

By: Alejandra Cuadros Rivas

# ASSIGNMENT 1: Git and GitHub

## I. Demonstration of Knowledge

### 1. Creation of the README.md file

```
acuad@APCR-ASUS MINGW64 ~/Documents
$ ls
Default.rdp      'Python Scripts'/
'Demo_Ale/'      R/
'My Data Sources'/
'My Music'@       README.md
'My Pictures'@   RapidMiner/
'My Videos'@     'SQL Server Management Studio'/
Outlook1.pst      'Sara Rivas'/
'Sound Recordings'/

acuad@APCR-ASUS MINGW64 ~/Documents
$ mkdir CFG-Degree

acuad@APCR-ASUS MINGW64 ~/Documents
$ ls
CFG-Degree/        Outlook1.pst
Default.rdp        'Python Scripts'/
'Demo_Ale/'        R/
'My Data Sources'/
'My Music'@        README.md
'My Pictures'@    RapidMiner/
'My Videos'@      'SQL Server Management Studio'/
'Sound Recordings'/

acuad@APCR-ASUS MINGW64 ~/Documents
$ cd CFG-Degree/
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree
$ #Let's create the README file
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree
$ echo "# CFG-Assignments" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/acuadrosr18/CFG-Assignments.git
git push -u origin main
Initialized empty Git repository in C:/Users/acuad/Documents/CFG-Degree/.git/
[master (root-commit) 1f85ad1] first commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 229 bytes | 114.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/acuadrosr18/CFG-Assignments.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
```

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## 2. Checking the status #1

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

## 3. Creating a Branch #1

We create a branch first on GitHub to add the edition of the GitHub 😊 I have no pictures of that, but I did it and then I opened the first pull request. Its name was Readme-edition

## 4. Opening a Pull request #1

The screenshot shows the GitHub interface for creating a pull request. At the top, it says "Open a pull request". Below that, it indicates a new branch named "Readme-edition" has been created. It shows "base: main" and "compare: Readme-edition". A green checkmark says "Able to merge. These branches can be automatically merged." In the "Add a title" section, there is a text input field containing "Update README.md". In the "Add a description" section, there is a rich text editor with a toolbar (Write, Preview, H, B, I, etc.) and a text area containing "First update with detailed information on the Readme.". At the bottom, it says "Markdown is supported" and "Paste, drop, or click to add files". A large green button at the bottom right says "Create pull request".

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The screenshot shows a GitHub pull request interface for a pull request titled "Update README.md #1". The pull request has been merged by "acuadrosr18" into the "main" branch. The merge message is "First update with detailed information on the Readme." Below the merge message, there is a comment from "acuadrosr18" with a smiley face emoji. The pull request has a "Verified" status and a commit hash "c837438". A sidebar on the right displays merge rules: "Require approval from specific reviewers before merging" (with a link to "Rulesets") and "This branch has no conflicts with the base branch" (with a note that merging can be performed automatically). There is also a "Merge pull request" button and a note about opening it in GitHub Desktop or viewing command line instructions. At the bottom, there is a "Add a comment" section with a "Write" tab, a preview toolbar, and a text area for adding comments. It also includes a note that Markdown is supported and a file upload area.

## 5. Merging and deploying to main branch #1

We merge them, deployed it to main branch and then we add a comment and delete the branch.

The screenshot shows a GitHub pull request interface for a pull request titled "Update README.md #1". The pull request has been merged by "acuadrosr18" into the "main" branch. The merge message is "First update with detailed information on the Readme." Below the merge message, there is a comment from "acuadrosr18" with a smiley face emoji. The pull request has a "Verified" status and a commit hash "4628bb9". A sidebar on the right displays a message: "Pull request successfully merged and closed" with a note that the "Readme-edition" branch can be safely deleted, and a "Delete branch" button. At the bottom, there is a "Add a comment" section with a "Write" tab, a preview toolbar, and a text area for adding comments. It also includes a note that Markdown is supported and a file upload area. A green "Comment" button is visible at the bottom right.

