## **(1) Setup *a* Local Repository:**

## 

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git init

Initialized empty Git repository in E:/Sapient/PJP 2.0/Week 1/.git/

## **(2) Setup a Remote Repository:**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git remote add origin "http://github.com/pankushm88/PJP-2.0.git"

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git remote -v

origin http://github.com/pankushm88/PJP-2.0.git (fetch)

origin http://github.com/pankushm88/PJP-2.0.git (push)

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git add .

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git commit -m "Git cmd run successfully"

[master (root-commit) 670d826] Git cmd run successfully

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

create mode 100644 Sample text file.docx

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git push origin master --force

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

Enumerating objects: 3, done.

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

Delta compression using up to 4 threads

Compressing objects: 100% (2/2), done.

Writing objects: 100% (3/3), 7.52 KiB | 1.07 MiB/s, done.

Total 3 (delta 0), reused 0 (delta 0), pack-reused 0

To http://github.com/pankushm88/PJP-2.0.git

+ 06e39ab...670d826 master -> master (forced update)

**(3): Create Local branches (Feature branch, Dev. branch, QA Branch, Master / Prod. Branch, Delivery Branches)**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git branch feature

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git branch QA

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git branch dev

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git branch delivery

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git branch production

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git branch

QA

delivery

dev

feature

\* master

production

**(4): Create Remote branches**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (master)

$ git checkout feature

Switched to branch 'feature'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git push origin feature

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

Total 0 (delta 0), reused 0 (delta 0), pack-reused 0

remote:

remote: Create a pull request for 'feature' on GitHub by visiting:

remote: https://github.com/pankushm88/PJP-2.0/pull/new/feature

remote:

To http://github.com/pankushm88/PJP-2.0.git

\* [new branch] feature -> feature

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git checkout QA

Switched to branch 'QA'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git push origin QA

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

Total 0 (delta 0), reused 0 (delta 0), pack-reused 0

remote:

remote: Create a pull request for 'QA' on GitHub by visiting:

remote: https://github.com/pankushm88/PJP-2.0/pull/new/QA

remote:

To http://github.com/pankushm88/PJP-2.0.git

\* [new branch] QA -> QA

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git checkout dev

Switched to branch 'dev'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (dev)

$ git push origin dev

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

Total 0 (delta 0), reused 0 (delta 0), pack-reused 0

remote:

remote: Create a pull request for 'dev' on GitHub by visiting:

remote: https://github.com/pankushm88/PJP-2.0/pull/new/dev

remote:

To http://github.com/pankushm88/PJP-2.0.git

\* [new branch] dev -> dev

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (dev)

$ git checkout delivery

Switched to branch 'delivery'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git push origin delivery

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

Total 0 (delta 0), reused 0 (delta 0), pack-reused 0

remote:

remote: Create a pull request for 'delivery' on GitHub by visiting:

remote: https://github.com/pankushm88/PJP-2.0/pull/new/delivery

remote:

To http://github.com/pankushm88/PJP-2.0.git

\* [new branch] delivery -> delivery

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git checkout production

Switched to branch 'production'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (production)

$ git push origin production

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

Total 0 (delta 0), reused 0 (delta 0), pack-reused 0

remote:

remote: Create a pull request for 'production' on GitHub by visiting:

remote: https://github.com/pankushm88/PJP-2.0/pull/new/production

remote:

To http://github.com/pankushm88/PJP-2.0.git

\* [new branch] production -> production

**(5): Add files, Make changes to existing files, Add folders, Remove folders,**

**remove files**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (production)

$ git checkout feature

Switched to branch 'feature'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git status

On branch feature

nothing to commit, working tree clean

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ type nul>feature1.txt

bash: type: nul

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ type nul > feature.txt

bash: type: nul

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git status

On branch feature

Untracked files:

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

feature.txt

feature1.txt

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

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git add feature.txt

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ mkdir FeatureFolder

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ cd FeatureFolder

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1/FeatureFolder (feature)

$ cd ..

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git status

On branch feature

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

new file: feature.txt

Untracked files:

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

FeatureFolder/

feature1.txt

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git add .

