GitHub Fork Explained

A fork in GitHub is a copy of a repository that exists in your own GitHub account. It allows you to experiment with changes, contribute to open-source projects, and work on a project independently without affecting the original repository.

How to Fork a Repository

1) Go to the GitHub repository you want to fork.

2) Click on the Fork button (top-right corner).

3) GitHub creates a copy of the repository in your account.

Working with a Forked Repository

- Clone your fork to your local system

```
git clone https://github.com/your-username/repository-name.git
```

- Add the original repository as an upstream remote

```
git remote add upstream https://github.com/original-owner/repository-name.git
```

- Check remotes

```
git remote -v
```

- Fetch updates from the original repository

```
git fetch upstream
```

- Merge updates from upstream

```
git merge upstream/main
```

- Push changes to your fork

```
git push origin main
```

Creating a Pull Request

1) Go to your forked repository on GitHub.

2) Click 'Compare & pull request'.

3) Add a description and submit the Pull Request for review.

Example Use Case

- You find an open-source project and want to contribute.

- You fork the repository to your own GitHub account.

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- You clone it, make changes, and commit them.

- You push the changes and create a Pull Request.

- The project maintainers review and merge your changes.