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Git Commands

Introduction

Sets configuration values for your user name, email as follows One time only

#git config --global user.name "DevOps Training Bangalore"
#git config --global user.email devopstrainingblr@gmail.com

Checking for settings

#git config --list

You can also check what Git thinks a specific key's value is by typing git config <key>:

#git config user.name

#git config --global core.editor "nano" (GNU nano 2.0)

(OR)

#git config --global core.editor "vim" (VIM)

Task 1: Create the git local repository in local machine (Laptop/Deskto), add one file (bhaska1.txt) and update that file, create the github remote repository (https://github.com) and move the local code to github repository.

Go the directory where you want to create the git repository.

 # mkdir git-practice-commands
#cd git-practice-commands
#git init : Create a local Git repository.

```
Initialized empty Git repository in /Users/MithunReddy/git/git-
```

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practice-commands/.git/

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#git status : Gives the status of your untracked files.

```
On branch master

Initial commit


nothing to commit (create/copy files and use "git add" to track)
```

#touch DbConnect.java
#git status

```
On branch master

Initial commit

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

    DbCOnnect.txt

nothing added to commit but untracked files present (use "git add" to
track)
```

#vim DbConnect.java
#git add DbConnect.java: Add the files(here DbCOnnect.java) into your new local repository.
#git clean -f : If we want to remove new files from working area.
#git clean -n : It will preview the changes.
#git reset the <<File Name>> : To untrack ant tracked files.
#git status

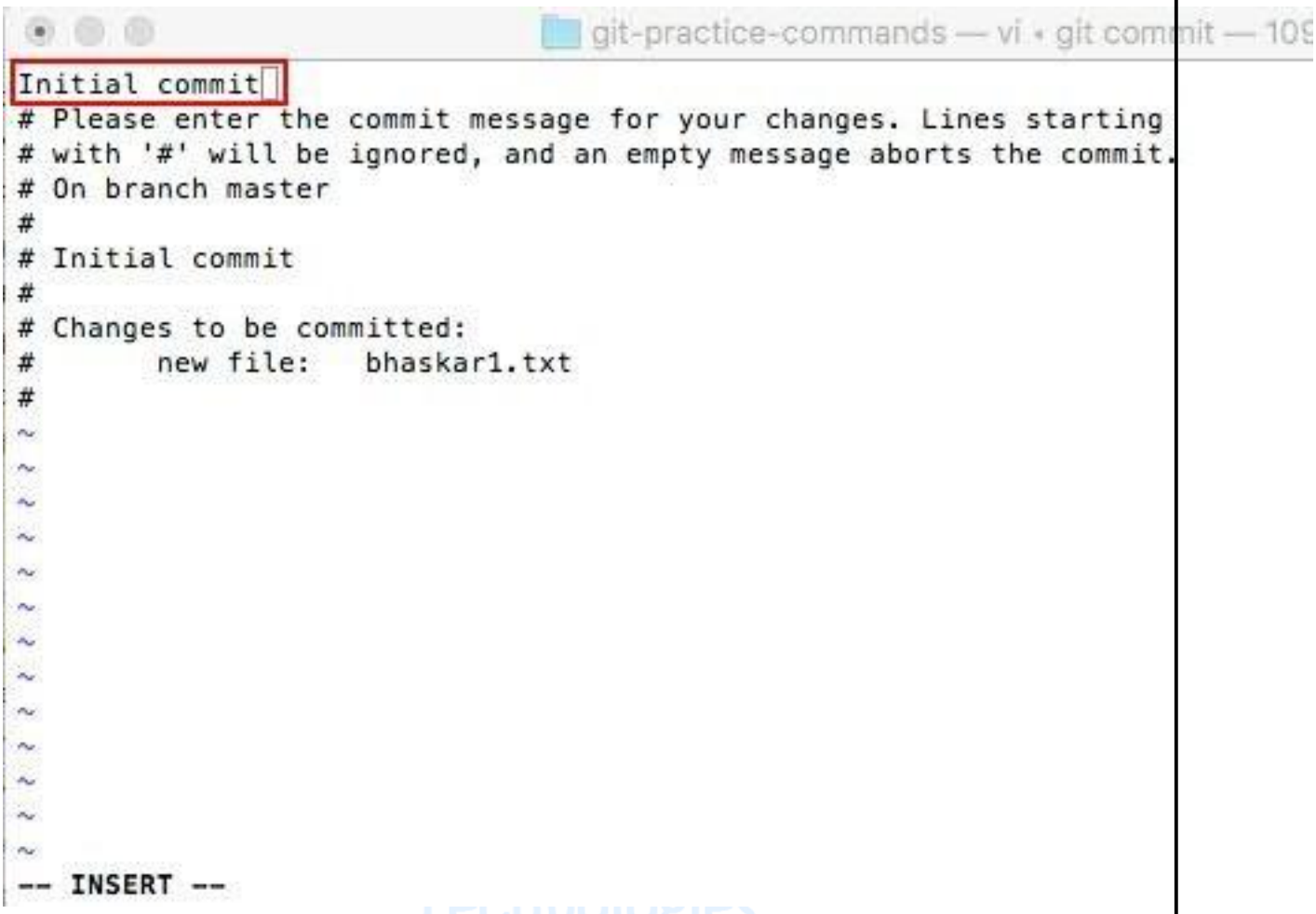
```
On branch master

Initial commit

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

    new file:   bhaskar1.txt
```

