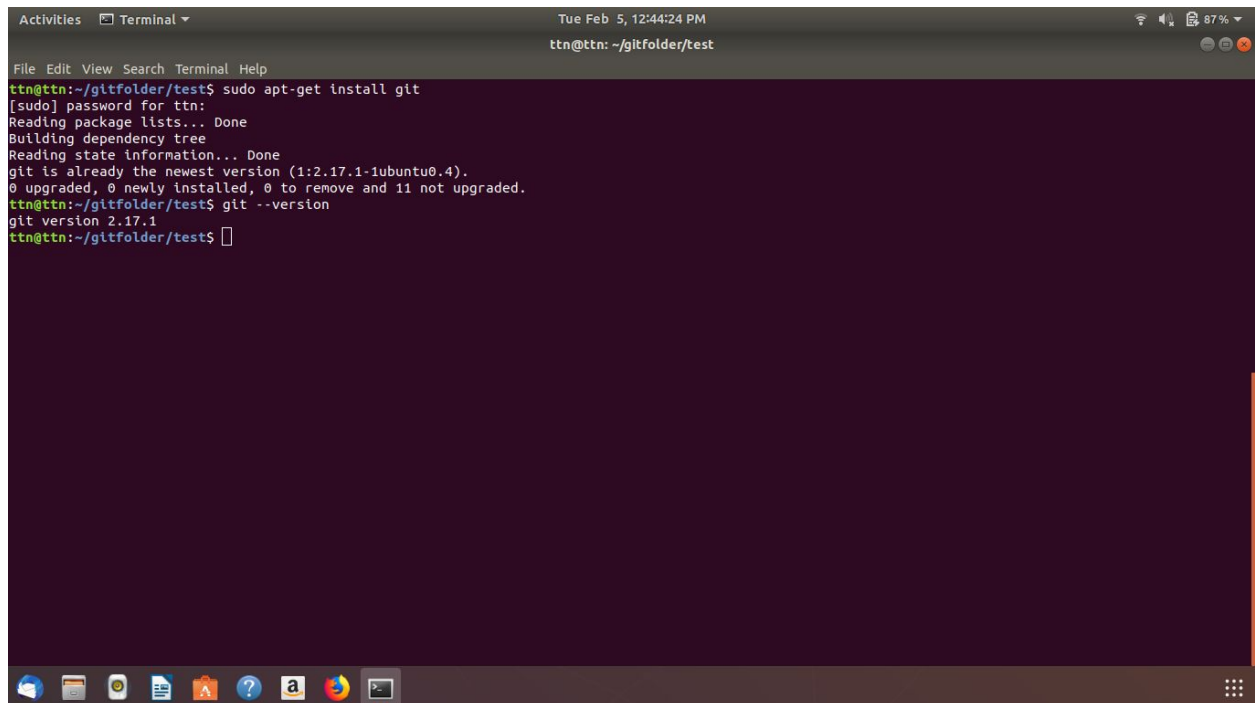
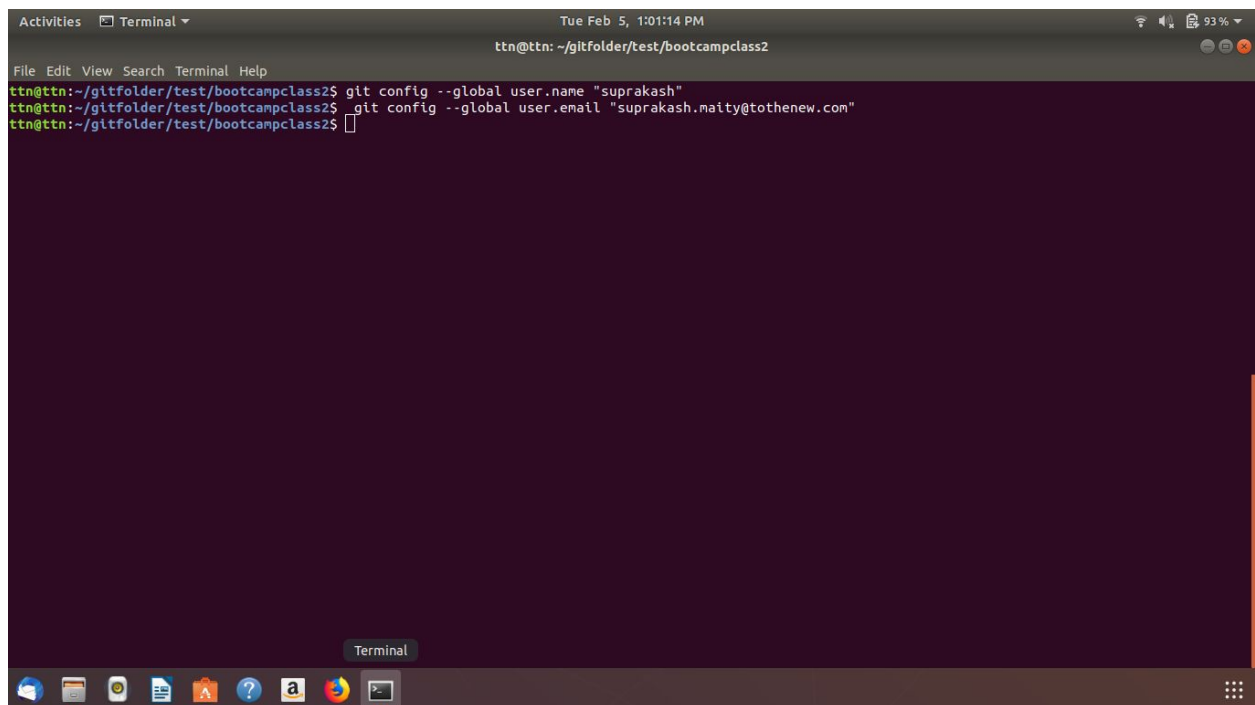