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The screenshot shows a GitHub pull request interface. At the top, a purple button indicates the pull request is 'Merged' by 'acuadrosr18'. Below this, there are tabs for 'Conversation' (0), 'Commits' (1), 'Checks' (0), and 'Files changed' (1). The main area shows a comment from 'acuadrosr18' stating 'First update with detailed information on the Readme.' Below the comment is a commit history entry for 'Update README.md'. To the right of the commit is a green 'Verified' badge and the ID 'C837438'. Another comment from 'acuadrosr18' below says 'Incredible update!'. At the bottom, a message indicates 'acuadrosr18 deleted the Readme-edition branch now' with a 'Restore branch' button.

## 6. Create Branch #2

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (main)
$ git branch feature/adding-files

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (main)
$ git branch
  feature/adding-files
* main

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (main)
$ git switch feature/adding-files
Switched to branch 'feature/adding-files'

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ git branch
* feature/adding-files
  main
```

## 7. Adding files to a branch

I added manually from the local repository and also added some through Git Bash:

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ touch presentation.pptx

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ ls
README.md  presentation.pptx

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ nano document.pdf

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ touch pleasegivemethefullmark.txt

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ ls
README.md  document.pdf  pleasegivemethefullmark.txt  presentation.pptx
```

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## 8. Checking the status and pushing them to Github

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ git status
On branch feature/adding-files
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Claps.mp3
    document.pdf
    pleasegivemethefullmark.txt
    presentation.pptx

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

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ git add .

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ git commit -m "Addition of four documents vitals for the project"
[feature/adding-files 5fb2c81] Addition of four documents vitals for the project
 4 files changed, 2 insertions(+)
 create mode 100644 Claps.mp3
 create mode 100644 document.pdf
 create mode 100644 pleasegivemethefullmark.txt
 create mode 100644 presentation.pptx
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ git push --set-upstream origin feature/adding-files
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (8/8), 1.04 MiB | 1.30 MiB/s, done.
Total 8 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'feature/adding-files' on GitHub by visiting:
remote:     https://github.com/acuadrosr18/CFG-Assigments/pull/new/feature/adding-files
remote:
To https://github.com/acuadrosr18/CFG-Assigments.git
 * [new branch]      feature/adding-files -> feature/adding-files
branch 'feature/adding-files' set up to track 'origin/feature/adding-files'.
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (feature/adding-files)
$ git status
On branch feature/adding-files
Your branch is up to date with 'origin/feature/adding-files'.

