Git & GitHUb

TEAM 4
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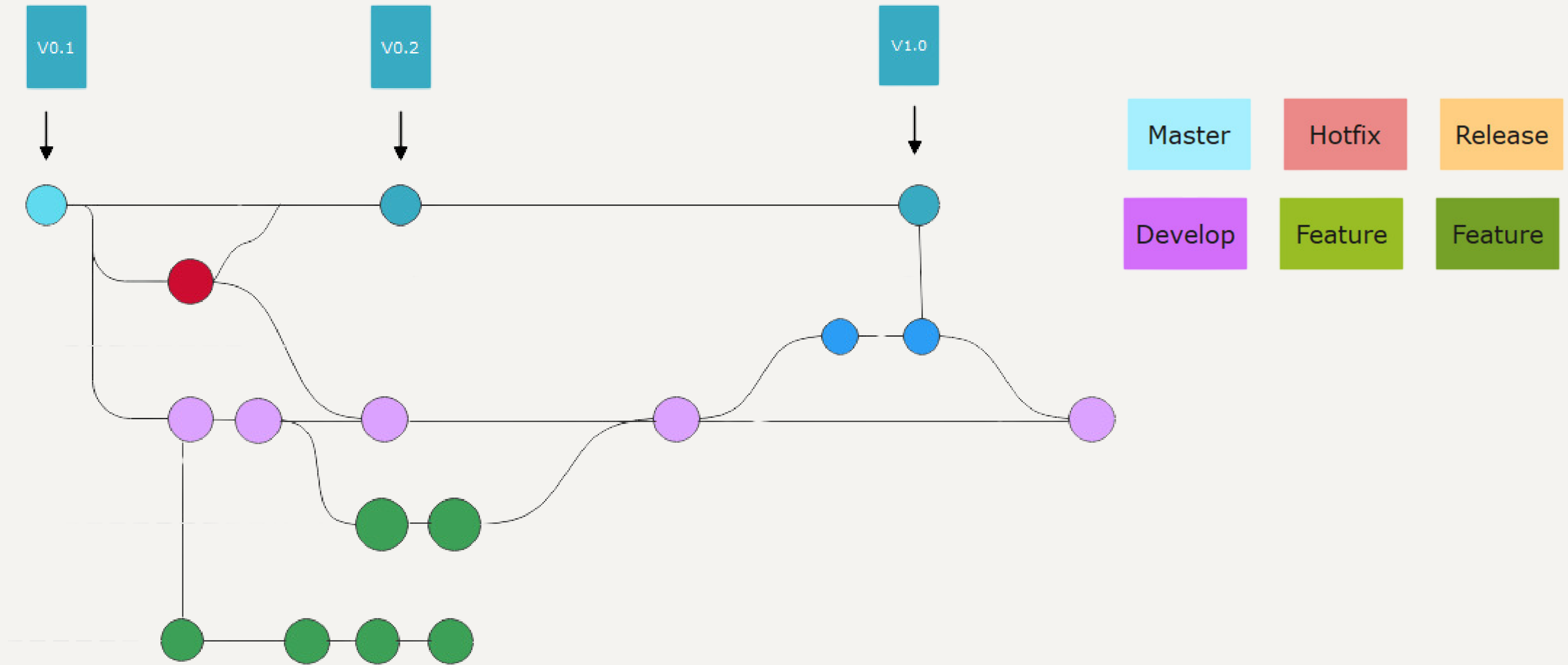SHANTERICKA GREENE, ZEDD
CHISHOLM

WHAT IS GIT?

A DISTRIBUTED VERSION CONTROL SYSTEM (DVCS) CREATED BY LINUS TORVALDS IN 2005 FOR LINUX, IS USED WIDELY TO TRACK CHANGES IN SOURCE CODE DURING SOFTWARE DEVELOPMENT.

