Creating a Repository in GitHub

1. Sign Up with GitHub
   https://github.com/

   Read the guide
   https://guides.github.com/activities/hello-world/
   https://git-scm.com/book/en/v2/Getting-Started-About-Version-Control

2. Download and Install the Desktop GitHub
   https://desktop.github.com/

3. Create a Repository MyFirstProject on GitHub.com using + options
   Avoid spaces while creating the Repository
   Check the Initialize the repository with a README
   Choose Git Ignore –None/Windows

4. Create/upload a text file to the GitHub using UI, Commit directly to the master branch

5. Modify the above text file by adding a few lines of text and commit the changes to the master branch
   Check the changes are saved or not
6. GitHub commands
   https://github.com/joshnh/Git-Commands

Cloning an existing Repository from GitHub Desktop

1. Copy the URL from GitHub UI by clicking the clone or download button

2. Clone the below repository into your Repository Using Import your Project to GitHub from + options
   https://github.com/jalatechnologies/HelloWorld.git

3. Clone the same repository into your GitHub Desktop downloaded

4. Create a Branch Branch-1 on GitHub Desktop and do some modification to the text file
   Check the changes are reflected on the GitHub origin/master repository

5. Commit the changes to the Branch-1 on GitHub Desktop
   Check the changes are reflected on the GitHub origin/master repository
   Notice that there are NO local changes to be committed in GitHub Desktop

6. Push the changes done in local branch to the origin/master using Push option from Repositories menu
   Check the changes are saved to the origin/master, changes are not saved

7. Notice that the branch Branch-1 in GitHub and a button to compare and Pull Request

8. Create a Pull request by clicking the compare and Pull request
   Check the changes are not saved to origin/master

9. Need to merge the changes into origin/master using Merge Pull Request

   Check all the changes done in Branch-1 are successfully saved to origin/master

10. The branch Branch-1 is no longer needed, So delete the branch Branch-1
    Go to branches and delete the branches that are merged into origin/master

Git- The Command line

1. Install Git on windows
   https://git-scm.com/book/en/v2/Getting-Started-Installing-Git
   https://git-scm.com/downloads

2. Set your Identity
   The first thing you should do when you install Git is to set your user name and email address

```
$ git config --global user.name "JALA Technologies", need to
include quotes

$ git config –global user.email jalatechnologies.com
```

3. Configure the editor

```
$ git config --global core.editor emacs
```

4. Check your settings

```
$ git config –list
```

5. Check the specific key value

```
$ git config user.name
```

6. Getting help

```
$ git help <verb>

$ man git-<verb>

Ex: $ git help config
```

7. Initializing a repository
   Navigate to project repositories folder D:\GitRepos
   and type

```
$ git init
```

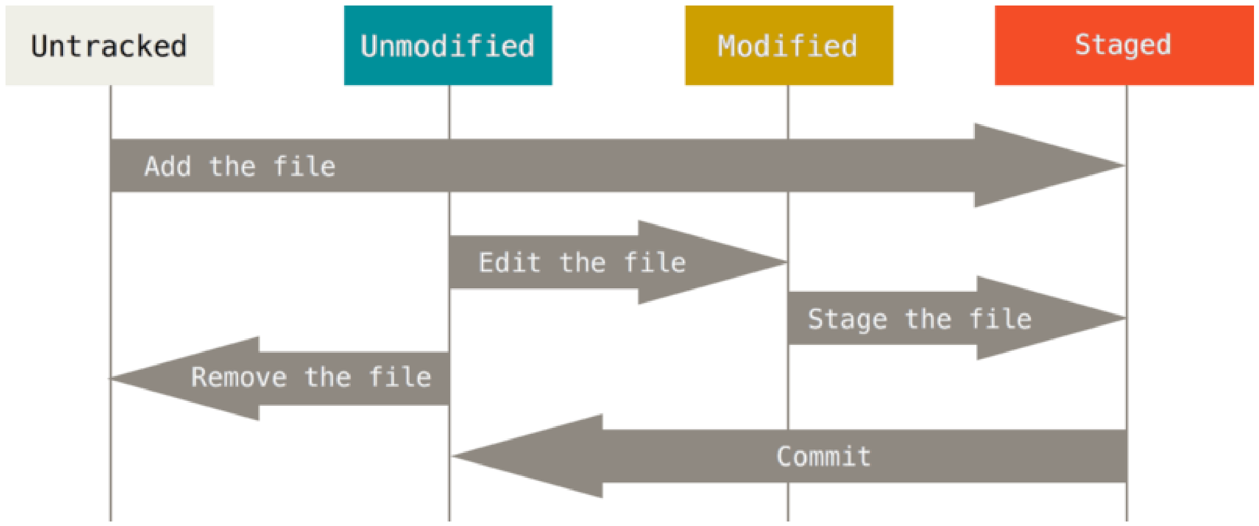
8. Cloning an existing repository
   Go to GitHub and click the below button for the Repository URL

```
$ git clone https://github.com/jalatechnologies/HelloWorld.git
```

```
This command should clone the repository on to your computer
```

