

General Instructions: This activity is expected to take approximately 1.5 hours. Please ensure careful adherence to the provided instructions.

Objective:

- This exercise focuses on using Git in a local environment without remote repositories. You'll practice setting up a local Git repository, working with branches, managing commits, and resolving conflicts locally.

Problem Statement: You are working on a project locally, and need to use Git for version control. Your task is to initialize a Git repository, implement features using branches, manage commits, and handle conflicts that may arise when merging different branches

1. Open Microsoft Word or any word processing software that supports document creation.
2. Start a new document.
3. Copy and paste the tasks for Machine Problem #1 into the document. Ensure proper formatting and readability.
4. Insert your source code into the document. You can either copy and paste it directly or take a screenshot of the code and insert the image
into the document.
5. Capture screenshots of the output of your code execution. Make sure the screenshots are clear and readable.
6. Insert the screenshots into the document. You can either directly insert the images or embed them as links, depending on your preference. and the document's requirements
7. Arrange the content in a logical and organized manner. You may want to use headings, subheadings, and bullet points to make the document easy to follow.
8. Review the document for any errors or formatting issues. Make necessary adjustments to ensure clarity and correctness. 9. Save the document as a PDF file. Most word processing software offers an option to save or export documents as PDFs. Choose this
option and follow the prompts to save your document in PDF format.
10. Once saved, review the PDF file to ensure that all content, including instructions, source code, and screenshots, is accurately captured and presented

11. If everything looks good, your Word document containing instructions, source code, and screenshots, saved as a PDF file, is ready for submission or sharing..

Please follow the filename format (minus 10 for the wrong filename) MP1<Lastname>.pdf

Example: MP1Mansueto.pdf

Scenario:

You're working on a personal project named "<YourLastname>_local_project and want to experiment with new features without affecting the main codebase

Example Mansueto local_project

Note:

Ensure Git is installed on your machine.

Set up your Git username and email (if not already configured)

Create a directory called Your Lastname_local project, navigate into it, and initialize it as a Git repository

Multiple commits reflecting changes in different branches

Evidence of conflict resolution during branch merging (optional)

A Git tag-marking version v1.0 (optional).

Tasks:

1. Create a new branch:

Create a new branch named "feature_x" to isolate your experimental changes

2. Stage changes:

Make modifications to your project files.

Stage the changes using the git add command.

3. Commit changes:

Commit the staged changes to your local repository using the git commit command. Provide a clear and concise commit message.

4. Switch back to the main branch:

Use the git checkout command to switch back to the main branch.

5. Merge changes from the feature branch:

Use the git merge command to merge the changes from the feature x branch into the main branch. Resolve any merge conflicts

that may arise

6. Viewing the Commit History:

Use Git commands to view the commit history and ensure that all commits are in place.

7. Tagging Versions (Optional):

After completing the merge, use the git tag command to create a tag named v1.0 to mark the first version of your project.

MINGW64:/c/Users/Lenovo Ideapad 320/Angelica_local_project

```
Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~
$ git config global user.name "Angelica Andres"
fatal: not in a git directory

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~
$ git config --global user.name "Angelica Andres"
error: key does not contain a section: user.name

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~
$ git config --global user.name "Angelica Andres"

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~
$ git config --global user.email "angel.ofu2019@gmail.com"

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~
$ mkdir Angelica_local_project

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~
$ cd Angelica_local_project

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project
$ git init
Initialized empty Git repository in C:/Users/Lenovo Ideapad 320/Angelica_local_p
project/.git/

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ ls
FirstTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git add FirstTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   FirstTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git commit -m "First Text File in Git"
[master (root-commit) 30c6e9e] First Text File in Git
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 FirstTxtFile.txt
```

Act
Go to

MINGW64:/c/Users/Lenovo Ideapad 320/Angelica_local_project

```
Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git status
On branch master
nothing to commit, working tree clean

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git checkout -b feature_x
Switched to a new branch 'feature_x'

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ git add .

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ git branch
* feature_x
  master

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ ls
FirstTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ ls
FirstTxtFile.txt  SecondTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ git add SecondTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ git status
On branch feature_x
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   SecondTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ git commit -m "Second Text File"
[feature_x 0fb73b7] Second Text File
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 SecondTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (feature_x)
$ git checkout master
Switched to branch 'master'

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git merge feature_x
Updating 30c6e9e..0fb73b7
```

MINGW64/c/Users/Lenovo Ideapad 320/Angelica_local_project

```
Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git merge feature_x
Updating 30c6e9e..0fb73b7
Fast-forward
 SecondTxtFile.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 SecondTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git tag v1.0

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git log --oneline
0fb73b7 (HEAD -> master, tag: v1.0, feature_x) Second Text File
30c6e9e First Text File in Git

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git checkout -b ThirdBranch
Switched to a new branch 'ThirdBranch'

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git add .

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ ls
FirstTxtFile.txt  SecondTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ ls
FirstTxtFile.txt  SecondTxtFile.txt  ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git add ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git status
On branch ThirdBranch
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
```

MINGW64/c/Users/Lenovo Ideapad 320/Angelica_local_project

```
Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git checkout master
Switched to branch 'master'
A   ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git merge feature_x
Already up to date.

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git checkout ThirdBranch
Switched to branch 'ThirdBranch'
A   ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git commit -m "Third Text File"
[ThirdBranch 2322496] Third Text File
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git status
On branch ThirdBranch
nothing to commit, working tree clean

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git checkout master
Switched to branch 'master'

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git merge ThirdBranch
Updating 0fb73b7..2322496
Fast-forward
 ThirdTxtFile.txt | 0
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git log --oneline
fatal: unrecognized argument: --oneline

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git log --oneline
2322496 (HEAD -> master, ThirdBranch) Third Text File
0fb73b7 (tag: v1.0, feature_x) Second Text File
```

```

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git checkout master
Switched to branch 'master'
A   ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git merge feature_x
Already up to date.

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git checkout ThirdBranch
Switched to branch 'ThirdBranch'
A   ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git commit -m "Third Text File"
[ThirdBranch 2322496] Third Text File
1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git status
On branch ThirdBranch
nothing to commit, working tree clean

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (ThirdBranch)
$ git checkout master
Switched to branch 'master'

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git merge ThirdBranch
Updating 0fb73b7..2322496
Fast-forward
 ThirdTxtFile.txt | 0
1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 ThirdTxtFile.txt

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git log --online
fatal: unrecognized argument: --online

Lenovo Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
$ git log --oneline
2322496 (HEAD -> master, ThirdBranch) Third Text File
0fb73b7 (tag: v1.0, feature_x) Second Text File

```

```
Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
log --oneline
6 (HEAD -> master, ThirdBranch) Third Text File
7 (tag: v1.0, feature_x) Second Text File
e First Text File in Git

Ideapad 320@DESKTOP-66TTL86 MINGW64 ~/Angelica_local_project (master)
y all 5028 possibilities? (y or n)
```