ASSIGNMENT 2

Q1.Git Setup

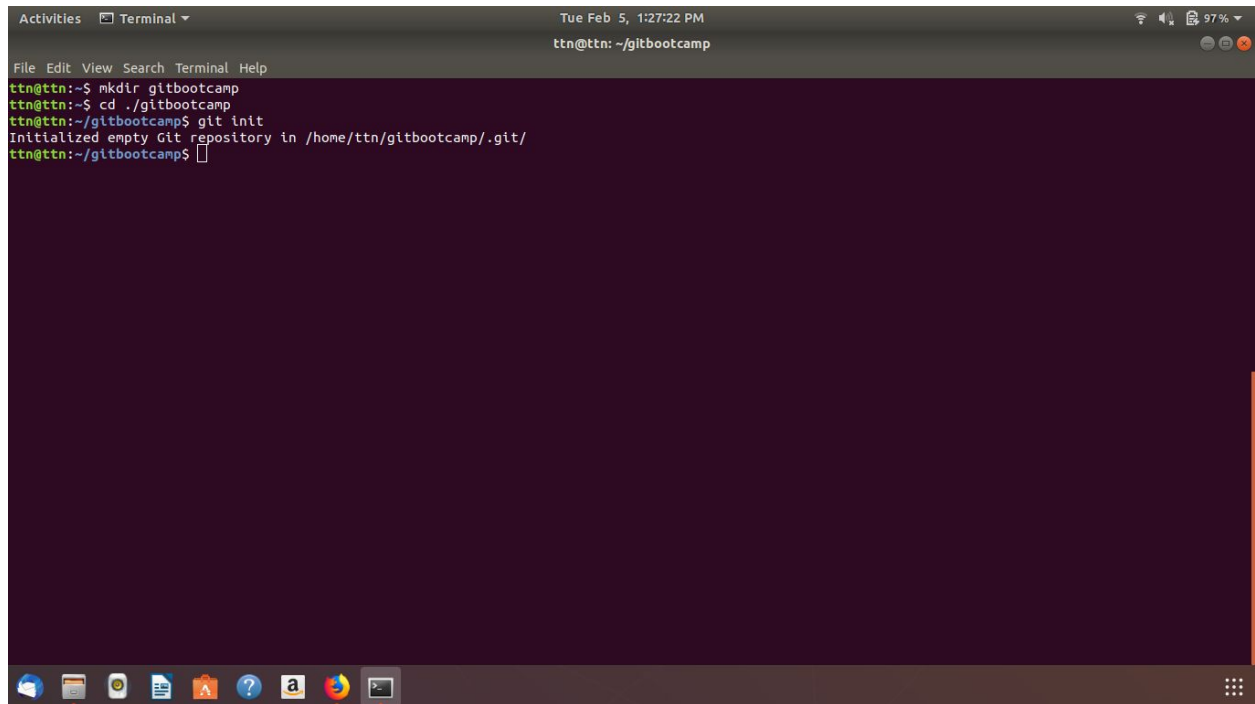
A terminal window titled 'Terminal' showing the installation of Git. The user runs 'sudo apt-get install git'. The output shows that Git is already the newest version (1:2.17.1-1ubuntu0.4) and that 0 packages were upgraded, 0 newly installed, 0 to be removed, and 11 not upgraded. The user then runs 'git --version', which outputs 'git version 2.17.1'.

```
ttn@ttn: ~/gitfolder/test$ sudo apt-get install git
[sudo] password for ttn:
Reading package lists... Done
Building dependency tree
Reading state information... Done
git is already the newest version (1:2.17.1-1ubuntu0.4).
0 upgraded, 0 newly installed, 0 to remove and 11 not upgraded.
ttn@ttn:~/gitfolder/test$ git --version
git version 2.17.1
ttn@ttn:~/gitfolder/test$
```