- GIT TAKES A SERIES OF SNAPSHOTS OF A MINIATURE FILESYSTEM, TAKING A SNAPSHOT FOR EVERY SAVE.
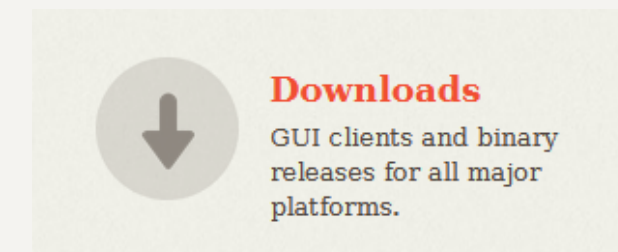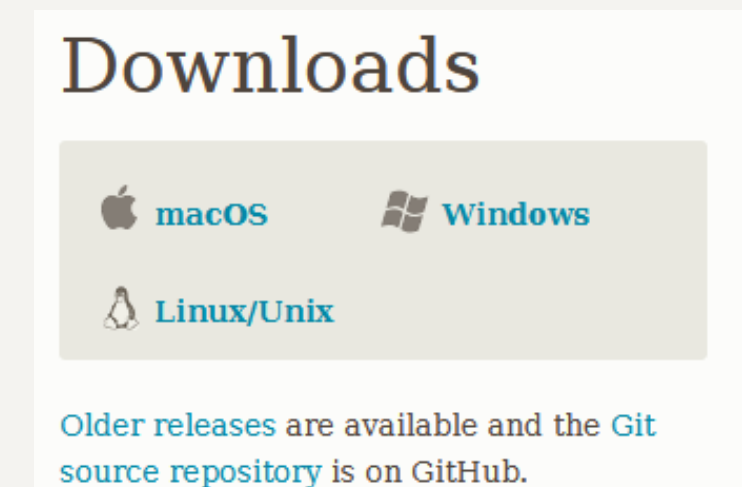
GIT FLOW

Master Hotfix Release

Develop Feature Feature

INSTALLING GIT

➡ Navigate to https://git-scm.com/

➡ Click "Downloads"

➡ Follow the installer instructions in order to install Git on your system.

OCTOCAT

WHAT IS GITHUB

A REMOTE SERVER HOSTING PLATFORM BY WINDOWS THAT HOSTS PROJECTS, THAT ALLOW FOR GLOBAL COLLABORATION AND CONTROL.

- **IT INTEGRATES WITH GIT**
- **OFFERS A GUI FOR MANAGING REPOSITORIES**
- **ALTERNATIVES:**
  - **BITBUCKET**
  - **AWS CODECOMMIT**
  - **GITLAB**

CREATING A GITHUB

Breaking down the process for creating a GitHub account.
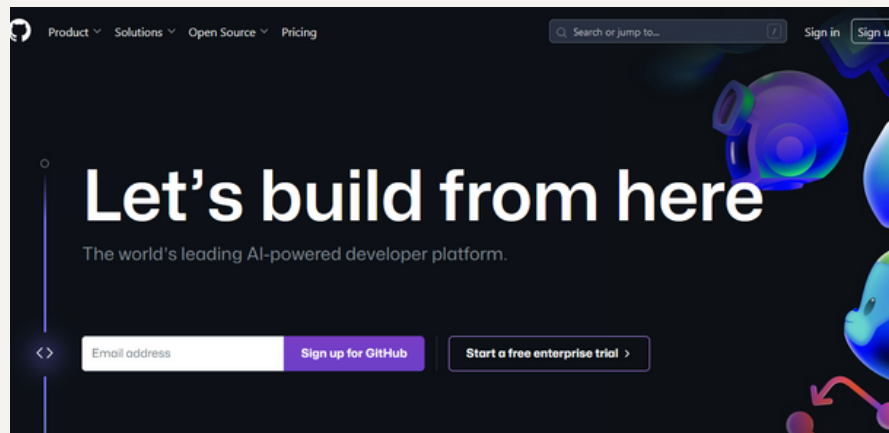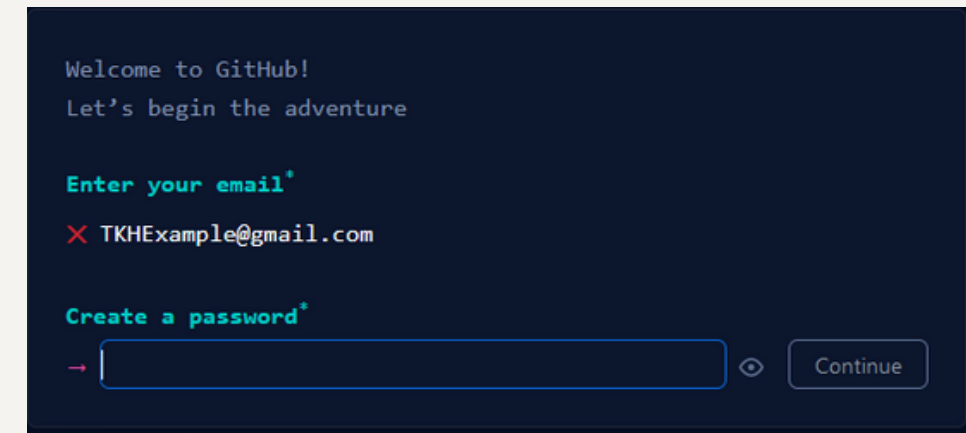
Navigate

Navigate to https://github.com

Click It

Select the Sign-Up button in the top right-hand corner of the page.

