**GitHub Learning Document**

**Q. What is Git?**

Ans: Free and Open source version control system

**Q. What is Version Control?**

Ans: The management of changes to documents, computer programs, large web sites and other collections of information.

**Q. What is a repository?**

Ans: A repository is basically a project. It includes all your files and folders for whatever kind of applications that you are building.

**Q. What is .md file?**

Ans: The complete abbreviation for md is “Markdown”. Markdown is basically a new way to format your text in these sort of files.

**Readme.md file tags:**

#: for main heading.

##: for smaller heading.

###: for more small heading.

**GUI Applications:**

* GitHub Kraken
* GitHub Desktop

**Terms:**

* Directory -> Folder
* CLI-> Command Line Interface
* Cd-> Change Directory
* GitHub-> A website to host your repository online
* Git-> A tool that tracks the changes in your code over time.

**Git Commands:**

* clone -> Bring a repository that is hosted somewhere like GitHub in a folder on your local machine
* add-> Track your files and changes in Git
* commit-> Save your file in Git
* push-> Upload Git commands to a remote repo like Github
* pull-> Download changes from remote repo to your local machine, the opposite of push.

**CLI Commands:**

* To check git version: git version
* To copy a repo from GitHub to local machine: git pull repolink
* To check the status of the github files, they are modified or created: git status
* To add all listed files to track the changes: github add .
* To add optional file to track the changes: github add <filename>.<extension>
* To commit the file: git commit –m <message>
* To commit file with description: git commit –m <message> -m <description>
* To push the code to the repo: git push
* To generate SSH key (inside git bash): ssh-keygen –t <type of encyrption> -b <strength of the encryption> -C <github email address>
* To copy the in terminal: pbcopy < ~/sshkey.pub
* To push the code in a branch: git push origin <branch name>
* To initialize a git repository to a local folder: git init
* To remote a repository: git remote add origin <link to repo>
* To set the default branch for every commit: git push –u origin <github branch>

**Git Branching:**

* To check all branches: git branch
* To create a new branch: git checkout –b <branch name>
* To switch between git branches: git checkout <branch name>
* To merge the changes locally for both branches: git merge <branch-name>
* To check the difference between master and changed file: git diff <name of the branch>
* To a branch: git branch –d <branch name>
* To unstage the changes in git: git reset <file nmae> | git reset
* To undo a commit: git reset HEAD~1
* To see logs of the commit: git log
* To go to a specific commit: git reset <hash code of the commit>
* To get rid of the certain git commit: git reset --hard <hash code of the commit>