



GIT & GITHUB

Getting started with VCS.



WHAT IS VERSION CONTROL?



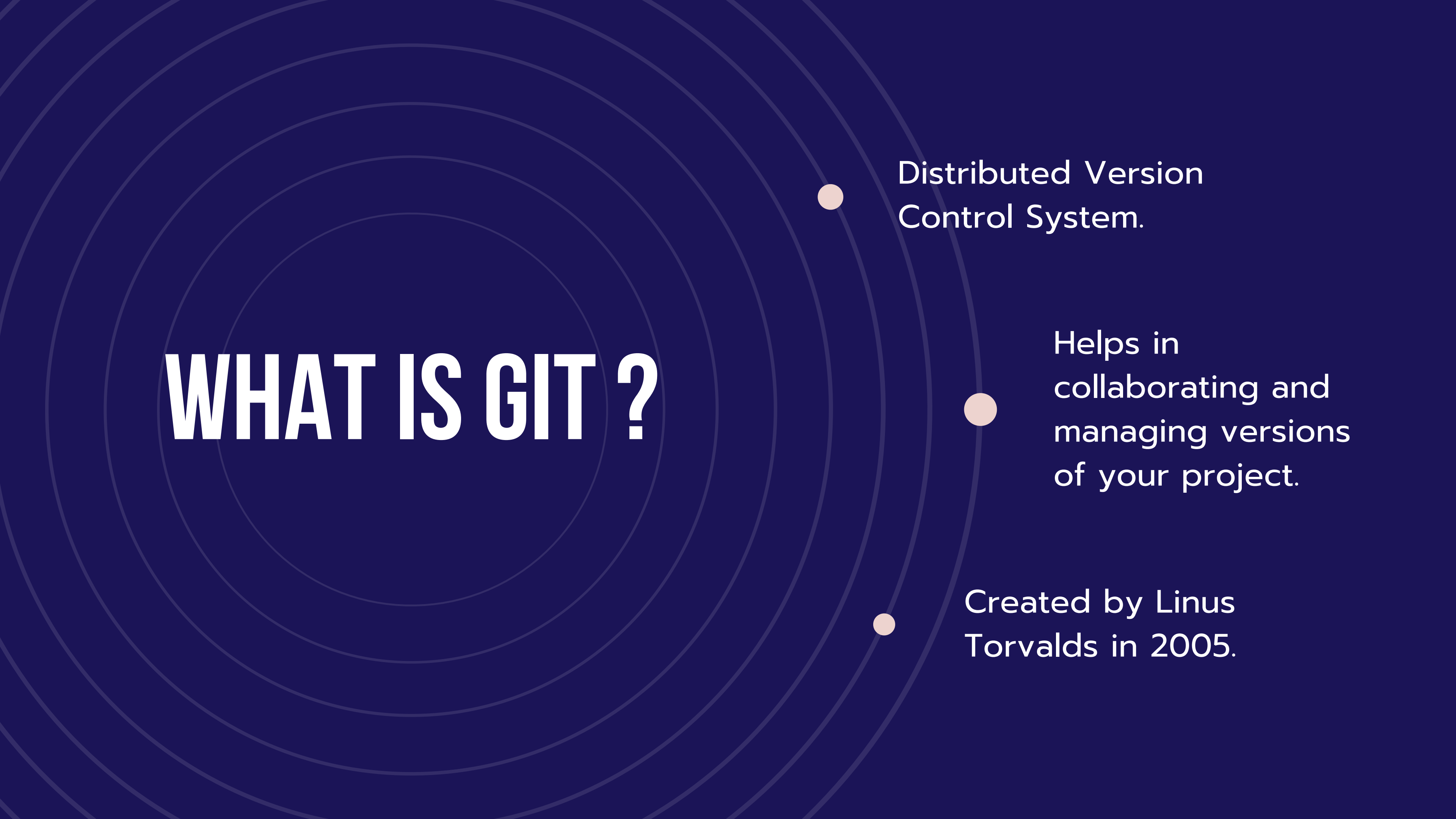
KEY CONCEPTS & USES

Backup and Restore

Undo Feature

Synchronization

WHAT IS GIT ?



