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# How to Install Git?

Step 1 :

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

Go to the above link and download the latest version as per the OS.

Step 2:



Step 3:



Step 4:



# How to configure GIT ?

**To set the user name for the GIT globally:**

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git config --global user.name "Dilip Sundarraj"

$ git config --global –list:

This is used to list global variables for GIT in the system.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git config --global --list

user.name=Dilip Sundarraj

**To set the email:**

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git config --global user.email [dilip.thelip@gmail.com](mailto:dilip.thelip@gmail.com)

**Auto** **Correct**:

The below command actually auto corrects if you mistype something.

It waits for one tenth of a second and auto corrects it. As per the below command it waits for 0.1 seconds and auto corrects it.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git config --global help.autocorrect 1

Eg.,

We mistyped statsu but it waited for 0.1 seconds and auto corrects it.

$ git statsu

WARNING: You called a Git command named 'statsu', which does not exist.

Continuing under the assumption that you meant 'status'

in 0.1 seconds automatically...

On branch master

Initial commit

Untracked files:

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

How to Install GIT.docx

~$w to Install GIT.docx

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

**Color.ui:**

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git config --global color.ui auto

**Crlf : (Carriage return line feed)**

**Read this is in GIt document.**

**For windows it is preferred to set it as true.**

**For Mac and Unix it is preferred to set it as false.**

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git config --global core.autocrlf true

**To display the config:**

cat .git/config

vim .git/config

# How to create Files ?

echo “Hello Again”> Readme.txt -> This will create the Readme.txt file with the Hello Again

touch file1.txt file2.txt -> This command creates two files.

## How to unset the configurations ?

Git config –unset user.name -> This command unsets the configuration variable from the configuration list.

# How to create a local Repository ?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git init

# How to Track the file changes?

Git status -> this command will tell you what are the untracked files in the repository.

Untracked files:

This tells the files mentioned are not in the repository and the files are not tracked by Git.

$ git status

On branch master

Initial commit

Untracked files:

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

How to Install GIT.docx

README.txt

~$w to Install GIT.docx

~WRL1961.tmp

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

# How to add a file to the Git Repository ?

$ git add README.txt

# How to add the updated files ?

git add -u

# How to commit the file to the repository ?

$ git commit -m 'added readme'

# How to commit and add the file in one command?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git commit -am 'addinf and commiting together'

[master 4a02c31] addinf and commiting together

4 files changed, 1 insertion(+), 1 deletion(-)

delete mode 100644 ~WRL1961.tmp

# How to check the history of changes ?

Approach 1:

$ git log

commit 405ea2a3d6e2202194c15a910539876af48be7e9

Author: Dilip.Sundarraj <dilip.thelip@gmail.com>

Date: Fri Nov 20 13:33:32 2015 -0600

added readme

Approach 2:

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git log --oneline

ec3d3a3 Merge pull request #2 from dilipthelip/news

c3cd16f added the news module

b64a57e Merge pull request #1 from dilipthelip/feature1

79d674c added new module

4370fcf added the file inside the folder

ef46c74 added this change

89d4a6b made changes

2da6825 added index.html

24dba1f Initial commit

Approach 3:

This will give you the graph option.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git log --graph

