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Practical No: 2

Date Of Performance: 18/07/2025

Aim: To Perform various GIT operations on local and Remote repositories using GIT Cheat-Sheet

1. Initial Setup: Set your identity for commits

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /c/Windows/System32
$ git config --global user.name "qarq90"

Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /c/Windows/System32
$ git config --global user.email scythethroughtheheart05@gmail.com
```

2. Creating Repositories: git init

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2
$ git init
Initialized empty Git repository in C:/Users/Abdurrahman Qureshi/Desktop/EXP2/.git/
```

3. Cloning a repo via "git clone <URL>"

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2
$ git clone https://github.com/qarq90/file_crews.git
Cloning into 'file_crews'...
remote: Enumerating objects: 387, done.
remote: Counting objects: 100% (387/387), done.
remote: Compressing objects: 100% (216/216), done.
remote: Total 387 (delta 161), reused 340 (delta 114), pack-reused 0 (from 0)
Receiving objects: 100% (387/387), 211.07 KiB | 1.09 MiB/s, done.
Resolving deltas: 100% (161/161), done.
```

4. Tracking Changes or see current state: git status

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        deleted:    decrypt.js
        modified:   package-lock.json
        modified:   package.json
        modified:   src/actions/crewActions.js
        modified:   src/app/create-crew/client.jsx
        modified:   src/app/create-crew/page.jsx
        modified:   src/app/crews/client.jsx
        modified:   src/app/globals.css
        modified:   src/app/layout.js
        modified:   src/components/Sidebar.jsx
        modified:   src/components/loaders/Full.jsx
        modified:   src/components/ui/Button.jsx
        modified:   src/components/ui/Input.jsx
        modified:   src/lib/connection.js

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        src/actions/cipher.js
        src/app/api/post/files/upload-file/
        src/lib/pinata/
        tsconfig.json

no changes added to commit (use "git add" and/or "git commit -a")
```

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2/file_crews (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```

5. Stage files for commit: `git add <file>`

`git add .`

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)
$ git add .
warning: in the working copy of 'tsconfig.json', LF will be replaced by CRLF the next time Git touches it
```

6. Commit staged changes locally:

`git commit -m "Message"`

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)
$ git commit -m "Project 2.0 - 25/07/2025"
[main 3d5a331] Project 2.0 - 25/07/2025
18 files changed, 441 insertions(+), 99 deletions(-)
delete mode 100644 decrypt.js
create mode 100644 src/actions/cipher.js
create mode 100644 src/app/api/post/files/upload-file/route.ts
create mode 100644 src/lib/pinata/config.ts
create mode 100644 tsconfig.json
```

7. Show commit history and Viewing History & Difference:

git log

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)
$ git log
commit 3d5a3318f1f17da51e1cfae9a0d6b9d52c1cf90f (HEAD -> main)
Author: qarq90 <scythethroughtheheart05@gmail.com>
Date:   Fri Jul 25 12:03:20 2025 +0530

    Project 2.0 - 25/07/2025

commit 47d7e240794d334b3dc9877630ed5064eee554c2 (origin/main, origin/HEAD)
Author: qarq90 <scythethroughtheheart05@gmail.com>
Date:   Sat May 24 01:18:48 2025 +0530

    Backup - 24/05/2025

commit 2b25cbfbac883356bdb6b2adc6374ed538a6497f
Author: qarq90 <scythethroughtheheart05@gmail.com>
Date:   Wed Apr 23 07:24:13 2025 +0530

    Fixed Bugs

commit 83a254c2f41c25073b5202aa7e76fb7dceacb5a0
Author: qarq90 <scythethroughtheheart05@gmail.com>
Date:   Mon Apr 21 23:46:56 2025 +0530

    Bug Fixes

commit 7aa6ad0ce5a2c04ea043a7bbd452664777870b30
Author: qarq90 <scythethroughtheheart05@gmail.com>
Date:   Mon Mar 10 02:14:04 2025 +0530

    File Types - 10/03/2025

commit 6b28983135983d5c412973a57cfab2cc2ab27f46
Author: qarq90 <scythethroughtheheart05@gmail.com>
Date:   Mon Mar 10 02:10:56 2025 +0530

