Preliminary Task – 1

Git and Github

Submitted By:

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 1^{st} year CYS

Creating a GitHub account

Installing Git In Your desktop

Git Operators

Configuring Git Bash

```
Mel@Mel MINGW64 ~
$ git --version
git version 2.35.1.windows.2

Mel@Mel MINGW64 ~
$ git config --global user.name melvinajose

Mel@Mel MINGW64 ~
$ git config --global user.email mel.melvinajose@gmail.com

Mel@Mel MINGW64 ~
$ git config --global --list
user.name=melvinajose
user.email=mel.melvinajose@gmail.com
```

Creating "Cognizance" Repo using Git Bash - init

```
Mel@Mel MINGW64 ~
$ cd cognizance

Mel@Mel MINGW64 ~/cognizance
$ git init
Initialized empty Git repository in C:/Users/melme/cognizance/.git/

Mel@Mel MINGW64 ~/cognizance (master)
$ ls

Mel@Mel MINGW64 ~/cognizance (master)
$ git status
On branch master

No commits yet

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

git add

adds a change in the working directory to the staging area.

```
Mel@Mel MINGW64 ~/cognizance (master)
$ touch Task-1

Mel@Mel MINGW64 ~/cognizance (master)
$ ls -l
total 0
-rw-r--r-- 1 Mel 197609 0 Feb 14 21:03 Task-1

Mel@Mel MINGW64 ~/cognizance (master)
$ git status
On branch master

No commits yet

Untracked files:
   (use "git add <file>..." to include in what will be committed)
   Task-1

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

Mel@Mel MINGW64 ~/cognizance (master)
$ git add Task-1

Mel@Mel MINGW64 ~/cognizance (master)
$ git sfiles
Task-1

Mel@Mel MINGW64 ~/cognizance (master)
$ git status
On branch master

No commits yet

Changes to be committed:
   (use "git rm --cached <file>..." to unstage)
        new file: Task-1
```

git commit - captures a snapshot of the project's currently staged changes.

git log - review and read a history of everything that happens to a repository.

```
Mel@Mel MINGW64 ~/cognizance (master)

$ git commit -m "Created a folder Task-1"
[master (root-commit) 370d7c1] Created a folder Task-1

1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Task-1

Mel@Mel MINGW64 ~/cognizance (master)

$ git log
commit 370d7c1cea02046a78d1912ed9575fffbc1845e8 (HEAD -> master)
Author: melvinajose <mel.melvinajose@gmail.com>
Date: Mon Feb 14 21:06:17 2022 +0530

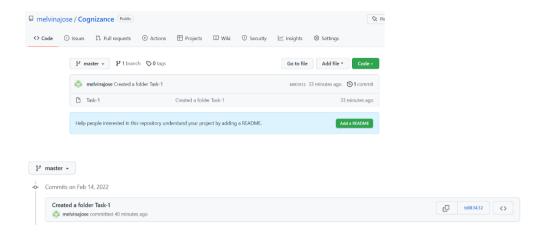
Created a folder Task-1
```

git remote - manages the set of remotes that you are tracking with your local repository.

git push- used to upload local repository content to a remote repository.

```
Mel@Mel MINGW64 ~/cognizance (master)
$ git remote add origin https://github.com/melvinajose/Cognizance.git

Mel@Mel MINGW64 ~/cognizance (master)
$ git push -u origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 220 bytes | 220.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'master' on GitHub by visiting:
remote: https://github.com/melvinajose/Cognizance/pull/new/master
remote:
To https://github.com/melvinajose/Cognizance.git
* [new branch] master -> master
branch 'master' set up to track 'origin/master'.
```



git branch- lets you create, list, rename, and delete branches.