nothing to commit, working tree clean
```

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## 9. Create another Pull request

Addition of four documents vitals for the project #2

**I'll Open** acuadrosr18 wants to merge 1 commit into `main` from `feature/adding-files`

Conversation 0 Commits 1 Checks 0 Files changed 4

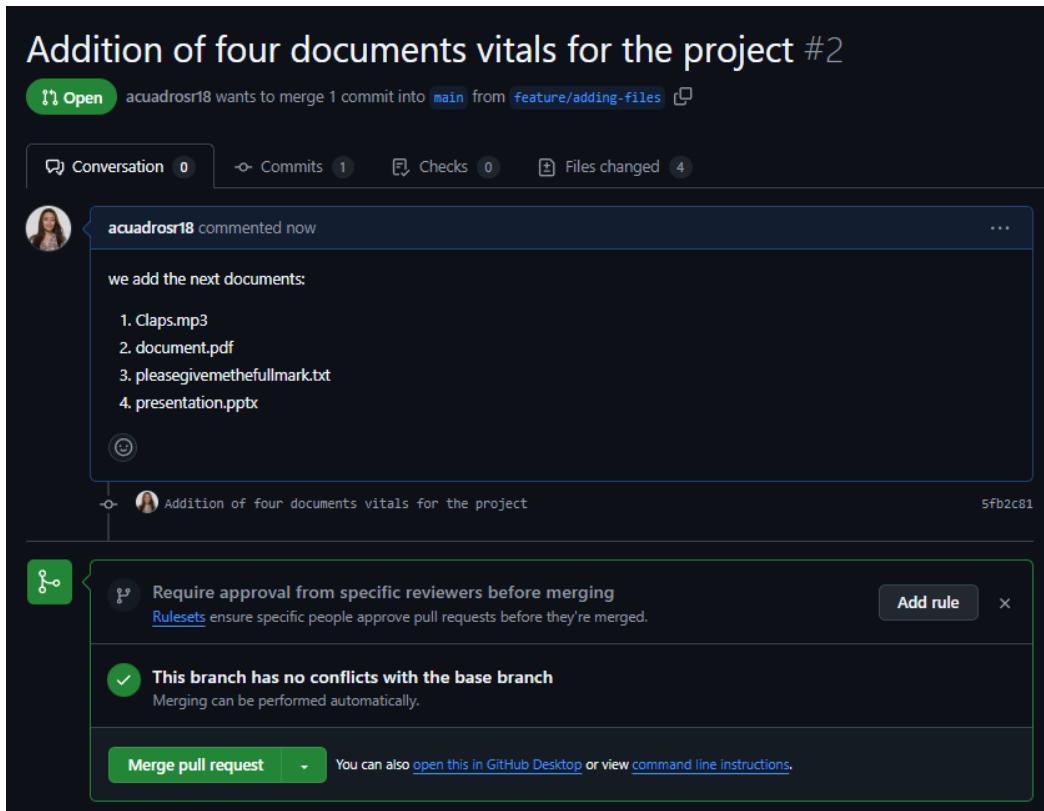
acuadrosr18 commented now  
we add the next documents:  
1. Claps.mp3  
2. document.pdf  
3. pleasegivemethefullmark.txt  
4. presentation.pptx

acuadrosr18 Addition of four documents vitals for the project 5fb2c81

Require approval from specific reviewers before merging  
[Rulesets](#) ensure specific people approve pull requests before they're merged.

This branch has no conflicts with the base branch  
Merging can be performed automatically.

Merge pull request You can also [open this in GitHub Desktop](#) or view [command line instructions](#).



## 10. Merge, deploy, comment and delete branch

I Merged acuadrosr18 merged 1 commit into `main` from `feature/adding-files` now

Conversation 0 Commits 1 Checks 0 Files changed 4

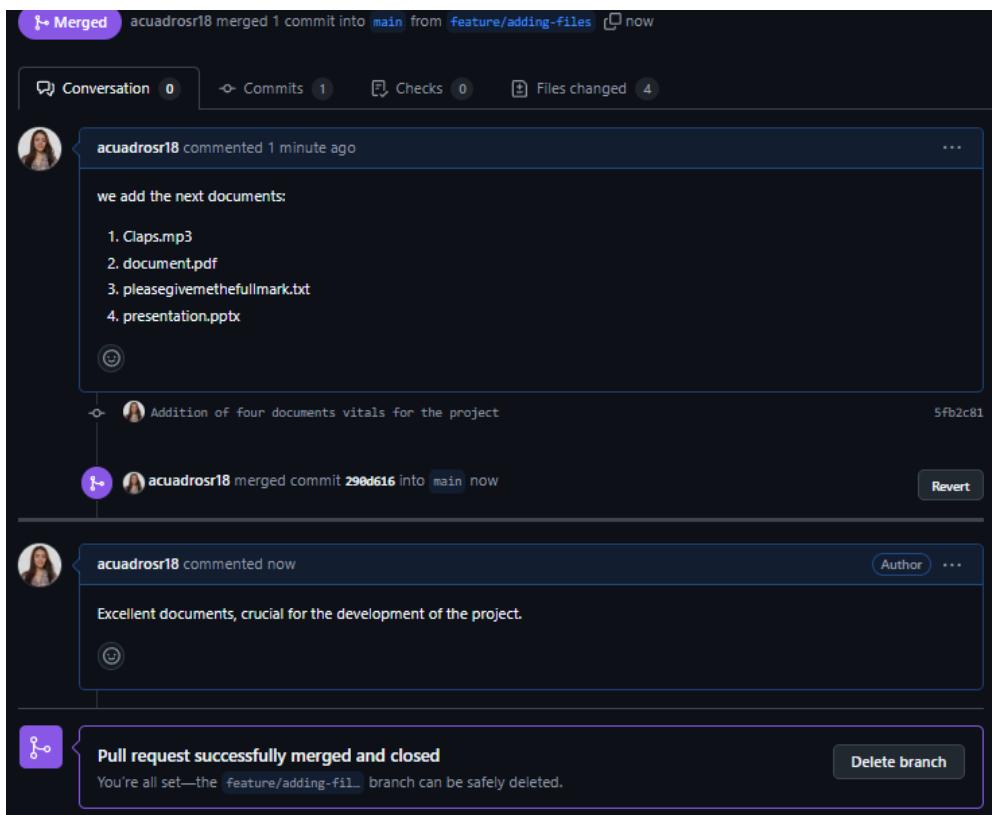
acuadrosr18 commented 1 minute ago  
we add the next documents:  
1. Claps.mp3  
2. document.pdf  
3. pleasegivemethefullmark.txt  
4. presentation.ppbx

acuadrosr18 Addition of four documents vitals for the project 5fb2c81

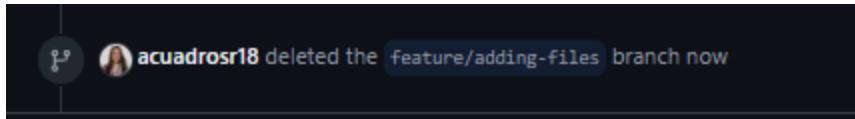
acuadrosr18 merged commit `290d616` into `main` now Revert

acuadrosr18 commented now Author ...  
Excellent documents, crucial for the development of the project.

Pull request successfully merged and closed Delete branch  
You're all set—the `feature/adding-files` branch can be safely deleted.



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## II. Create .gitignore

The .gitignore file in a Git repository is used to specify the files and directories that Git **should ignore and not track**. This helps in excluding files that contain sensitive data, intermediate build artifacts, or other files that do not need to be shared or stored in version control. By using a .gitignore file, we keep the repository clean and avoid cluttering it with unnecessary files, which also improves the performance of Git operations.

We created 3 \*.xlsx documents and add manually an \*.png file, and when we pushed the branch Git ignore them during the push operation. They are not hidden in the file system, rather, they are simply not tracked by Git. We won't see them listed in Git status reports or in the repository on GitHub, but we can still find and access them normally on our local file system.

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (main)
$ git branch adding-documents-and-create-.getignore
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.get
ignore)
$ nano Finanzas.xlsx

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.get
ignore)
$ nano Finance.xlsx

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.get
ignore)
$ nano Confidential.xlsx
```