Add Info

Follow the on-screen instructions to set up your account

CONFIGURING GIT

HOW TO CONNECT THE TWO TOGETHER ON YOUR LOCAL ENVIRONMENT

Configure user information for all local repositories

Enables helpful colorization of the command line output
$ git config --global color.ui auto

Sets the email you want attached to your commit transactions
$ git config --global user.email "[email address]"

Sets the name you want attached to your commit transactions
$ git config --global user.name "[name]"

CREATING A REPOSITORY

GITHUB

1. In the upper-right corner of any page, select , then click New repository.
2. Create your repository name like"testrep" in the "Repository name" box .
3. In the "Description" box, type a short description. For example, type "This repository is for practicing Linux commands"
4. Select if your repository will be "public" or "private".
5. Click Create Repository
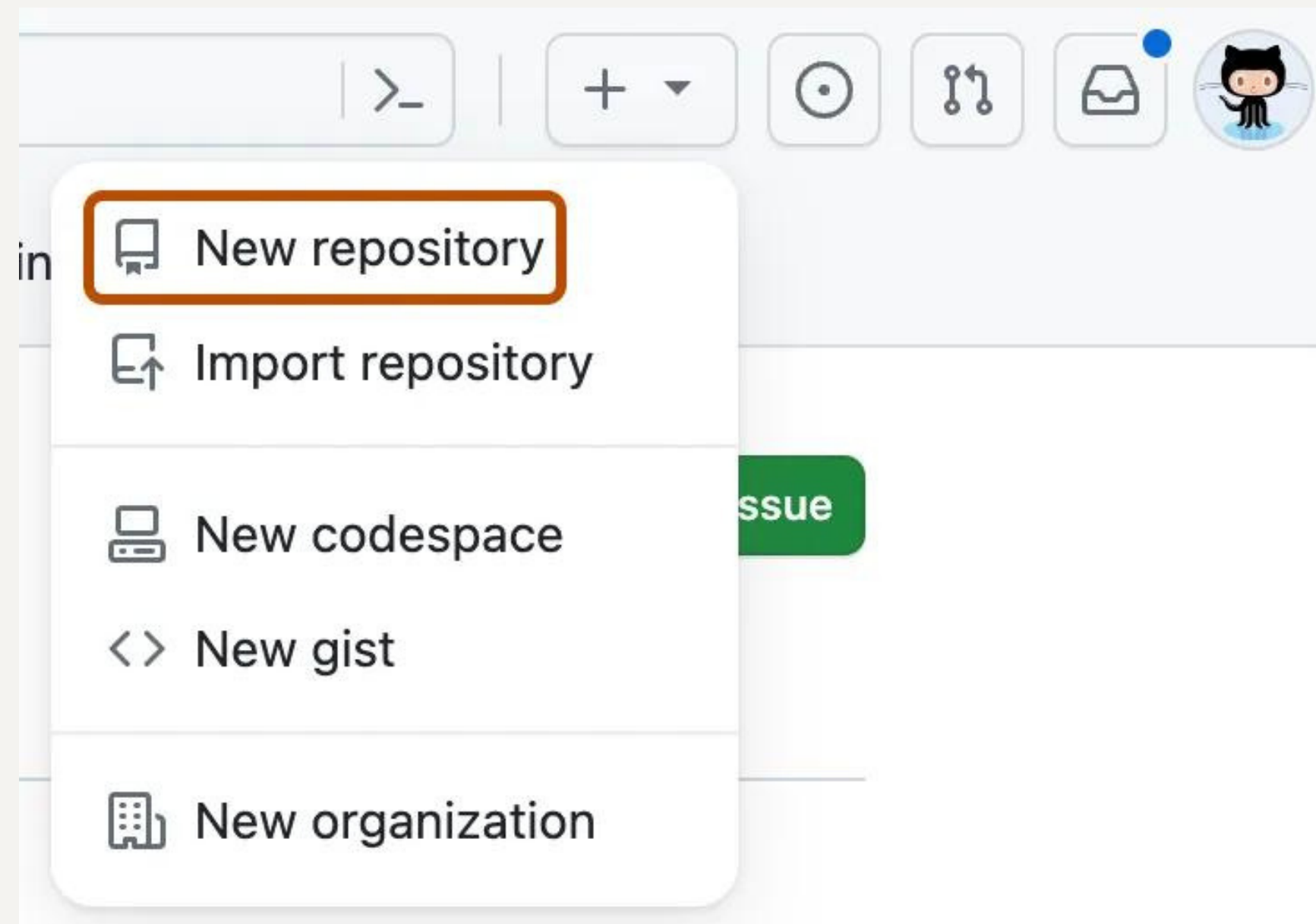
CREATING A BRANCH