A terminal window titled 'Terminal' showing the configuration of Git. The user runs 'git config --global user.name "suprakash"' and 'git config --global user.email "suprakash.maity@tothenew.com"'. The prompt changes to the directory ~/gitfolder/test/bootcampclass2.

```
ttn@ttn: ~/gitfolder/test/bootcampclass2$ git config --global user.name "suprakash"
ttn@ttn:~/gitfolder/test/bootcampclass2$ git config --global user.email "suprakash.maity@tothenew.com"
ttn@ttn:~/gitfolder/test/bootcampclass2$
```

Q2.Initialize a Git Repository

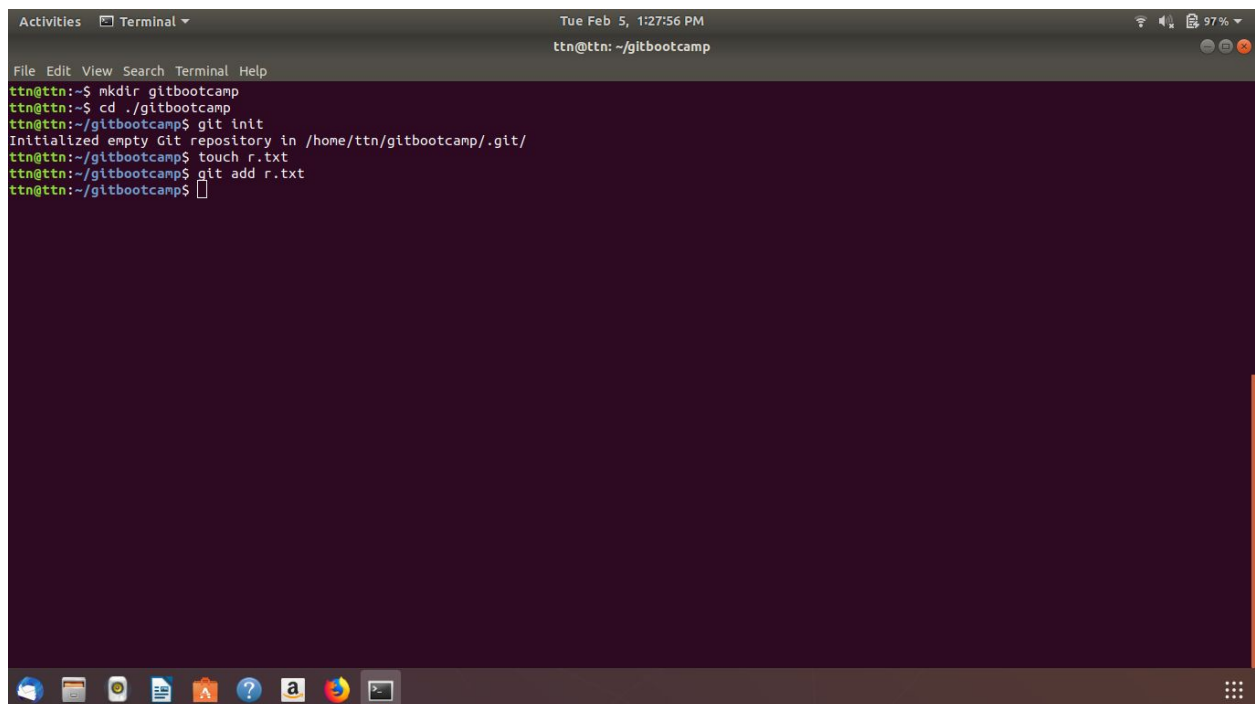


A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Tue Feb 5, 1:27:22 PM, ttn@ttn: ~/gitbootcamp). The terminal shows the following commands and output:

```
ttn@ttn:~$ mkdir gitbootcamp
ttn@ttn:~$ cd ./gitbootcamp
ttn@ttn:~/gitbootcamp$ git init
Initialized empty Git repository in /home/ttn/gitbootcamp/.git/
ttn@ttn:~/gitbootcamp$
```

The terminal window has a dark purple background and a light gray border. The status bar at the bottom shows various system icons and a 97% battery level.

Q3.Add files to the repository



A terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Tue Feb 5, 1:27:56 PM, ttn@ttn: ~/gitbootcamp). The terminal shows the following commands and output:

```
ttn@ttn:~$ mkdir gitbootcamp
ttn@ttn:~$ cd ./gitbootcamp
ttn@ttn:~/gitbootcamp$ git init
Initialized empty Git repository in /home/ttn/gitbootcamp/.git/
ttn@ttn:~/gitbootcamp$ touch r.txt
ttn@ttn:~/gitbootcamp$ git add r.txt
ttn@ttn:~/gitbootcamp$
```

The terminal window has a dark purple background and a light gray border. The status bar at the bottom shows various system icons and a 97% battery level.

Q4.Unstage 1 file

```
Activities Terminal Tue Feb 5, 1:29:11 PM ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