GNU nano 8.1	.gitignore	Modified
# Ignore all the excel files .xlsx		
# Ignore files		
Screenshot.png		

GN Help ^O Write Out ^F Where Is ^K Cut ^T Execute ^C Location  
X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line

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```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.getignore)
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.getignore)
$ git status
On branch adding-documents-and-create-.getignore
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    .gitignore

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

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.getignore)
$ git add .

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.getignore)
$ git status
On branch adding-documents-and-create-.getignore
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   .gitignore
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.getignore)
$ git commit -m "Addition of the .gitignore file"
[adding-documents-and-create-.getignore 5dfd456] Addition of the .gitignore file
 1 file changed, 6 insertions(+)
 create mode 100644 .gitignore
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.getignore)
$ git push --set-upstream origin adding-documents-and-create-.getignore
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 549 bytes | 183.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'adding-documents-and-create-.getignore' on GitHub by visiting
:
remote:     https://github.com/acuadrosr18/CFG-Assessments/pull/new/adding-documents-and-create-
-.getignore
remote:
To https://github.com/acuadrosr18/CFG-Assessments.git
 * [new branch]      adding-documents-and-create-.getignore -> adding-documents-and-create-.geti
gnore
branch 'adding-documents-and-create-.getignore' set up to track 'origin/adding-documents-and-cre
ate-.getignore'.