1. Click the Code tab of your repository named "testrep".
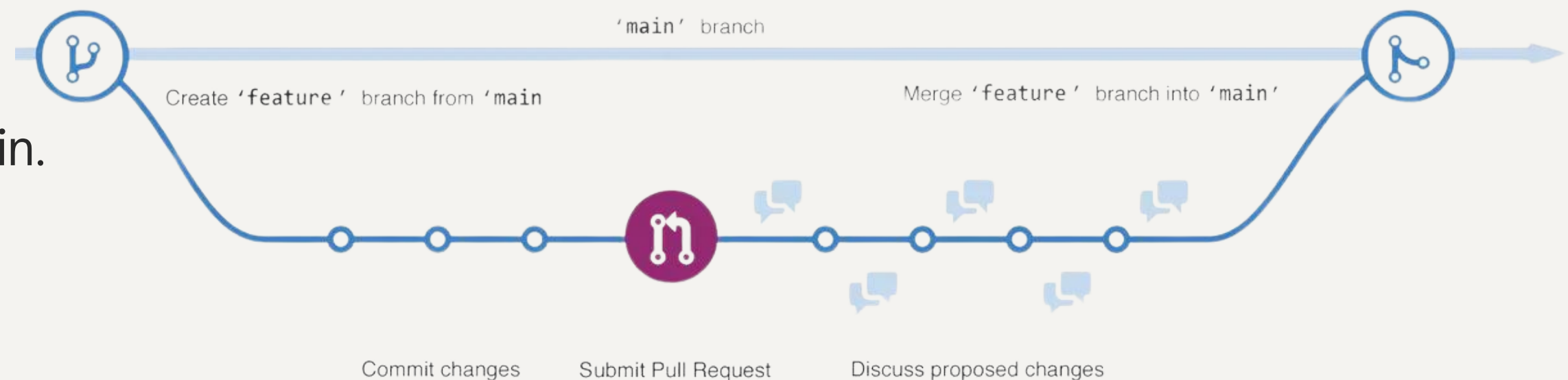2. Above the file list, click the dropdown menu that says main.
3. Type a branch name, testrep-edits, into the text box.
4. Click Create branch: testrep-edits from main.

.

'main' branch

Create 'feature' branch from 'main

Merge 'feature' branch into 'main'

Commit changes   Submit Pull Request   Discuss proposed changes

MAKING COMMITS

GUI Method

1. Under the testrep-edits branch you created, click the Testrep.md file.
2. To edit the file, click .
3. In the editor, write a bit about yourself.
4. Click- Commit changes.
5. In the "Commit changes" box, write a commit message that describes your changes.
6. Click Commit changes.

CLI Method

git commit -m "Message to explain changes"

GIT COMMANDS

- **Pull** - update the local version of a repository from a remote
- **Push** - push the local repository content to a remote repository
- **Branch** - a pointer to a snapshot of your changes
- **Merge** - take the independent lines of development created by git branch and integrate them into a single branch.
- **Checkout** - used to navigate between the branches created by git branch
- **Revert** - a forward-moving undo operation that offers a safe method of undoing changes

GIT COMMANDS

- **Commit** - captures a snapshot of the project's currently staged changes
- **Rebase** - changing the base of your branch from one commit to another making it appear as if you'd created your branch from a different commit
- **Add** - Moves changes from the working directory to the staging area
- **Clean** - Removes untracked files from the working directory
- **Clone** - Creates a copy of an existing Git repository
- **Commit** - Takes the staged snapshot and commits it to the project history
- **Log** - Used to explore the previous revisions of a project.

OPEN SOURCE

Open source is a type of software that is freely available for anyone to use, modify, and distribute.

- The source code is open
- Allows users to inspect, enhance, and share

Git - Its open-source nature has led to widespread adoption, making Git an essential tool in modern software development.

COMPARISON RECAP...

FEATURE	GIT	GITHUB
Definition	Version control system	Web-based Git repository hosting
Primary Function	Local repository management	Remote repository hosting
Accessibility	Local machine	Internet access required
Collaboration	Manual sharing of repositories	Built-in tools for collaboration
User Interface	Command-line interface	Graphical user interface and web interface

RESOURCE PAGE

➡ <u>AMIGOSCODE GIT COURSE</u>

➡ <u>GEEKSFORGEEKS</u>

➡ <u>EDRAWMAX: GIT FLOW DIAGRAM</u>

➡ CONFIGURING GIT AND GITHUB

➡ WHAT IS GIT?

➡ <u>GIT COMMANNDS</u>

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THANK YOU

You got HACKED

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