ttn@ttn:~/gitbootcamp$ git status
On branch master

No commits yet

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

    new file:   r.txt

ttn@ttn:~/gitbootcamp$ git rm --cached r.txt
rm 'r.txt'
ttn@ttn:~/gitbootcamp$ git status
On branch master

No commits yet

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

    r.txt

nothing added to commit but untracked files present (use "git add" to track)
ttn@ttn:~/gitbootcamp$
```

```
Activities Terminal Tue Feb 5, 1:31:10 PM ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
ttn@ttn:~/gitbootcamp$ git reset HEAD r.txt
fatal: ambiguous argument 'HEAD': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'
ttn@ttn:~/gitbootcamp$ git reset HEAD --r.txt
error: unknown option 'r.txt'
usage: git reset [--mixed | --soft | --hard | --merge | --keep] [-q] [<commit>]
       or: git reset [-q] [<tree-ish>] [--] [<paths>...]
       or: git reset --patch [<tree-ish>] [--] [<paths>...]

    -q, --quiet                be quiet, only report errors
    --mixed                   reset HEAD and index
    --soft                   reset only HEAD
    --hard                   reset HEAD, index and working tree
    --merge                  reset HEAD, index and working tree
    --keep                   reset HEAD but keep local changes
    --recurse-submodules[=<reset>] control recursive updating of submodules
    -p, --patch              select hunks interactively
    -N, --intent-to-add      record only the fact that removed paths will be added later

ttn@ttn:~/gitbootcamp$ git reset HEAD -- r.txt
ttn@ttn:~/gitbootcamp$ git status
On branch master

No commits yet

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

    r.txt

nothing added to commit but untracked files present (use "git add" to track)
ttn@ttn:~/gitbootcamp$
```