\* commit ec3d3a37c064c4b9d3a54e38b59638340c9b147b

|\ Merge: b64a57e c3cd16f

| | Author: dilipthelip <dilip.thelip@gmail.com>

| | Date: Wed Aug 12 07:13:55 2015 -0500

| |

| | Merge pull request #2 from dilipthelip/news

| |

| | added the news module

| |

| \* commit c3cd16f9d48a23133124d56b15224c84d7c72d8b

|/ Author: dilipthelip <dilip.thelip@gmail.com>

| Date: Wed Aug 12 06:46:45 2015 -0500

|

| added the news module

|

\* commit b64a57e4400d727e12a1d354a180903978bf3b2f

|\ Merge: 4370fcf 79d674c

| | Author: dilipthelip <dilip.thelip@gmail.com>

| | Date: Wed Aug 12 06:42:29 2015 -0500

| |

| | Merge pull request #1 from dilipthelip/feature1

| |

| | sasadadsadadded new module

| |

| \* commit 79d674c4ab5ecbea9418c6aec05599fef61ea140

|/ Author: dilipthelip <dilip.thelip@gmail.com>

| Date: Wed Aug 12 06:31:13 2015 -0500

|

| added new module

|

\* commit 4370fcfaf2a5091ac62414d9780fb390a49c424d

| Author: dilipthelip <dilip.thelip@gmail.com>

| Date: Tue Aug 11 17:35:08 2015 -0500

|

| added the file inside the folder

|

\* commit ef46c7448391b00f6a0b804377218ada0c04f279

| Author: dilipthelip <dilip.thelip@gmail.com>

| Date: Tue Aug 11 16:37:01 2015 -0500

|

| added this change

|

\* commit 89d4a6b25f34d98096aeb8f00f6c52f9c2c7472d

| Author: dilipthelip <dilip.thelip@gmail.com>

| Date: Tue Aug 11 16:13:38 2015 -0500

|

| made changes

|

\* commit 2da682525ce742870bd943616a742bb4e28e2a91

| Author: dilipthelip <dilip.thelip@gmail.com>

| Date: Tue Aug 11 15:49:16 2015 -0500

|

| added index.html

|

\* commit 24dba1f387d594f9ac46df9c21d86f012c34e3f3

Author: dilipthelip <dilip.thelip@gmail.com>

Date: Tue Aug 11 15:19:24 2015 -0500

Initial commit

Approach 4:

This is another view of the log. If there are multiple people involved in checking in the files then it will be listed down below.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git shortlog

dilipthelip (9):

Initial commit

added index.html

made changes

added this change

added the file inside the folder

added new module

Merge pull request #1 from dilipthelip/feature1

added the news module

Merge pull request #2 from dilipthelip/news

Approach 5:

git shortlog -sne

S -> summary

N ->order them by Numerically decreasing

E ->include email in the result

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git shortlog -sne

WARNING: You called a Git command named 'shorlog', which does not exist.

Continuing under the assumption that you meant 'shortlog'

in 0.1 seconds automatically...

9 dilipthelip <dilip.thelip@gmail.com>

## To determine how many commits are made to the repository ?

The below command will tell you how many commits are made to the repository ?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git log --oneline | wc -l

9

# What is HEAD ?

The latest commit is known as HEAD.

Head~1 -> This is the version is the prior to the latest commit.

# How to check the differences between the different commited version ?

HEAD -> This is the latest committed version

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git diff HEAD~1..HEAD

# How to remove files using Git ?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ rm file2.txt

# How to Rename File names?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ mv file file\_updated.txt

# How to undo the changes made ?

Approach 1:

To undo the changes of one particular file

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git checkout file\_updated.txt

# How to remove the current version and add the previous version as the latest ?

**Approach 1:**

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git reset --soft HEAD~1

This command removes the current HEAD version from the repository and updates it with the previous version.

**Approach 2:**

If you want to undo changes of multiple files then

Git reset –hard

# How to Clean the working Copy ?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git clean

fatal: clean.requireForce defaults to true and neither -i, -n, nor -f given; refusing to clean

git clean –n:

This will give you the message would remove the stray files

git clean –f:

This will remove the unstaged files from the working directory

# Ignoring Files with .gitignore ?

Add the .gitignore file in to the root path of the repository.

.gitignore file is a txt file.

Eg.,

I have added a logs folder to the root path.

$ 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: How to Install GIT.docx

Untracked files:

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

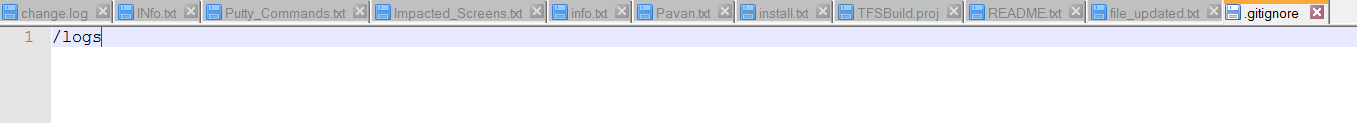
logs/

~WRL1250.tmp

~WRL4044.tmp

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

I do not want to be considered as a tracked file. Add the below line in the .gitignore file.



