ANITA B.ORG 2022

GRACE HOPPER CELEBRATION

OPEN SOURCE DAY

Git 101

Prepare to make your Open Source Day contributions!

Team

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Workshop Overview

- Review workshop Prerequisites
- Breakdown of key Git concepts
- Walkthrough of contributing to a sample Open Source Project
- Q&A

Pre-requisites

- Install Git on your local machine
- From your terminal, make sure that the git command is recognized
  - Alternatively, install ‘Github Desktop’
- Install a code editor of your choice (Eg. VSCode, Sublime Text, Atom, etc)
- Create a Github account
- Connect your local Git to your GitHub account via ssh

Workshop Repo: [bit.ly/osd-git-2022](bit.ly/osd-git-2022)

What is Git?

A **distributed version control system** that allows Software Development teams to:

- Track
- Manage
- Collaborate on

Software Projects

git

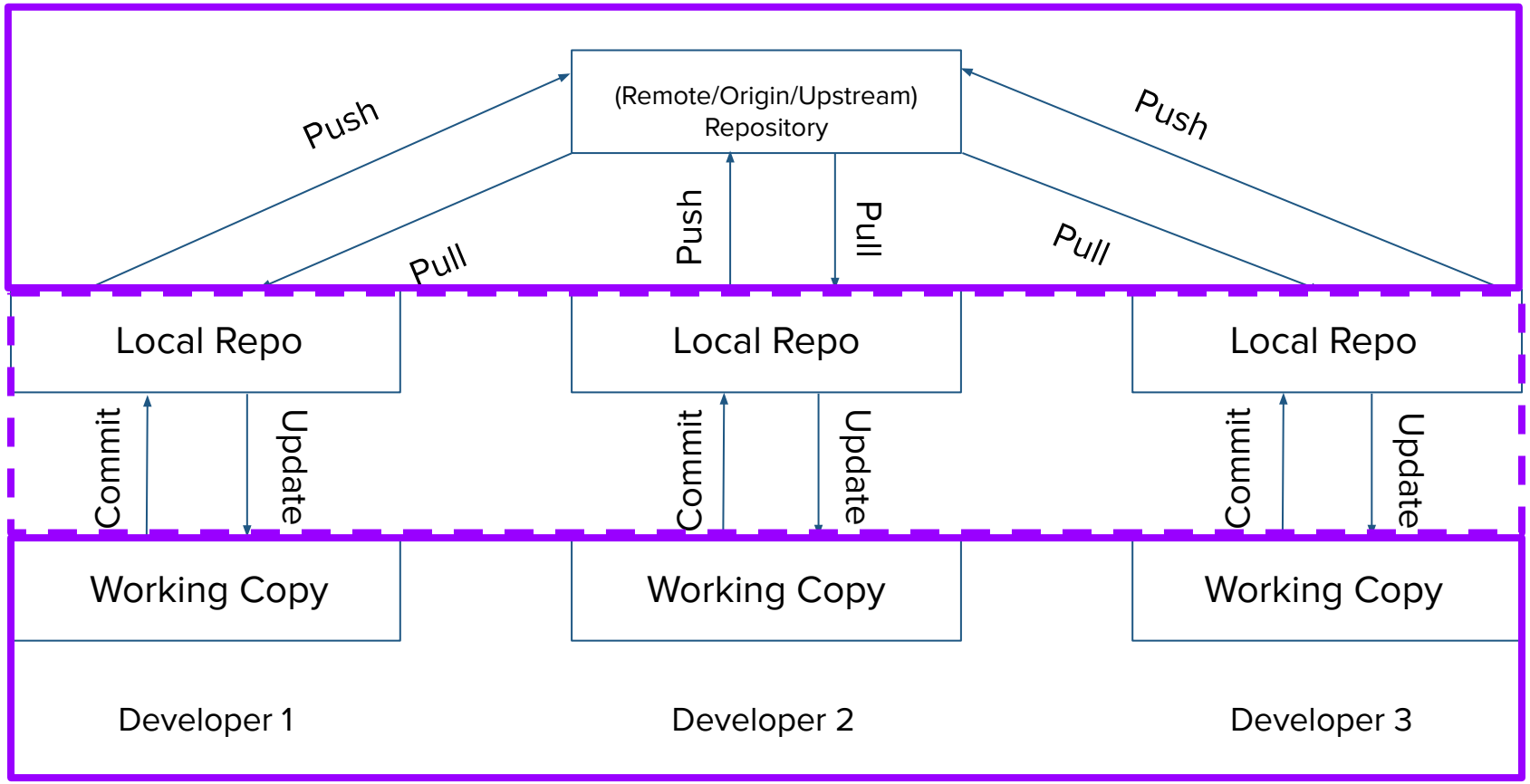
https://commons.wikimedia.org/wiki/File:Git-logo.svg