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git status

On branch feature

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

new file: FeatureFolder/feature2.txt

new file: feature.txt

new file: feature1.txt

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git rm -f FeatureFolder/feature2.txt

rm 'FeatureFolder/feature2.txt'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git status

On branch feature

Changes to be committed:

(use "git restore --staged <file>..." to unstage)

new file: feature.txt

new file: feature1.txt

**(6): Check-in, Stage, Commit, Push files into Feature Branch**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git checkout feature

Already on 'feature'

A feature.txt

A feature1.txt

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git add.

git: 'add.' is not a git command. See 'git --help'.

The most similar command is

add

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git add .

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git commit -m "Files added to feature branch"

[feature 05e3eb6] Files added to feature branch

2 files changed, 0 insertions(+), 0 deletions(-)

create mode 100644 feature.txt

create mode 100644 feature1.txt

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git push

fatal: The current branch feature has no upstream branch.

To push the current branch and set the remote as upstream, use

git push --set-upstream origin feature

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git push --set-upstream origin feature

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

Enumerating objects: 4, done.

Counting objects: 100% (4/4), done.

Delta compression using up to 4 threads

Compressing objects: 100% (2/2), done.

Writing objects: 100% (3/3), 314 bytes | 62.00 KiB/s, done.

Total 3 (delta 0), reused 0 (delta 0), pack-reused 0

To http://github.com/pankushm88/PJP-2.0.git

670d826..05e3eb6 feature -> feature

Branch 'feature' set up to track remote branch 'feature' from 'origin'.

**(7): Promote code from Feature branch to Dev. branch via Pull requests**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (feature)

$ git checkout dev

Switched to branch 'dev'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (dev)

$ git pull origin feature

warning: redirecting to https://github.com/pankushm88/PJP-2.0.git/

From http://github.com/pankushm88/PJP-2.0

\* branch feature -> FETCH\_HEAD

Updating 670d826..05e3eb6

Fast-forward

feature.txt | 0

feature1.txt | 0

2 files changed, 0 insertions(+), 0 deletions(-)

create mode 100644 feature.txt

create mode 100644 feature1.txt

**(8):** **Check-out the latest code from remote branch to local branch**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (dev)

$ git checkout production

Switched to branch 'production'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (production)

$ git branch -r

origin/QA

origin/delivery

origin/dev

origin/feature

origin/master

origin/production

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (production)

$ git checkout origin/QA

Note: switching to 'origin/QA'.

You are in 'detached HEAD' state. You can look around, make experimental

changes and commit them, and you can discard any commits you make in this

state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may

do so (now or later) by using -c with the switch command. Example:

git switch -c <new-branch-name>

Or undo this operation with:

git switch -

Turn off this advice by setting config variable advice.detachedHead to false

HEAD is now at 670d826 Git cmd run successfully

## 

## **(9): Explore the diff. between Checkout vs Pull**

**Sol:**

The basic difference between the checkout and pull is that in case of checkout we just copy or override the code from the branch on which we are checking out while in pull request we just update our code with the other code and our changes also remains there in the code.

# (10): Get two people to make changes to the same fife, checL-in & *handle* merge conflicts

**Sol:**

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 ((670d826...))

$ git status

HEAD detached at origin/QA

nothing to commit, working tree clean

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 ((670d826...))

$ git stash

Saved working directory and index state WIP on delivery: 670d826 Git cmd run successfully

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 ((670d826...))

$ git checkout QA

Switched to branch 'QA'

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git stash

No local changes to save

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git merge master

Already up to date.

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git stash

No local changes to save

**C: On the ground day to day scenarios**

**(1): Reset / revert one or more files to the previous state & ignore the local changes (Soft reset & Hard reset)**

**Sol**:

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git log

commit 670d82696cf0f2686b986c0c8f6bbc9f95d43e6c (HEAD -> QA, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, delivery)

Author: Pankush Mahajan <pankushm88@gmail.com>

Date: Wed Aug 19 19:40:59 2020 +0530

Git cmd run successfully

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git reset –-soft

**(2): Stash the local changes during merge conflicts**

**Sol:** Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git add .

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (QA)

$ git stash

No local changes to save

## **(3): Debasing with off options (reword, edit, squash, fixup, exec, drop)**

## **Sol:**

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git merge master

Already up to date.