 # git commit : Commit the files that you've staged in your local repository.



type i then put the comments and press esc key and type :wq and click on enter key.

#git status

```
On branch master

nothing to commit, working tree clean
```

- Open the file (DbConnect.java) and update with some text.

#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:                                   Dbconnect.java


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

#git commit -a -m "Updated DbConnect.java file"

```
[master 7f795a7] Updated DbConnect.java file
 1 file changed, 1 insertion(+)
```

- Create the repository in github as follows.

Login into github (http://github.com)

On right side top corner click on **"+"** symbol and click on **"New repository"** and give the Repository name and click on Create repository.

#git remote add origin git@github.com:devopstrainingblr/test.git : Adding the URL for the remote repository where your local repository code will be pushed.

 # git remote –v :

#git push -u origin master : Push the changes in your local repository to GitHub remote repository. (Here push is the git command , origin is the remote name and master is the branch name)

```
Counting objects: 6, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (6/6), 479 bytes | 0 bytes/s, done.
Total 6 (delta 0), reused 0 (delta 0)
To git@github.com:devopstrainingblr/test.git
 * [new branch]      master -> master
Branch master set up to track remote branch master from origin.
```

#git status

```
 On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working tree clean
```

#git remote show origin : It will give the information on a particular remote (here origin is the remote name)

 # git remote remove origin : It will remove the remote origins.

 # git remote -v

Task 2: Create the git local repository in local machine (Laptop/Deskto), create the another branch (bugfix), merge with master branch.

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#mkdir branchmerge
#cd branchmerge
#git init (By default it will create the master branch)

#touch DbConnection.java
Update this file like change 1 – master branch
#**vim DbConnection.java**
 # git add .
 # git commit -a -m "initial commit"
#git branch : It gives the branch names in current repository.
#git branch bugfix : It will create the bugfix branch in local git repository.

#git branch -v: It will display the branches in git repo.

```
bugfix 87226db initial commit
* master 87226db initial commit
```

Note: Here * indicate currently in use branch.
 # git checkout bugfix : Switch to bugfix branch.

```
Switched to branch 'bugfix'
```

Update the Bhaskar.txt like change 2 – bugfix branch
 # git add .
 # git commit -a -m "bugfix commit"

 # git checkout master : Switch to master branch.

```
Switched to branch 'master'
```

Updat the Bhaskar.txt like change 3 – master branch
 # git add .
 # git commit -a -m "master commit"

 # git checkout bugfix : Switch to bugfix branch.

```
Switched to branch 'bugfix'
```

Check the file and see the contents in file.