```
Mel@Mel MINGW64 ~/cognizance (master)

$ git branch -M branch1

Mel@Mel MINGW64 ~/cognizance (branch1)

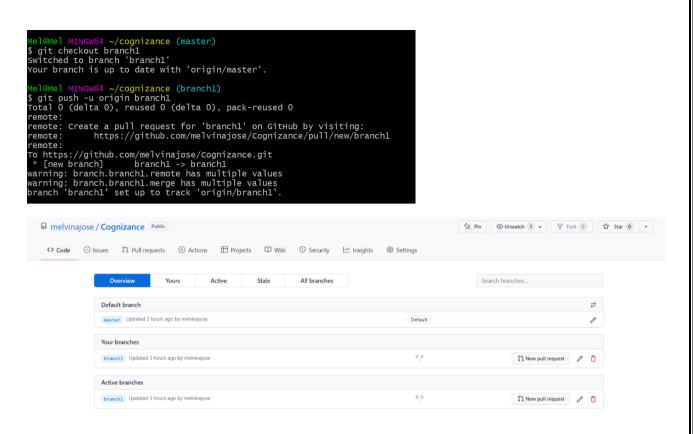
$ ls

Task-1
```

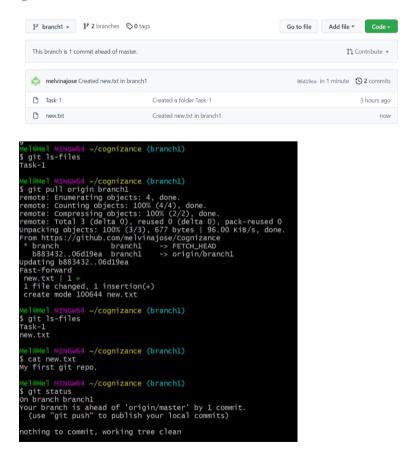
git checkout - lets you navigate between the branches created by git branch.

git status- displays the state of the working directory and the staging area.

```
lel@Mel MINGW64 ~/cognizance (branch1)
S git checkout master
Switched to a new branch 'master'
branch 'master' set up to track 'origin/master'.
 Mel@Mel MINGW64 ~/cognizance (master)
$ git push
Everything up-to-date
Mel@Mel MINGW64 ~/cognizance (master)
$ git commit -m "Created a branch Branch1"
on branch master
Your branch is up to date with 'origin/master'.
nothing to commit, working tree clean
Mel@Mel MINGW64 ~/cognizance (master)
$ git push -u origin master
Everything up-to-date
branch 'master' set up to track 'origin/master'.
                 w64 ~/cognizance (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.
nothing to commit, working tree clean
Mel@Mel MINGW64 ~/cognizance (master)
$ git add .
                  64 ~/cognizance (master)
$ git ls-files
 mel@Mel MINGW64 ~/cognizance (master)
$ git push
Everything up-to-date
```



git pull - used to update the local version of a repository from a remote. **git ls-files** - outputs the filenames



```
Mel@Mel MINGW64 ~/cognizance (branch1)
$ git log
commit 06d19eaf8c863c32acdf139375066b1314bb8aac (HEAD -> branch1, origin/branch1)
Author: melvinajose <99662316+melvinajose@users.noreply.github.com>
Date: Tue Feb 15 00:34:25 2022 +0530

Created new.txt in branch1

commit b88343248dad059ff5c45aa32f0bb6547d73f68a (origin/master, master)
Author: melvinajose <mel.melvinajose@gmail.com>
Date: Mon Feb 14 21:42:13 2022 +0530

Created a folder Task-1
```

git merge - used to integrate changes from another branch.

```
el@Mel MINGW64 ~/cognizance (merge_branch)
  touch merge
  el@Mel MINGW64 ~/cognizance (merge_branch)
  git add .
                  //64 ~/cognizance (merge_branch)
$ git ls-files
Task-1
merge
new.txt
 Mel@Mel MINGW64 ~/cognizance (branch1)
$ git branch -M merge_branch
 Mel@Mel MINGW64 ~/cognizance (merge_branch)
$ touch merge
 Mel@Mel MINGW64 ~/cognizance (merge_branch)
$ git add .
Mel@Mel MINGW64 ~/cognizance (merge_branch)
$ git ls-files
Task-1
merge
new.txt
Mel@Mel MINGW64 ~/cognizance (merge_branch)
$ git checkout branch1
Switched to a new branch 'branch1'
A merge
branch 'branch1' set up to track 'origin/branch1'.
Mel@Mel MINGW64 ~/cognizance (branch1)
$ git merge merge_branch
Already up to date.
Mel@Mel MINGW64 ~/cognizance (branch1)
$ git ls-files
Task-1
merge
Mel@Mel MINGW64 ~/cognizance (branch1)