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git rebase master

Current branch delivery is up to date.

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git log

commit 670d82696cf0f2686b986c0c8f6bbc9f95d43e6c (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA)

Author: Pankush Mahajan <pankushm88@gmail.com>

Date: Wed Aug 19 19:40:59 2020 +0530

Git cmd run successfully

**(4): Git log, status & reflog**

## **Sol:**

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git log

commit 670d82696cf0f2686b986c0c8f6bbc9f95d43e6c (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA)

Author: Pankush Mahajan <pankushm88@gmail.com>

Date: Wed Aug 19 19:40:59 2020 +0530

Git cmd run successfully

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git status

On branch delivery

nothing to commit, working tree clean

Pankush@ridz MINGW32 /e/Sapient/PJP 2.0/Week 1 (delivery)

$ git reflog

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{0}: reset: moving to HEAD

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{1}: checkout: moving from delivery to delivery

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{2}: checkout: moving from delivery to delivery

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{3}: checkout: moving from delivery to delivery

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{4}: reset: moving to HEAD

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{5}: checkout: moving from QA to delivery

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{6}: checkout: moving from 670d82696cf0f2686b986c0c8f6bbc9f95d43e6c to QA

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{7}: checkout: moving from production to origin/QA

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{8}: checkout: moving from dev to production

05e3eb6 (origin/feature, feature, dev) HEAD@{9}: pull origin feature: Fast-forward

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{10}: checkout: moving from feature to dev

05e3eb6 (origin/feature, feature, dev) HEAD@{11}: commit: Files added to feature branch

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{12}: checkout: moving from feature to feature

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{13}: checkout: moving from production to feature

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{14}: checkout: moving from delivery to production

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{15}: checkout: moving from dev to delivery

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{16}: checkout: moving from QA to dev

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{17}: checkout: moving from feature to QA

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{18}: checkout: moving from master to feature

670d826 (HEAD -> delivery, origin/production, origin/master, origin/dev, origin/delivery, origin/QA, production, master, QA) HEAD@{19}: commit (initial): Git cmd run successfully

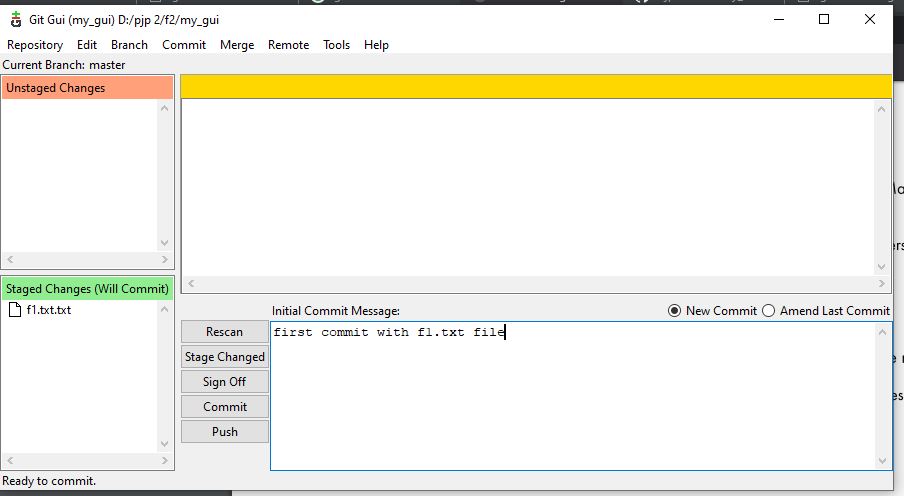
## **(B)Basic usage using the GUI Client (VS Code or Github Client etc)**

## **Sol:**

## E:\DownLoads E\git gui1.jpg

## E:\DownLoads E\git gui2.jpgE:\DownLoads E\gui 4.png

## C:\Users\aser\Desktop\as\week1assn\2.3.JPG

****