After adding the /logs in the ignore file the log folder is not displayed in the untracked files section after you run the git status command.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ 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: How to Install GIT.docx

Untracked files:

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

.gitignore

~WRL1250.tmp

~WRL4044.tmp

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

Working Remotely with GIT:

# How to clone the repository to local ?

git clone <URL>

# How to View Commits ?

This will tell you what is the latest commit that has been made to the repository.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git show HEAD

commit ec3d3a37c064c4b9d3a54e38b59638340c9b147b

Merge: b64a57e c3cd16f

Author: dilipthelip <dilip.thelip@gmail.com>

Date: Wed Aug 12 07:13:55 2015 -0500

Merge pull request #2 from dilipthelip/news

added the news module

# How to view list of changes made in a commit ?

Follow the below steps:

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git log --oneline

ec3d3a3 Merge pull request #2 from dilipthelip/news

c3cd16f added the news module

b64a57e Merge pull request #1 from dilipthelip/feature1

79d674c added new module

4370fcf added the file inside the folder

ef46c74 added this change

89d4a6b made changes

2da6825 added index.html

24dba1f Initial commit

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git show 24dba1f

commit 24dba1f387d594f9ac46df9c21d86f012c34e3f3

Author: dilipthelip <dilip.thelip@gmail.com>

Date: Tue Aug 11 15:19:24 2015 -0500

Initial commit

**diff --git a/README.md b/README.md**

**new file mode 100644**

**index 0000000..27e4350**

**--- /dev/null**

**+++ b/README.md**

@@ -0,0 +1 @@

+# gitTutorial

# Git Remote:

This tells “Git” from where the code is fetched and pushed to.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git remote

origin

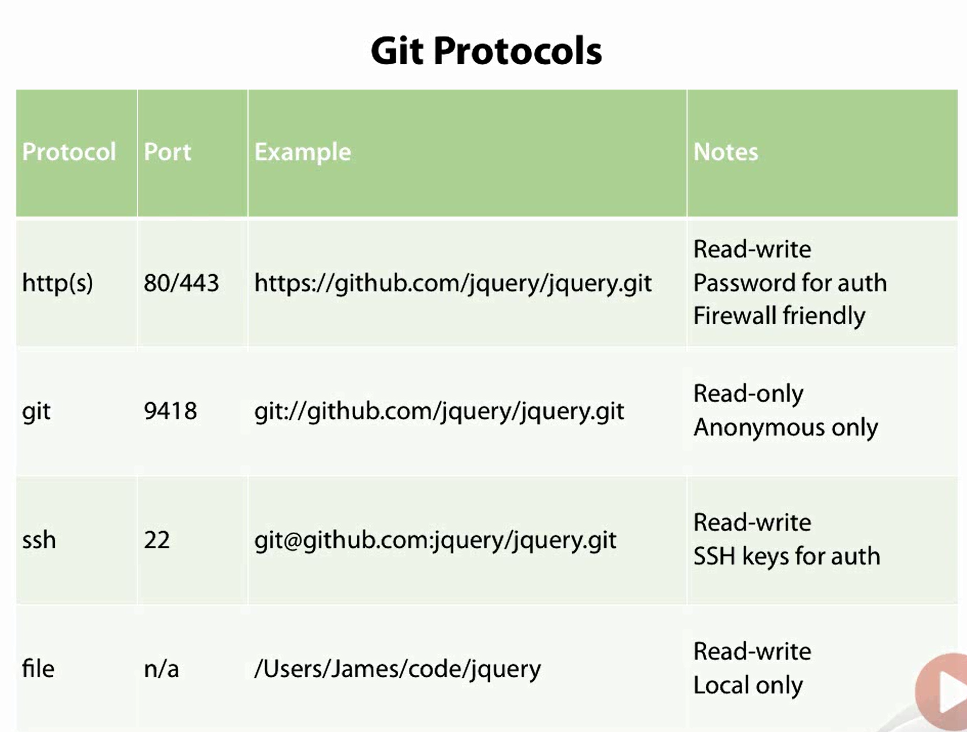
DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git remote -v

origin https://github.com/dilipthelip/gitTutorial.git (fetch)

origin https://github.com/dilipthelip/gitTutorial.git (push)

# Git protocols:



# Branches - How to view Branches ?

git branch -> This command will list of branches created for the repository.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git branch

\* master

# Tags - How to View Tags?

Tags -> Tags are known points in your code base where we can often tag versions.