#git checkout master

#git diff master bugfix

#git merge bugfix

Fix the conflicts
#git add .
#git commit –m “merging”
#git remote add origin <<Git Remote Repo>>
#git push --all origin

#git branch -d bugfix
#git log

'git mergetool' will now attempt to use one of the following tools:
opendiff tortoisemerge emerge vimdiff

$ git config --global merge.tool opendiff

Mirroring a repository

To make an exact duplicate, you need to perform both a bare-clone and a mirror-push.
Open up the command line, and type these commands:

Create one directory
#mkdir codebackup
#cd codebackup

Make a bare clone of the repository
#git clone --bare https://github.com/exampleuser/old-repository.git

git push --mirror https://github.com/exampleuser/new-repository.git
Mirror-push to the new repository

Remove our temporary local repository
rm -rf codebackup

Steps for Code Checkout into local from Repository
==========

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Go to the directory where we need to commit the code/checkout the code

cd C:\ReddyL\JavaWorkspace\MTWorkSpace

Get the code from Git Repository as follows.

git clone <<GitHub URL>>

Git Commands

git branch : It will displays the branch names on your repository.

git branch <<Branch Name>> : It will create the local branch in the repository.

Ex: git branch test

git branch -d test: It will delete the local branch in the repository, if that branch already merged with another branch.
git branch -D test: It will delete the local branch in the repository, even if that branch is not merged also.

```
bhaskars-air:gitpractice bhaskarreddyl$ git branch -d hotfix
error: The branch 'hotfix' is not fully merged.
If you are sure you want to delete it, run 'git branch -D hotfix'.
bhaskars-air:gitpractice bhaskarreddyl$ git branch -D hotfix
Deleted branch hotfix (was e42d874).
bhaskars-air:gitpractice bhaskarreddyl$
```

git push origin : bugfix : It will delete a remote branch in the repository.

```
bhaskars-air:gitpractice bhaskarreddyl$ git push origin :bugfix
To github.com:devopstrainingblr/test12345.git
 - [deleted]         bugfix
bhaskars-air:gitpractice bhaskarreddyl$
```

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git checkout -b <<Branch name>> : It will create the branch name and will switch.

git checkout <<Branch name>> : This will switch the branch.

Ex: git checkout test

git config http.sslVerify false : To disable SSL verification for that singular repository

git config --global http.sslVerify false : To disable the SSL verification for Globally (For all repositories) --> Not suggested way

git clone <<Git URL>> : To get the code from repository into your local machine.

git log : It will display the commit history.

git log -p -2 : which shows the difference introduced in each commit. You can also use -2, which limits the output to only the last two entries:

git log --stat : If you want to see some abbreviated stats for each commit, you can use the --stat option.

git rm : Removes files from your index and your working directory so they will not be tracked.

What is the difference between git fetch and get pull?

Ans) git fetch : It will get the update from git remote repo and will update your local repo. But it will not merge with Local working copy.
git fetch : It will get the update from git remote repo and will update your local repo as well it will merge with Local working copy also.