Q5.Commit the file

```
Activities Terminal Tue Feb 5, 1:32:40 PM ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
--merge          reset HEAD, index and working tree
--keep           reset HEAD but keep local changes
--recurse-submodules[=<reset>]
                  control recursive updating of submodules
-p, --patch      select hunks interactively
-N, --intent-to-add record only the fact that removed paths will be added later

ttn@ttn:~/gitbootcamp$ git reset HEAD -- r.txt
ttn@ttn:~/gitbootcamp$ git status
On branch master

No commits yet

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

        r.txt

nothing added to commit but untracked files present (use "git add" to track)
ttn@ttn:~/gitbootcamp$ git add r.txt
ttn@ttn:~/gitbootcamp$ git status
On branch master

No commits yet

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

        new file:   r.txt

ttn@ttn:~/gitbootcamp$ git commit
[master (root-commit) 37cc54e] initial commit
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 r.txt
ttn@ttn:~/gitbootcamp$
```

Q6.Add a remote

```
Activities Terminal Tue Feb 5, 1:49:17 PM ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
ttn@ttn:~/gitbootcamp$ git remote add origin git@github.com:suprakashmaity29/btclass2.git
ttn@ttn:~/gitbootcamp$
```

Q7.Undo changes to a particular file

```
Activities Terminal Tue Feb 5, 3:53:15 PM ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
ttn@ttn:~/gitbootcamp$ git status
On branch master
nothing to commit, working tree clean
ttn@ttn:~/gitbootcamp$ vim r.txt
ttn@ttn:~/gitbootcamp$ git status
On branch 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:   r.txt

no changes added to commit (use "git add" and/or "git commit -a")
ttn@ttn:~/gitbootcamp$ git checkout r.txt
ttn@ttn:~/gitbootcamp$
```

Q8.Push changes to Github

```
Activities Terminal Tue Feb 5, 1:54:02 PM ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
ttn@ttn:~/gitbootcamp$ git remote add origin git@github.com:suprakashmaity29/btclass2.git
ttn@ttn:~/gitbootcamp$ git remote -v
origin  git@github.com:suprakashmaity29/btclass2.git (fetch)
origin  git@github.com:suprakashmaity29/btclass2.git (push)
ttn@ttn:~/gitbootcamp$ git push origin master
Counting objects: 3, done.
Writing objects: 100% (3/3), 211 bytes | 211.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To github.com:suprakashmaity29/btclass2.git
 * [new branch]      master -> master
ttn@ttn:~/gitbootcamp$
```

Q9.Clone the repository

```
Activities Terminal Tue Feb 5, 1:41:11 PM ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
ttn@ttn:~/gitbootcamp$ git clone git@github.com:suprakashnatty29/btclass2.git
Cloning into 'btclass2'...
warning: You appear to have cloned an empty repository.
ttn@ttn:~/gitbootcamp$
```

Q10.Add changes to one of the copies and pull the changes in the other.

```
Activities Terminal Wed Feb 6, 1:54:37 PM
Terminal
File Edit View Search Terminal Help
dir1/fileindir1 | 1 +
dir2/fileinsidedir2 | 1 +
2 files changed, 2 insertions(+)
create mode 100644 dir1/fileindir1
create mode 100644 dir2/fileinsidedir2
ttn@ttn:newgitpro2 (master)$ cd ..
ttn@ttn:~$ cd ./newgitrepo
ttn@ttn:newgitrepo (master)$ cat > files
new file
^C
ttn@ttn:newgitrepo (master)$ git add.
git: 'add.' is not a git command. See 'git --help'.

The most similar command is
  add
ttn@ttn:newgitrepo (master)$ git add .
ttn@ttn:newgitrepo (master)$ git commit
[master 4392895] done
 1 file changed, 1 insertion(+)
 create mode 100644 files
ttn@ttn:newgitrepo (master)$ git puch origin master
git: 'puch' is not a git command. See 'git --help'.

The most similar command is
  push
ttn@ttn:newgitrepo (master)$ git push origin master
Counting objects: 2, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (2/2), 253 bytes | 253.00 KiB/s, done.
Total 2 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:suprakashnatty29/newproject.git
 f42b0de..4392895  master -> master
ttn@ttn:newgitrepo (master)$
```

```
Activities Terminal Wed Feb 6, 1:44:43 PM
Terminal
File Edit View Search Terminal Help
ttn@ttn:~$ cd ./newgitpro
bash: cd: ./newgitpro: No such file or directory
ttn@ttn:~$ cd ./newgitpro2
ttn@ttn:newgitpro2 (master)$ git pull origin master
Warning: Permanently added the RSA host key for IP address '140.82.118.3' to the list of known hosts.
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 6 (delta 0), reused 6 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), done.
From github.com:suprakashmaity29/newproject
* branch      master      -> FETCH_HEAD
  fd80b12..f42b0de master  -> origin/master
Updating fd80b12..f42b0de
Fast-forward
 dir1/filedir1 | 1 +
 dir2/fileinsidedir2 | 1 +
 2 files changed, 2 insertions(+)
 create mode 100644 dir1/filedir1
 create mode 100644 dir2/fileinsidedir2
ttn@ttn:newgitpro2 (master)$
```