Distributed Version
Control System.

Helps in
collaborating and
managing versions
of your project.

Created by Linus
Torvalds in 2005.

WHAT IS GITHUB?

A platform for code collaboration.
GitHub uses Git for version control and
provides you all sorts of awesome tools for
code collaboration.



GIT REPOSITORY

- A directory or folder which contains the source code.
- Git keeps track of every change that happens inside this folder.

COMMIT

Every change or modification you make to the project repository is called a COMMIT.



CODE DEMO!

CONFIGURING GIT



```
git config --global user.name "Neil Chauhan"
```

Put your name inside the quotes.

```
git config --global user.email "<email id>"
```

Put your email id used for your GitHub account.



INITIALIZING A GIT REPOSITORY.

```
git init .
```

Initializes an empty git repository

OTHER COMMANDS

```
git status
```

Prints the current status of the repository.

```
git add <filename>
```

Adds the current file.



```
git add -A
```

Adds all the modified files.

```
git commit -m
```

Applies the changes made to the added file.

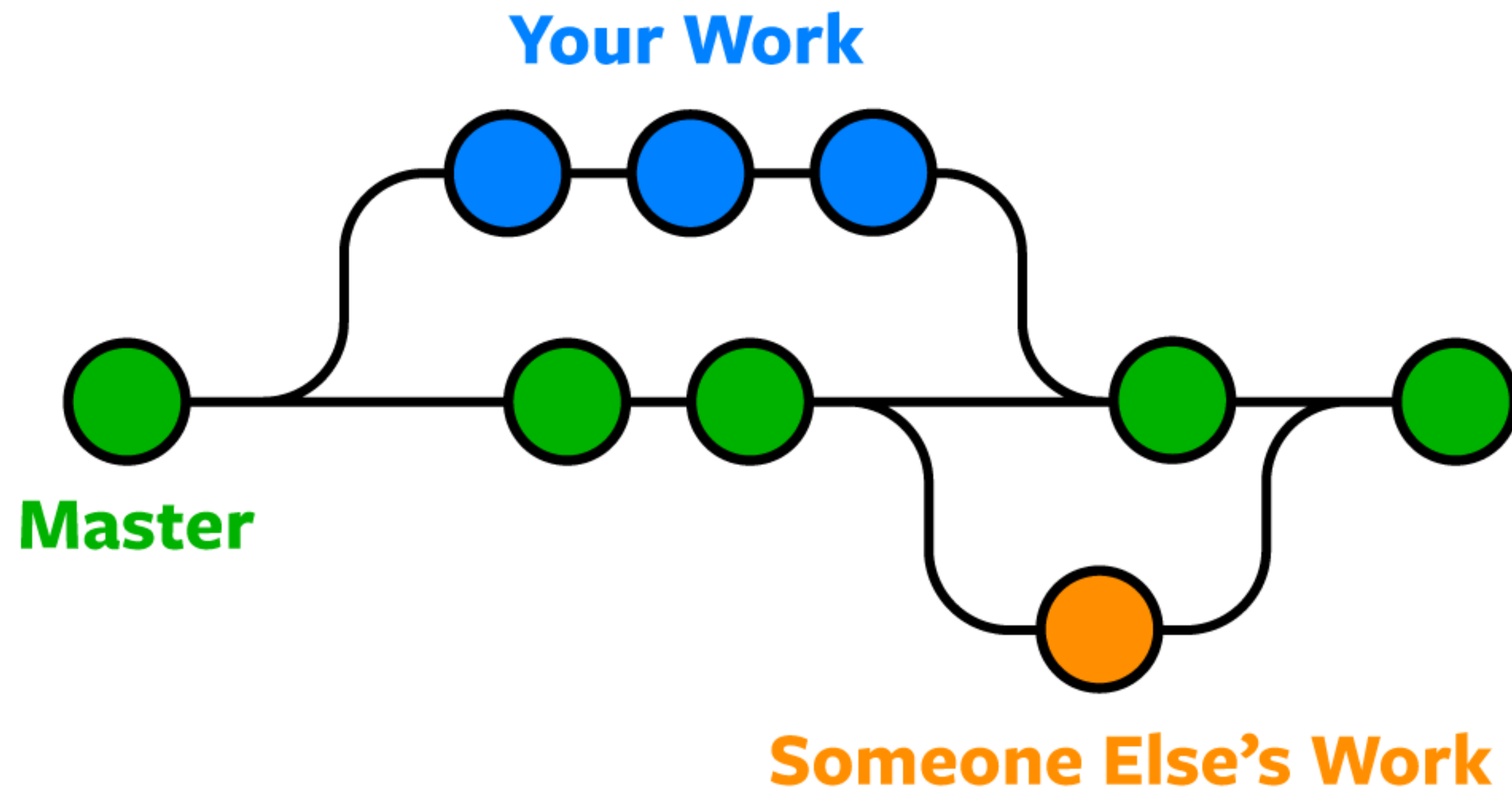
```
git log
```

Prints a log of all the commits made to the repository.




BRANCHING

- Each branch is a copy of the main repository.
- Branches can be used to work on various functionalities side by side without modify the main repository.



WORKING WITH BRANCHES



```
git checkout -b <branch_name>
```

Creates a new branch in the project repository.