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (adding-documents-and-create-.getignore)
$ git status
On branch adding-documents-and-create-.getignore
Your branch is up to date with 'origin/adding-documents-and-create-.getignore'.

nothing to commit, working tree clean
```

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# Addition of the .gitignore file #3

Merged acuadrosr18 merged 1 commit into main from adding-documents-and-create-.gitignore now

Conversation 0 Commits 1 Checks 0 Files changed 1

acuadrosr18 commented now

Addition of the .gitignore file

acuadrosr18 Addition of the .gitignore file 5dfd456

acuadrosr18 merged commit 738c58c into main now Revert

acuadrosr18 commented now Author ...

Necessary! Thanks.

acuadrosr18 deleted the adding-documents-and-create-.gitignore branch now Restore branch

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The screenshot shows a GitHub repository page for 'acuadrosr18 / CFG-Assignments'. The repository is private, has 0 stars, 0 forks, 1 watching, 1 branch, 0 tags, and no activity. The main branch is 'main'. A merge pull request from 'adding-docu...' was merged 5 minutes ago. The commit history shows several files added: '.gitignore' (Addition of the .gitignore file), 'Claps.mp3' (Addition of four documents vitals for the ...), 'README.md' (Update README.md), 'document.pdf' (Addition of four documents vitals for the ...), 'pleasegivemethefullmark.txt' (Addition of four documents vitals for the ...), and 'presentation.pptx' (Addition of four documents vitals for the ...). All commits were made 38 minutes ago.

If I execute the push, they appear because files were already tracked by Git before I added them to .gitignore,

The screenshot shows the same GitHub repository page after a push. The repository is now public ('Private' is disabled). It has 1 branch and 0 tags. A merge branch 'main' was merged 5 minutes ago. The commit history shows the same set of files being added: '.gitignore' (Addition of the .gitignore file), 'Claps.mp3' (Addition of four documents vitals for the project), 'Confidential.xlsx' (addition of confidential documents), 'Finance.xlsx' (addition of confidential documents), 'Finanzas.xlsx' (addition of confidential documents), 'README.md' (Update README.md), 'Screenshot.png' (addition of confidential documents), 'document.pdf' (Addition of four documents vitals for the project), 'pleasegivemethefullmark.txt' (Addition of four documents vitals for the project), and 'presentation.pptx' (Addition of four documents vitals for the project). All commits were made 45 minutes ago.

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### III. Create requirements.txt

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (main)
$ git branch requirements

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (main)
$ git switch requirements
Switched to branch 'requirements'

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (requirements)
$ nano requirements.txt
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (requirements)
$ git status
On branch requirements
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    requirements.txt

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

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (requirements)
$ git add .
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (requirements)
$ git commit -m "Adding requirements for the project"
[requirements 5d26541] Adding requirements for the project
 1 file changed, 1 insertion(+)
 create mode 100644 requirements.txt
```

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (requirements)
$ git push
fatal: The current branch requirements has no upstream branch.
To push the current branch and set the remote as upstream, use

  git push --set-upstream origin requirements
```

To have this happen automatically for branches without a tracking upstream, see 'push.autoSetupRemote' in 'git help config'.

```
acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (requirements)
$ ^C

acuad@APCR-ASUS MINGW64 ~/Documents/CFG-Degree (requirements)
$ git push --set-upstream origin requirements
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 307 bytes | 307.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'requirements' on GitHub by visiting:
remote:     https://github.com/acuadrosr18/CFG-Assigments/pull/new/requirement
s
remote:
To https://github.com/acuadrosr18/CFG-Assigments.git
 * [new branch]      requirements -> requirements
branch 'requirements' set up to track 'origin/requirements'.
```

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The **requirements.txt file** in a Python project lists all the libraries and their specific versions that the project depends on.

This helps ensure that anyone who sets up the project uses the exact versions required, avoiding compatibility issues and maintaining consistent behaviour across different environments.

It simplifies project setup by allowing users to install all dependencies with a single command:

**pip install -r requirements.txt.**