**Git Configuration**

**Basics**

* Version Control System(VCS) – system allows to track history of some files
* Files are stored in an area known as repository
* Git is a distributed version control system – Means typically have a central repository and others clone this central repository.
* Git allows synchronization in Local Repo(repo in my system), Remote repo(repo in other sytem) and Git Repo
* Brances in Git – Can work different versions of our file, can store them and switch one from other. If we add a new feature we can create new branch for keep old file without any change
* Check three of our files – committed ( Safely stored n local area), modified(changed but not committed yet) and staged(marked as modified and need to commit next)
* Staging Area – Add to index
* These stages leads to 3 sections – Working directory, Staging Area and Git directory
* Diagram from link (http://git-scm.com/book/en/v2/Getting-Started-Git-Basics)- Files add to index from working directory to staging area, then committed to Git repo from staging area
* Here from our workspace/other place to local repository done by push

**Installation**

* Install Git for windows(Search git for windows, download it from <http://git-scm.com/download/win>, and we get docs for git here)
* Check Git bash while installation

**Git Account Creation**

* Create account in <https://github.com/> OR <https://gitent-scm.com/> OR <https://bitbucket.org/> OR <https://gitorious.org/>
* Get the clone URI
* We can create a local repo or clone a repo and configure as mine
* Make our workspace as local repo
* Bit Bucket & Git Enterprise are hosting sites for git

**Command Line**

* Different ways to use git
* Like from eclipse GUI s are available. But commands are easy and useful for all types of IDEs
* Git bash- command prompt customized for git
* Open Git Bash from start menu or search
* Git Bash – Select/Copy/Paste options
* git help git 🡪 View all commands
* git help <command> 🡪for view command help
* git --help 🡪 View all commands
* Create local repo and copy path
* cd “<insert\_key(local repo path)>” 🡪 for copy local repo path. No right click
* git init 🡪 Initialize git in this directory
* git config --global user.name <username> 🡪 Configure username
* git config --global user.email <email> 🡪 Configure email ID
* git clone <Clone Uri> 🡪 Clone our Git repository
* **Create a file** : create a file in local repo/ use vi filename.ext OR vi foldername\filename.ext

(When vi command for a text file – a command prompt opens – press Insert key for typing – after typing press Esc key – then give command :wq for save file and exit.)

* git add filename.ext OR git add foldername\filename.ext 🡪 Add file to staging area
* git add --all OR git add . 🡪 for add all files in repo
* git rm filename.ext 🡪 remove a file from repo
* git status – Always check git status for view tracked and untracked files- shows tracked in green letters and untracked one in red
* git log 🡪 view commit history
* git commit 🡪 commit changes in files added in staging area to local repository
* git commit –m “<commit message>” 🡪 Commit
* git pull <Git rep Url/Remote repo Url> 🡪 Pull the changes from a repository to our local repo (Master)
* git push <Git rep Url/Remote repo Url> 🡪 Push the files to server repo (Master)
* **Branching**: Diverge from main line(master branch) and continue without messing main stream. Allows to keep a backup
* git branch 🡪 check all branches available in repo
* git branch <branch name> 🡪 create a branch
* git checkout <branch name> 🡪 switch to a branch
* git checkout –b <branch name> 🡪 create and switch to branch
* git push –u <Repo url> <branch name> 🡪 Push the branch and its files to server repo
* git pull –u <Repo url> <branch name> 🡪 Pull the files to server repo branch
* git merge <branch name> merge branch with current one
* git branch –d <branch name> 🡪 delete a branch
* git push orgin master 🡪 push commited changes to orgin master

**References**

[http://git-scm.com/](http://git-scm.com/\)

<http://www.vogella.com/tutorials/Git/article.html>

Bit bucket with Git Bash : <https://confluence.atlassian.com/display/BITBUCKET/Set+up+Git>

Git Enterprise : <https://gitent-scm.com/gitent/users/Login.git;jsessionid=8yhdn3sem6he1sz4wxz5u5x6g?target=Home>

<http://www.siteground.com/tutorials/git/commands.htm>