Q11. Check differences between a file and its staged version

```
Activities Terminal Wed Feb 6, 1:59:22 PM
Terminal
File Edit View Search Terminal Help
ttn@ttn:newgitrepo (master)$ cat > file5
adding changes
ttn@ttn:newgitrepo (master)$ git diff
diff --git a/file5 b/file5
index fa49b07..2beaba6 100644
--- a/file5
+++ b/file5
@@ -1,1 @@
+new file
+adding changes
ttn@ttn:newgitrepo (master)$ 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:   file5

no changes added to commit (use "git add" and/or "git commit -a")
ttn@ttn:newgitrepo (master)$
```

Q12. Ignore a few files to be checked in


```
Activities Terminal Tue Feb 5, 11:40:29 PM 72%
Terminal
File Edit View Search Terminal Help
ttn@ttn:newgitrepo (master)$ ls -l
total 16
drwxr-xr-x 2 ttn ttn 4096 Feb  5 23:27 dir1
drwxr-xr-x 2 ttn ttn 4096 Feb  5 23:27 dir2
-rw-r--r-- 1 ttn ttn  10 Feb  5 23:30 file1
-rw-r--r-- 1 ttn ttn  19 Feb  5 23:28 file2
-rw-r--r-- 1 ttn ttn   0 Feb  5 23:36 file3
ttn@ttn:newgitrepo (master)$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   .gitignore
        new file:   file3

ttn@ttn:newgitrepo (master)$ touch file4
ttn@ttn:newgitrepo (master)$ cat > .gitignore
file4
ttn@ttn:newgitrepo (master)$ git add .
ttn@ttn:newgitrepo (master)$ git status
On branch master
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        new file:   .gitignore
        new file:   file3

ttn@ttn:newgitrepo (master)$
```

Q13.Create a new branch.

```
Activities Terminal Tue Feb 5, 4:13:34 PM
ttn@ttn: ~/gitbootcamp
File Edit View Search Terminal Help
ttn@ttn:~/gitbootcamp$ git checkout -b newbranch
Switched to a new branch 'newbranch'
ttn@ttn:~/gitbootcamp$ git checkout newbranch
Already on 'newbranch'
ttn@ttn:~/gitbootcamp$ git push origin newbranch
Total 0 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'newbranch' on GitHub by visiting:
remote:   https://github.com/suprakashmaity29/btclass2/pull/new/newbranch
remote:
To github.com:suprakashmaity29/btclass2.git
 * [new branch]      newbranch -> newbranch
ttn@ttn:~/gitbootcamp$ git branch
  master
* newbranch
ttn@ttn:~/gitbootcamp$
```