$ git commit -m "Merged branch1 with merge_branch"

[branch1 2896781] Merged branch1 with merge_branch

1 file changed, 0 insertions(+), 0 deletions(-)

create mode 100644 merge
```

4 ~/cognizance (branch1)

git branch -M merge_branch



git clone - used to create a copy of a specific repository or branch within a repository.

```
Mel@Mel MINGW64 ~/cognizance (master)
$ mkdir clone

Mel@Mel MINGW64 ~/cognizance (master)
$ cd

Mel@Mel MINGW64 ~/cognizance/clone (master)
$ git clone https://github.com/melvinajose/Cognizance.git
Cloning into 'Cognizance'...
remote: Enumerating objects: 8, done.
remote: Counting objects: 100% (8/8), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 8 (delta 1), reused 5 (delta 0), pack-reused 0
Receiving objects: 100% (8/8), done.
Resolving deltas: 100% (1/1), done.

Mel@Mel MINGW64 ~/cognizance/clone (master)
$ ls
Cognizance/

Mel@Mel MINGW64 ~/cognizance/clone (master)
$ cd cognizance/

Mel@Mel MINGW64 ~/cognizance/clone (cognizance (master))
$ ls
Task-1
```

git rebase - used to change a series of commits, modifying the history of your repository.

```
el@Mel MINGW64 ~/cognizance (master)
  cd clone/
 tel@Mel MINGW64 ~/cognizance/clone (master)
g git rebase master
Current branch master is up to date.
                   w64 ~/cognizance/clone (master)
$ git branch rebase
Mel@Mel MINGW64 ~/cognizance/clone (master)
$ git checkout rebase
Switched to branch 'rebase'
 mel@Mel MINGW64 ~/cognizance/clone (rebase)
 Cognizance/
Mel@Mel MINGW64 ~/cognizance/clone (rebase)
$ cognizance/
 pash: cognizance/: Is a directory
 mel@Mel MINGW64 ~/cognizance/clone (rebase)
$ cd cognizance
 lel@Mel MINGW64 ~/cognizance/clone/cognizance (master)
$ touch rebase
Mel@Mel MINGW64 ~/cognizance/clone/cognizance (master)
$ git add clone
fatal: pathspec 'clone' did not match any files
 el@Mel MINGW64 ~/cognizance/clone/cognizance (master) git add rebase
Mel@Mel MINGW64 ~/cognizance/clone/cognizance (master)
$ git commit -m "rebase"
[master 0e66f37] rebase
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 rebase
Mel@Mel MINGW64 ~/cognizance/clone/cognizance (master)
$ git rebase master
Current branch master is up to date.
```

git fetch - downloads commits, files, and refs from a remote repository into your local repo.

```
Mel@Mel MINGW64 ~/cognizance/clone (master)
$ git fetch https://github.com/melvinajose/Cognizance.git master
From https://github.com/melvinajose/Cognizance
* branch master -> FETCH_HEAD

Mel@Mel MINGW64 ~/cognizance/clone (master)
$ git fetch -all
error: did you mean `--all` (with two dashes)?

