:43 +0000 (Thu, 30 Jan 2025) | 1 line

added a  testfile
------------------------------------------------------------------------
r1 | hruthin | 2025-01-30 12:10:00 +0000 (Thu, 30 Jan 2025) | 1 line

initial structure
------------------------------------------------------------------------
```

9) Checkout the repository to work locally

```
hruthin@4f7e8c7e4ccb5e3:~/working-copy$ svn checkout file:///home/hruthin/svnrepo/trunk /home/hruthin/working-copy
Checked out revision 2.
```

10) Import the files from test directory to your svn repository and verify the changes

```
hruthin@4f7e8c7e4ccb5e3:~$ svn import  /home/hruthin/working-copy file:///home/hruthin/svnrepo/trunk -m "initial commit"
Skipped 'working-copy/.svn/.svn'
svn: E160020: File already exists: filesystem '9b7b851f-b6e9-426f-913f-7faefbedd222', transaction '3-3', path '/trunk/testfile.txt'
hruthin@4f7e8c7e4ccb5e3:~$ svn list file:///home/hruthin/svnrepo/trunk
testfile.txt
testfile2.txt
```

11) Now you will use svn-git to clone the SVN repository into your git repository new-git-repo

```
hruthin@4f7e8c7e4ccb5e3:~$ git svn clone  file:///home/hruthin/svnrepo --stdlayout /home/hruthin/newsvn
r1 = ab397e98e19ef7b105483f4b1862faa7861bd36f (refs/remotes/origin/trunk)
        A        testfile.txt
r2 = bcd4d4edd5a3fd99ffc43c8ee622923050a95ea9 (refs/remotes/origin/trunk)
        A        testfile2.txt
r3 = 4a5e6677c2a224a7f8cbccc946f75d4398afbbcd (refs/remotes/origin/trunk)
Checked out HEAD:
  file:///home/hruthin/svnrepo/trunk r3
```

```
hruthin@4f7e8c7e4ccb5e3:~/newsvn$ git log
commit 4a5e6677c2a224a7f8cbccc946f75d4398afbbcd (HEAD -> master, origin/trunk)
Author: hruthin <hruthin@9b7b851f-b6e9-426f-913f-7faefbedd222>
Date:   Thu Jan 30 12:35:21 2025 +0000

    new chnage

    git-svn-id: file:///home/hruthin/svnrepo/trunk@3 9b7b851f-b6e9-426f-913f-7faefbedd222

commit bcd4d4edd5a3fd99ffc43c8ee622923050a95ea9
Author: hruthin <hruthin@9b7b851f-b6e9-426f-913f-7faefbedd222>
Date:   Thu Jan 30 12:30:43 2025 +0000

    added a  testfile

    git-svn-id: file:///home/hruthin/svnrepo/trunk@2 9b7b851f-b6e9-426f-913f-7faefbedd222

commit ab397e98e19ef7b105483f4b1862faa7861bd36f
Author: hruthin <hruthin@9b7b851f-b6e9-426f-913f-7faefbedd222>
Date:   Thu Jan 30 12:10:00 2025 +0000

    initial structure

    git-svn-id: file:///home/hruthin/svnrepo/trunk@1 9b7b851f-b6e9-426f-913f-7faefbedd222
```