9. Making changes to the cloned repository
   Some basics to know
   Tracked files: Files that Git knows
   Untracked files: Files that Git doesn't know

   As you edit files, Git sees them as modified, because you've changed them since your last commit. As you work, you selectively stage these modified files and then commit all those staged changes, and the cycle repeats



10. Checking the status of your files

```
$ git status
```

11. Tracking new files
    If you add any files to the cloned repository, it is untracked by default. Run git status command to check if the file is tracked or untracked

```
$ git add FILE NAME

$ git add --all
```

12. Staging modified files
    Again git add is used to stage. It is a multipurpose command

```
$ git add FILE NAME
```

13. Committing the changes

```
$ git commit –m “First commit from the command line”
```

14. Viewing the Commit history

```
$ git log
```

15. Adding remote repositories

```
$ git remote add “ShortName”
https://github.com/jalatechnologies/Helloworld.git

For removing

$ git remote rm “ShortName”
```

16. Showing your remotes

```
$ git remote

$ git remote -v
```

17. Fetching and Pulling from your remotes

```
$ git fetch <remote URL> or

$ git fetch origin- fetches any new work that has been pushed to that server since you cloned (or last fetched from) it
```

18. Pushing to your remotes

```
$ git push origin master
```

19. Inspecting a Remote

```
$ git remote show origin
```

20. Removing Remotes

```
$ git remote remove "ShortName"
```

Git Branching
https://git-scm.com/book/en/v2/Git-Branching-Basic-Branching-and-Merging

21. Creating a new Branch

```
$ git branch BRANCHNAME
```

22. Switching Branches

```
$ git checkout BRANCHNAME
```

23. Basic merging

```
$ git checkout master

$ git merge workingBranch-Do remember to switch to the branch the changes should go into
```

24. Listing the branches

```
$ git branch
```

25. Branches merged and Not merged

```
$ git branch –merged
$ git branch --no-merged
```

26. Remote Branches

```
$ git remote show “SHORTNAME”
```

27. Setup to track a Remote Branch

```
$ git branch –u origin/BRANCHNAME
```

28. Removing the tracking of a Remote Branch

```
$ git branch –unset-upstream
$ git branch –dr origin/BRANCHNAME
```

29. Check the Setup branches

```
$ git branch -vv
```

30. Pushing a branch to a remote

```
$ git push origin “LOCALBRANCHNAME”
```

31. Deleting the local branch

```
$ git branch –d branch_name
$ git branch –D branch_name
```

32. Deleting the remote branch

```
$ git push origin –delete <BRANCHNAME>
```

Note: The -d option is an alias for --delete, which only deletes the branch if it has already been fully merged in its upstream branch. You could also use -D, which is an alias for --delete --force, which deletes the branch "irrespective of its merged status."

Adding an existing project to GitHub using the command line

Step 1: Create a new repository on GitHub

In Terminal, change the current working directory to your local project.

Step 2: Initialize the local directory as a Git repository

```
git init
```

Add the files in your new local repository. This stages them for the first commit.

```
git add .
```

or:

```
git add --all
```

Step 3: Commit the files that you've staged in your local repository.

```
git commit -m 'First commit'
```

Copy remote repository URL field from your GitHub repository (use clone option to copy)

In Terminal, add the URL for the remote repository where your local repository will be pushed.

```
git remote add origin <remote repository URL>
```

Sets the new remote:

```
git remote -v
```

Push the changes in your local repository to GitHub.

```
git push origin master
```
Pushes the changes in your local repository up to the remote repository you specified as the origin

Push a new local branch to a remote Git repository and track it too

1. Create a new branch:
   ```
   git checkout -b feature_branch_name
   ```
2. Edit, add and commit your files.
3. Push your branch to the remote repository:
   ```
   git push -u origin feature_branch_name
   ```