Q14.Diverge them with commits


```
Activities Terminal Wed Feb 6, 2:47:14 PM
Terminal
File Edit View Search Terminal Help
ttn@ttn:newgitrepo (newbranch)$ cat > fileonnewb
this is new file
ttn@ttn:newgitrepo (newbranch)$ git add .
ttn@ttn:newgitrepo (newbranch)$ git commit
[newbranch 8c5277c] commit on branch
2 files changed, 2 insertions(+), 1 deletion(-)
create mode 100644 fileonnewb
ttn@ttn:newgitrepo (newbranch)$ git log --graph --oneline --all
* 8c5277c (HEAD -> newbranch) commit on branch
* 4392895 (origin/master, master) done
* f42b0de done commit of the folders
* fd80b12 commit done
* 8fea976 done
* 5b57a09 commit
* 7ad47e4 first commit to the new repo
ttn@ttn:newgitrepo (newbranch)$ git log --oneline --decorate
8c5277c (HEAD -> newbranch) commit on branch
4392895 (origin/master, master) done
f42b0de done commit of the folders
fd80b12 commit done
8fea976 done
5b57a09 commit
7ad47e4 first commit to the new repo
ttn@ttn:newgitrepo (newbranch)$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
ttn@ttn:newgitrepo (master)$ git log --oneline --decorate
4392895 (HEAD -> master, origin/master) done
f42b0de done commit of the folders
fd80b12 commit done
8fea976 done
5b57a09 commit
7ad47e4 first commit to the new repo
ttn@ttn:newgitrepo (master)$
```

```
Activities Terminal Wed Feb 6, 3:18:59 PM
Terminal
File Edit View Search Terminal Help
drwxr-xr-x 2 ttn ttn 4096 Feb 6 10:09 dir2/
-rw-r--r-- 1 ttn ttn 10 Feb 5 23:30 file1
-rw-r--r-- 1 ttn ttn 19 Feb 5 23:28 file2
-rw-r--r-- 1 ttn ttn 18 Feb 5 23:59 file3
-rw-r--r-- 1 ttn ttn 0 Feb 5 23:39 file4
-rw-r--r-- 1 ttn ttn 9 Feb 6 14:44 file5
drwxr-xr-x 8 ttn ttn 4096 Feb 6 14:44 .git/
-rw-r--r-- 1 ttn ttn 6 Feb 5 23:39 .gitignore
ttn@ttn:newgitrepo (master)$ cat > files
adding changes for branching
ttn@ttn:newgitrepo (master)$ add .
Command 'add' not found, did you mean:
  command 'axd' from deb afnix
  command 'dad' from deb debian-dad
  command 'ddd' from deb ddd
  command 'adbd' from deb android-tools-adbd
  command 'dd' from deb coreutils
  command 'and' from deb and
  command 'aid' from deb id-utils
  command 'amd' from deb am-utils
  command 'tdd' from deb devtodo
  command 'ldd' from deb libc-bin
  command 'pdd' from deb pdd
  command 'atd' from deb at
  command 'ad' from deb netatalk
  command 'adb' from deb adb
Try: sudo apt install <deb name>
ttn@ttn:newgitrepo (master)$ git add .
ttn@ttn:newgitrepo (master)$ git commit -m "msg"
[master 6f1117a] msg
1 file changed, 1 insertion(+), 1 deletion(-)
```

Q15.Edit the same file at the same line on both branches and commit

```
Activities Terminal Wed Feb 6, 3:25:17 PM
Terminal
File Edit View Search Terminal Help
drwxr-xr-x 5 ttn ttn 4096 Feb 6 14:44 ./
drwxr-xr-x 23 ttn ttn 4096 Feb 6 11:38 ../
drwxr-xr-x 2 ttn ttn 4096 Feb 6 10:08 dir1/
drwxr-xr-x 2 ttn ttn 4096 Feb 6 10:09 dir2/
-rw-r--r-- 1 ttn ttn 10 Feb 5 23:30 file1
-rw-r--r-- 1 ttn ttn 19 Feb 5 23:28 file2
-rw-r--r-- 1 ttn ttn 18 Feb 5 23:59 file3
-rw-r--r-- 1 ttn ttn 0 Feb 5 23:39 file4
-rw-r--r-- 1 ttn ttn 29 Feb 6 15:18 file5
drwxr-xr-x 8 ttn ttn 4096 Feb 6 15:18 .git/
-rw-r--r-- 1 ttn ttn 6 Feb 5 23:39 .gitignore
ttn@ttn:newgitrepo (master)$ git checkout
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)
ttn@ttn:newgitrepo (master)$ git checkout newbranch
Switched to branch 'newbranch'
ttn@ttn:newgitrepo (newbranch)$ cat file5
adding changes
ttn@ttn:newgitrepo (newbranch)$ cat > file5
editing at the same line
ttn@ttn:newgitrepo (newbranch)$ git add .
ttn@ttn:newgitrepo (newbranch)$ git commit -m "msg1"
[newbranch 162624f] msg1
1 file changed, 1 insertion(+), 1 deletion(-)
ttn@ttn:newgitrepo (newbranch)$ git checkout master
Switched to branch 'master'
Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)
ttn@ttn:newgitrepo (master)$ cat > file5
hello
ttn@ttn:newgitrepo (master)$ git add .
ttn@ttn:newgitrepo (master)$ git commit -m "msg2"
[master 9d1253e] msg2
1 file changed, 1 insertion(+), 1 deletion(-)
ttn@ttn:newgitrepo (master)$
```