Mel@Mel MINGW64 ~/cognizance/clone (master)
$ git fetch --all
Fetching origin
```

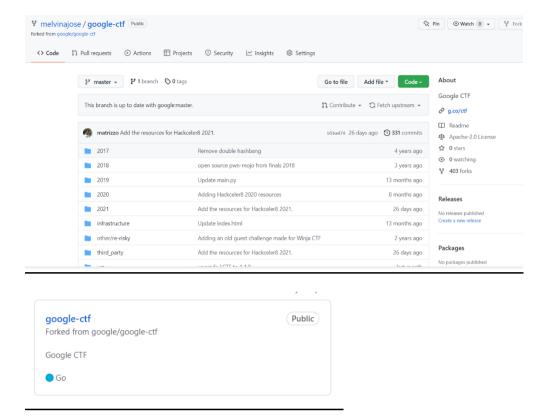
git reset - used to undo local changes to the state of a Git repo.

git stash - saves the uncommitted changes locally, allowing you to make changes, switch branches, and perform other Git operations.

```
Mel@Mel MINGW64 ~/cognizance (master)
$ git stash
No local changes to save
```

git fork

A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project.



git config --list --show-origin

```
Mel@Mel MINGW64 ~/cognizance (master)
$ git config --list --show-origin
file:C:/Program Files/Git/etc/gitconfig diff.astextplain.textconv=astextplain
file:C:/Program Files/Git/etc/gitconfig filter.lfs.clean=git-lfs clean -- %f
file:C:/Program Files/Git/etc/gitconfig filter.lfs.smudge=git-lfs smudge -- %f
file:C:/Program Files/Git/etc/gitconfig filter.lfs.process=git-lfs filter-process
file:C:/Program Files/Git/etc/gitconfig filter.lfs.required=true
file:C:/Program Files/Git/etc/gitconfig http.sslbackend=openssl
file:C:/Program Files/Git/etc/gitconfig http.sslcainfo=C:/Program Files/Git/etc/gitconfig tore.autocrlf=true
file:C:/Program Files/Git/etc/gitconfig core.autocrlf=true
file:C:/Program Files/Git/etc/gitconfig core.symlinks=false
file:C:/Program Files/Git/etc/gitconfig core.symlinks=false
file:C:/Program Files/Git/etc/gitconfig core.symlinks=false
file:C:/Program Files/Git/etc/gitconfig credential.helper=manager-core
file:C:/Program Files/Git/etc/gitconfig credential.helper=manager-core
file:C:/Program Files/Git/etc/gitconfig credential.helper=manager-core
file:C:/Users/melme/.gitconfig user.name=melVinajose
file:C:/Users/melme/.gitconfig user.name=melVinajose
file:c:/Users/melme/.gitconfig user.name=melVinajose
file:.git/config core.filemode=false
file:.git/config core.spmlinks=false
file:.git/config core.spmlinks=false
file:.git/config core.spmlinks=false
file:.git/config core.symlinks=false
file:.git/config core.iganrecase=true
remote.origin.url=https://github.com/melvinajose/Cognizance.git
remote.origin.fetch=+refs/heads/*:refs/remotes/origin/*
branch.master.remote=origin
file:.git/config branch.master.merge=refs/heads/master
file:.git/config branch.branchl.merge=refs/heads/branchl
```

git config --list --show-scope

```
Mel@Mel MINGW64 ~/cognizance (master)

$ git config --list --show-scope
system diff.astextplain.textconv=astextplain
system filter.lfs.clean=git-lfs clean -- %f
system filter.lfs.smudge=git-lfs smudge -- %f
system filter.lfs.process=git-lfs filter-process
system filter.lfs.process=git-lfs filter-process
system filter.lfs.process=git-lfs filter-process
system filter.lfs.proquired=true
system http.sslbackend=openssl
system http.sslbackend=openssl
system core.autocrlf=true
system core.symlinks=false
system pull.rebase=false
system pull.rebase=false
system pull.rebase=false
system init.defaultbranch=master
global user.ame=melvinajose
global user.mame=melvinajose
global user.email=mel.melvinajose@gmail.com
local core.repositoryformatversion=0
local core.logallrefupdates=true
local core.logallrefupdates=true
local core.symlinks=false
local core.ignorecase=true
local remote.origin.url=https://github.com/melvinajose/Cognizance.git
local branch.master.remote=origin
local branch.master.remote=origin
local branch.branchl.merge=refs/heads/branchl
```

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