    File Types - 10/03/2025
```

commit 47d7e240794d334b3dc9877630ed5064eee554c2 (origin/main, origin/HEAD)

Author: qarq90 <scythethroughtheheart05@gmail.com>

Date: Sat May 24 01:18:48 2025 +0530

Backup - 24/05/2025

commit 2b25cbfbac883356bdb6b2adc6374ed538a6497f 23:46:56 2025 +0530

Author: qarq90 <scythethroughtheheart05@gmail.com>

Date: Wed Apr 23 07:24:13 2025 +0530

Fixed Bugs

commit 83a254c2f41c25073b5202aa7e76fb7dceacb5a0

Author: qarq90 <scythethroughtheheart05@gmail.com> /2025

Date: Mon Apr 21 23:46:56 2025 +0530

Bug Fixes

commit 7aa6ad0ce5a2c04ea043a7bbd452664777870b30

Author: qarq90 <scythethroughtheheart05@gmail.com>

Date: Mon Mar 10 02:14:04 2025 +0530

File Types - 10/03/2025

commit 6b28983135983d5c412973a57cfab2cc2ab27f46

Author: qarq90 <scythethroughtheheart05@gmail.com>

Date: Mon Mar 10 02:10:56 2025 +0530

File Types - 10/03/2025

commit 80cb572b17be8bf6899c27e468c0bb5eba477163

Author: qarq90 <scythethroughtheheart05@gmail.com>

Date: Sun Jan 19 00:57:35 2025 +0530

Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)

\$



8. Condensed visual history:

git log --oneline --graph

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)
$ git log --oneline --graph
* 3d5a331 (HEAD -> main) Project 2.0 - 25/07/2025
* 47d7e24 (origin/main, origin/HEAD) Backup - 24/05/2025
* 2b25cbf Fixed Bugs
* 83a254c Bug Fixes
* 7aa6ad0 File Types - 10/03/2025
* 6b28983 File Types - 10/03/2025
* 80cb572 Limit - 19/01/2025
* 4c3bc62 Cookie - 12/01/2025
* 9449508 Cookie - 12/01/2025
* d5da436 Session - 12/01/2025
* 51e45e8 Session - 12/01/2025
* 47c4ea4 QOL - 12/01/2025
* 9e06117 QOL - 12/01/2025
* 4a08017 QOL - 12/01/2025
* c9e689d Loadnation - 12/01/2025
* 1a98c95 Cookieing - 12/01/2025
* 0dfa7e7 Loading - 12/01/2025
* 13cc028 File Upload 2.0 - 12/01/2025
* be4ce47 File Uploads - 12/01/2025
* 1ff8b69 1.5 - 12/01/2025
* 7ce5ad7 Cookie - 11/01/2025
* c21e431 QOL UI - 11/01/2025
* 5951b8a Update Crew Bug - 11/01/2025
* 5b97252 first commit

Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)
$ |
```

9. Show differences: git diff

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 /d/Web/file_crews (main)
$ git diff
```

10. Show branches: git branch

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2/file_crews (new)
$ git branch
main
* new
```

11. Create and switch to new branch:

git checkout -b branch_name

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2/file_crews (main)
$ git checkout -b new
Switched to a new branch 'new'
```

12. Switch to an existing branch:

git checkout branch_name

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2/file_crews (new)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

13. Delete an existing branch:

git branch -d branch_name

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2/file_crews (main)
$ git branch -d new
Deleted branch new (was 47d7e24).
```

14. Visual confirmation of merge: git log --graph

```
Abdurrahman Qureshi@DESKTOP-H2RV5MQ MINGW64 ~/Desktop/EXP2/file_crews (main)
$ git log --graph
* commit 47d7e240794d334b3dc9877630ed5064eee554c2 (HEAD -> main, origin/main, origin/HEAD)
| Author: qarq90 <scythethroughtheheart05@gmail.com>
| Date: Sat May 24 01:18:48 2025 +0530
|
| Backup - 24/05/2025
|
| * commit 2b25cbfbac883356bdb6b2adc6374ed538a6497f
| | Author: qarq90 <scythethroughtheheart05@gmail.com>
| | Date: Wed Apr 23 07:24:13 2025 +0530
| |
| | Fixed Bugs
| |
| | * commit 83a254c2f41c25073b5202aa7e76fb7dceacb5a0
| | | Author: qarq90 <scythethroughtheheart05@gmail.com>
| | | Date: Mon Apr 21 23:46:56 2025 +0530
| | |
| | | Bug Fixes
| | |
| | | * commit 7aa6ad0ce5a2c04ea043a7bbd452664777870b30
| | | | Author: qarq90 <scythethroughtheheart05@gmail.com>
| | | | Date: Mon Mar 10 02:14:04 2025 +0530
| | | |
| | | | File Types - 10/03/2025
| | | |
| | | | * commit 6b28983135983d5c412973a57cfab2cc2ab27f46
| | | | | Author: qarq90 <scythethroughtheheart05@gmail.com>
| | | | | Date: Mon Mar 10 02:10:56 2025 +0530
| | | | |
| | | | | File Types - 10/03/2025
```

Conclusion:

We performed and understood various GIT operations on local and Remote repositories using GIT Cheat-Sheet.