```
git checkout <branch_name>
```

Switches the repository to the specified branch name.





`git branch`

Prints the list of all the branches associated with the project repository, as well as shows the branch to which the repository is currently pointing to.

PUSHING TO GITHUB



```
git remote add origin <repository link>
```

Connects your remote repository to GitHub.

```
git push origin master
```

Pushes all the changes made to the remote repository to the GitHub repository.





MERGING

It is the concept of adding the other branches associated to the project repository into the master branch.



```
git merge <branch_name>
```

Merges the specified branch into the current branch.

MERGE CONFLICT

GIT MERGE

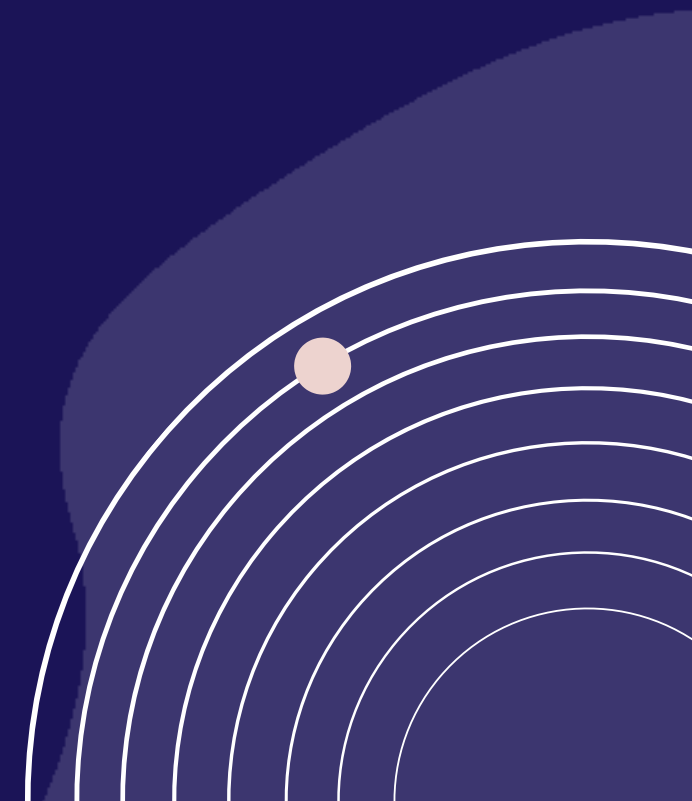




Merge conflict arises when two branches are merged having different values for the same code block.



CREATING A PULL REQUEST



STEPS

The diagram features a central title 'STEPS' in a large, bold, white sans-serif font. To the left of the title, four steps are listed in a vertical spiral arrangement. Each step is represented by a white text label and a light orange circular dot. The dots are connected by a thin, light orange spiral line that winds inward toward the center. The background is a solid dark blue with several concentric, thin, light blue circles centered on the 'STEPS' text.

1. Clone Repository

2. Make Changes

3. Push to GitHub

4. Create a Pull Request

THAT'S ALL!
THANK YOU.