Q16. Try merging and resolve merge conflicts

```
Activities Terminal Wed Feb 6, 3:31:53 PM
Terminal
File Edit View Search Terminal Help
ttn@ttn:newgitrepo (master)$ git mergetool
Merging:
file5

Normal merge conflict for 'file5':
{local}: modified file
{remote}: modified file
ttn@ttn:newgitrepo (master)$ git status
On branch master
Your branch is ahead of 'origin/master' by 2 commits.
(use "git push" to publish your local commits)

All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
  modified:   file5
  new file:   fileonnewb

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

  file5.orig

ttn@ttn:newgitrepo (master)$ git commit -m
```

Q17. Stash the changes and pop them

```
Activities Terminal
Wed Feb 6, 3:38:51 PM
Terminal

File Edit View Search Terminal Help

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    new file:   file5.orig
    new file:   file6

ttn@ttn:newgitrepo (master)$ git stash
Saved working directory and index state WIP on master: f4831f7 doen
ttn@ttn:newgitrepo (master)$ git pop
git: 'pop' is not a git command. See 'git --help'.

The most similar command is
    log
ttn@ttn:newgitrepo (master)$ git stash pop
On branch master
Your branch is ahead of 'origin/master' by 5 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    new file:   file5.orig
    new file:   file6

Dropped refs/stash@{0} (ef1f4d6b16a2fa12e4412116c7699ebcd2acfd0b)
ttn@ttn:newgitrepo (master)$ git stash
Saved working directory and index state WIP on master: f4831f7 doen
ttn@ttn:newgitrepo (master)$ git status
On branch master
Your branch is ahead of 'origin/master' by 5 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
ttn@ttn:newgitrepo (master)$
```

Q18. Add the following code to your .bashrc file : color_prompt="yes"

```
parse_git_branch() {
    git branch 2> /dev/null | sed -e '/^[^*]/d' -e 's/* \([^*]\)/(\1)/'
}
if [ "$color_prompt" = yes ]; then
    PS1='\u@\h\[\033[00m\]:\[\033[01;34m\]\W\[\033[01;31m\]
$(parse_git_branch)\[\033[00m\]\$ '
else
    PS1='\u@\h:\W $(parse_git_branch)\$ '
fi
unset color_prompt force_color_prompt
```

```
Activities Terminal Tue Feb 5, 4:20:36 PM ttn@ttn: ~
File Edit View Search Terminal Help

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
    if [ -f /usr/share/bash-completion/bash_completion ]; then
        . /usr/share/bash-completion/bash_completion
    elif [ -f /etc/bash_completion ]; then
        . /etc/bash_completion
    fi
fi

color_prompt="yes"
parse_git_branch() {
    git branch 2> /dev/null | sed -e '/^[^*]/d' -e 's/* \([^*]\)/(\1)/'
}
if [ "$color_prompt" = yes ]; then
    PS1='\u@\h[\033[00m\]:\[\033[01;34m\]\W[\033[01;31m\] ${parse_git_branch}\[\033[00m\]}$ '
else
    PS1='\u@\h:\W ${parse_git_branch})$ '
fi
unset color_prompt force_color_prompt

-- INSERT -- 130,38 Bot
```