

# GIT COMMANDS OVERVIEW

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A concise guide to commonly used Git commands.

# Clone a Repository

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- Command:

```
git clone <repository-url>
```

- Purpose:

Obtain a local copy of a remote repository to start contributing or exploring its contents.

# Create a New Branch

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- Command:

```
git checkout -b <branch-name>
```

- Purpose:

Begin work on a new feature or bugfix without affecting the main codebase. Always a good practice to isolate changes.

# Stage and Commit Changes

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- Command:

`git add <file-name> OR git add .`

`git commit -m "Descriptive commit message"`

- Purpose:

Save your changes in a commit. A commit is like a snapshot of your code at a particular point in time.

# Push Changes to Remote Repository

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- Command:

```
git push origin <branch-name>
```

- Purpose:

Update the remote repository with your local changes so that others can see and collaborate.



# Pull Latest Changes from Remote

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- Command:

```
git pull origin <branch-name>
```

- Purpose:

Fetch the latest changes from the remote repository to ensure you're working with the most recent codebase.

# Merge Branches

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- Command:

`git checkout <target-branch>`

`git merge <source-branch>`

- Purpose:

Integrate changes from one branch (source) into another branch (target).

# Resolve Merge Conflicts

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- Command:

Resolve manually in file:

```
git add <resolved-file-name>
```

```
git commit -m "Resolved merge conflicts"
```

- Purpose:

Ensure a smooth merge by addressing code discrepancies between branches.



# Rebase onto Another Branch

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- Command:
- `git rebase <base-branch>`
- Purpose:
- Apply your branch's changes on top of another branch's changes, effectively rearranging the commit history.

# View Commit History

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- Command:

`git log`

- Purpose:

Review the chronological list of commits, which helps in understanding the evolution of the project.

# Undo Changes

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- Command:

To unstage: `git reset <file-name>`

To discard: `git checkout <file-name>`

- Purpose:

Mistakes happen. Use these commands to revert unintended changes before committing.