The below tag will list down the number of tags available for the repository

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/Git\_PluralSight/Remote\_Repository/gitTutorial (master)

$ git tag

# What is Origin ?

**origin** is not the remote repository name. It is an alias given to the URL pointing to the default remote repository.

# Unstage – how to unstage a staged file ?

DHC+z001qgd@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git rm --cached How\_to\_Install\_GIT\_And\_Commands.docx

# How to add the local repository to Remote?

Create the repository in github and get the clone url

<https://github.com/dilipthelip/git_pluralsight>

Approach 1:

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git remote add origin <https://github.com/dilipthelip/git_pluralsight.git>

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git push -u origin master

Approach 2: (SSh version)

# Pull - How to get the updates made to the repository?

Approach 1:

This will pull down any changes made to the remote repository.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git fetch

The below command will tell you the changes that has been made to the branch remotely by someone.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git log origin/master

How to get that in to our local working copy?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git merge origin/master

Updating 04698df..0480afd

Fast-forward

README.txt | 4 +++-

1 file changed, 3 insertions(+), 1 deletion(-)

Approach 2:

The below command gets the updates from the remote branch and updates the local repository.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git pull

remote: Counting objects: 3, done.

remote: Compressing objects: 100% (3/3), done.

remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0

Unpacking objects: 100% (3/3), done.

From https://github.com/dilipthelip/git\_pluralsight

0480afd..3ab3e2c master -> origin/master

Updating 0480afd..3ab3e2c

Fast-forward

README.txt | 1 +

1 file changed, 1 insertion(+)

**Scenario 1:**

Changes not committed in local.

# Push – How to push the changes to the remote repository ?

warning: push.default is unset; its implicit value has changed in

Git 2.0 from 'matching' to 'simple'. To squelch this message

and maintain the traditional behavior, use:

git config --global push.default matching

To squelch this message and adopt the new behavior now, use:

git config --global push.default simple

Simple -> Pushes only the current branch.This is the preferable option.

Matching -> It will push all the branches to the remote branch and would merge them.

<http://stackoverflow.com/questions/21839651/git-what-is-the-difference-between-push-default-matching-and-simple>

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git commit -am 'addinf and commiting together'

[master 4a02c31] addinf and commiting together

4 files changed, 1 insertion(+), 1 deletion(-)

delete mode 100644 ~WRL1961.tmp

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git push

If changes are not pushed then we need to set the working directory to point to the correct branch.

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git branch --set-upstream-to=origin/master master

Provide the credentials it will automatically push it to the branch

# How to remove the origin ?

DHC+Z001QGD@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git remote rm origin

# Tags – Creating and verifying Tags?

This is basically used to tag a commit point.

Regardless of whatever happens the tag version v1.0 always points to the commit point when the tag was created.

Approach 1:

DHC+z001qgd@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git tag v1.0

Approach 2:

In the below version it provides a tag with a message.

DHC+z001qgd@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git tag v1.0\_message -m 'tag with version'

Approach 3:

Signing the tag – meaning some person signed and confirmed this is the official 1.0 release.

Follow the below link and set up few stuff

<http://stackoverflow.com/questions/12061645/generating-a-gpg-key-for-git-tagging>

Please re read it again. It did not work.

# Tags – Verifying tag :

-v is used to verify tag.

DHC+z001qgd@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git tag -v v1.0\_message

object b2fd4bbea33c34818ab88a08298ae8129271f311

type commit

tag v1.0\_message

tagger dilipthelip <dilip.thelip@gmail.com> 1448551517 -0600

tag with version

error: no signature found

error: could not verify the tag 'v1.0\_message'

# Tag – Pushing tags to Remote :

DHC+z001qgd@2QBZP12 MINGW64 /c/Dilip/Study/GIT (master)

$ git push –tags

This will push the tag to the remote.

# How to pull a remote ?

# How to clear the console ?

Clear

# To check?

How to remove the initialized repository ?

Ho w to handle conflicts?

Scenario 1:

1. Modify the file in Git hub
2. Modify the same file in local.
3. Git pull request

Scenario 2:

1. Add a new file in local.
2. Modify a different file in git hub
3. Pull request.

# Commands:

Cat:

Cat command is used to read one or more files and display it in the standard output.