So **git pull = git fetch + git merge origin/mast**

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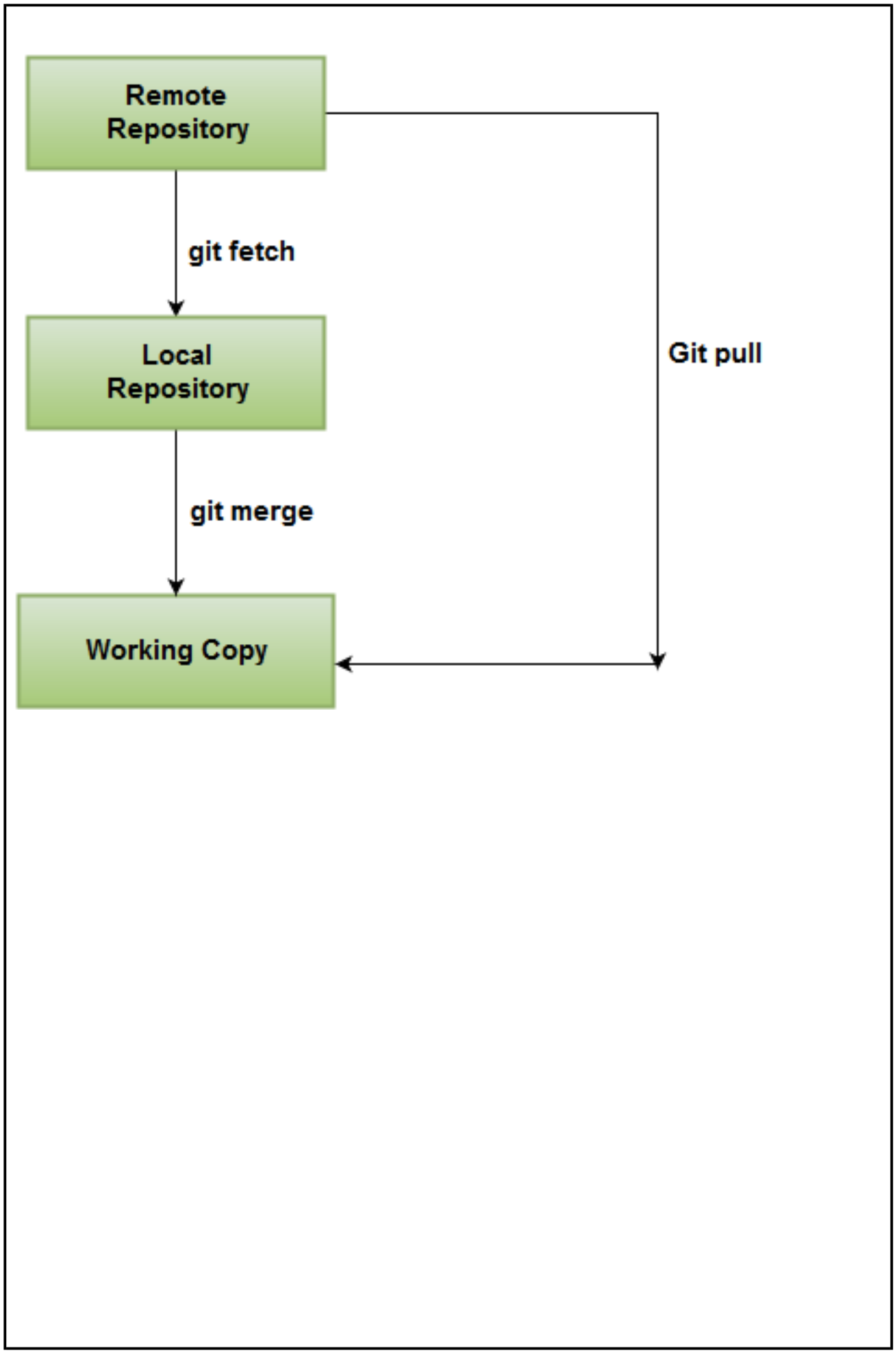

```
bhaskars-air:gitpractice bhaskarreddyl$ git fetch
remote: Counting objects: 3, done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
From github.com:devopstrainingblr/test12345
   574df20..40a3236  master     -> origin/master
bhaskars-air:gitpractice bhaskarreddyl$ cat DbConnect.java
public class Test{}
bhaskars-air:gitpractice bhaskarreddyl$ git pull origin master
From github.com:devopstrainingblr/test12345
 * branch            master     -> FETCH_HEAD
Updating 277214e..40a3236
Fast-forward
 DbConnect.java | 5 ++++-
 1 file changed, 4 insertions(+), 1 deletion(-)
bhaskars-air:gitpractice bhaskarreddyl$ cat DbConnect.java
public class Test{

  public Test(){}
}
```

 # git grep "Test()" : Search the working directory for Test()

```
bhaskars-air:gitpractice bhaskarreddyl$ git grep "Test()"
DbConnect.java:  public Test(){}
bhaskars-air:gitpractice bhaskarreddyl$
```

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Resources:
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https://github.com/
https://git-scm.com/book/en/v2/Getting-Started-First-Time-Git-Setup
https://www.atlassian.com/git/tutorials/comparing-workflows/

https://git-scm.com/book/en/v2/Git-Branching-Basic-Branching-and-Merging
http://www.vogella.com/tutorials/Git/article.html
https://help.github.com/articles/duplicating-a-repository/