What is GitHub?

A hosting platform for distributed version control and collaboration

GitHub

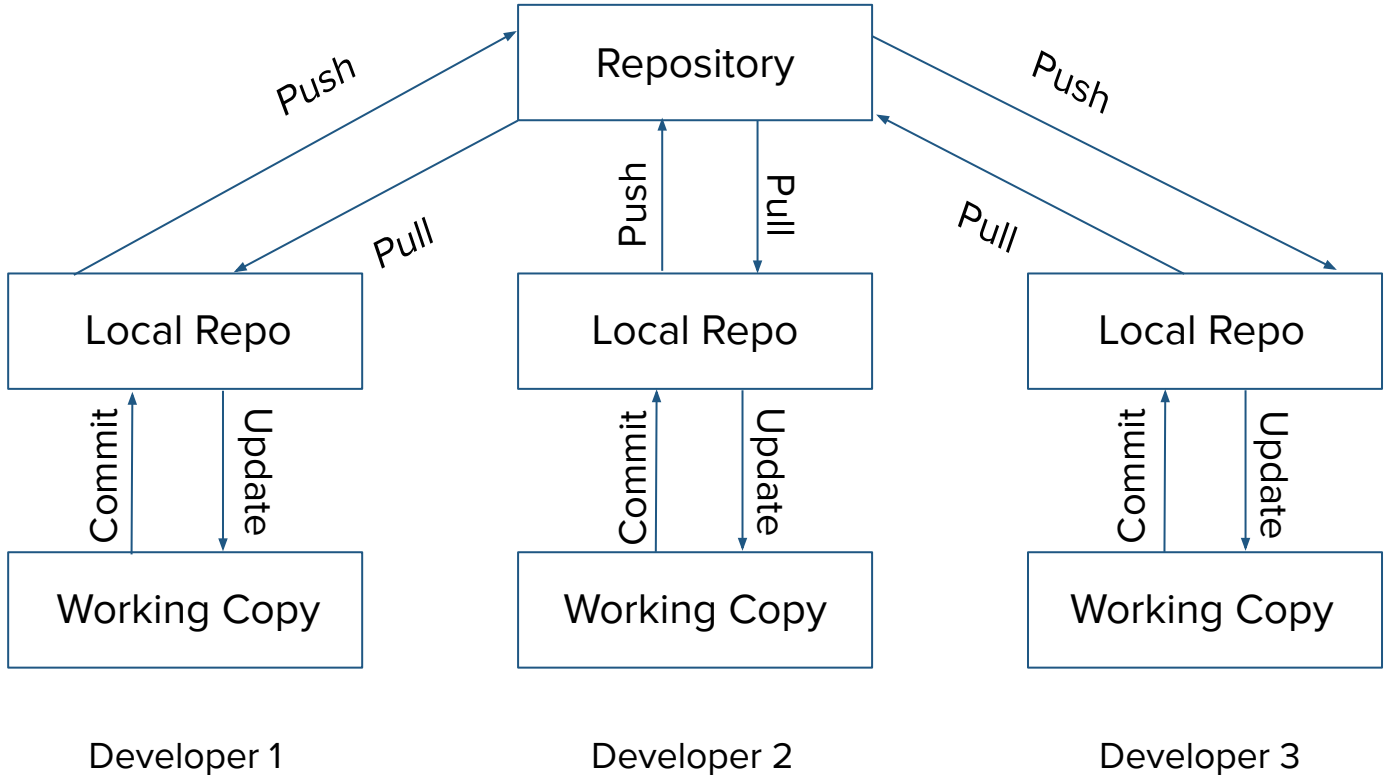
Distributed Version Control System



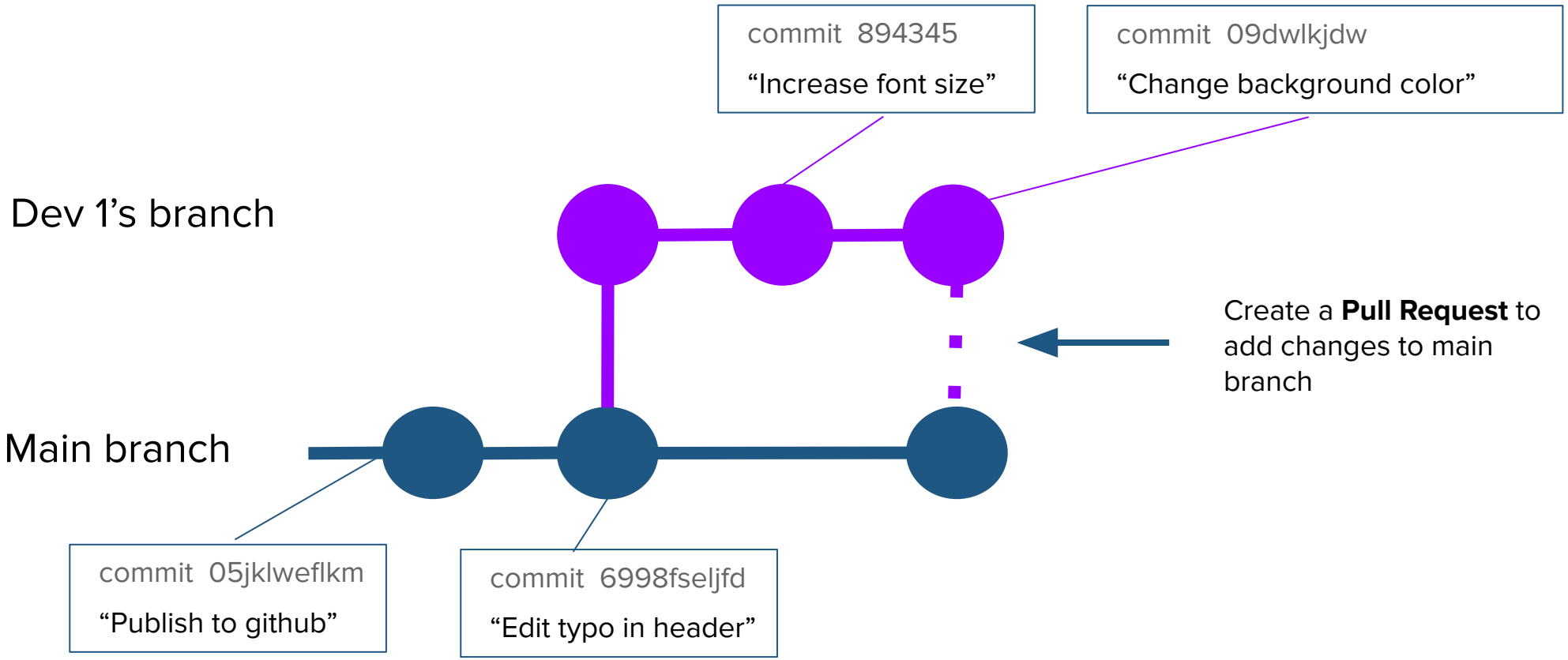
Push: Send our changes to the repository
Pull: Retrieve all new changes from repository
Commit: Add your working copy changes to the repo

- Changes will remain local until pushed to repository

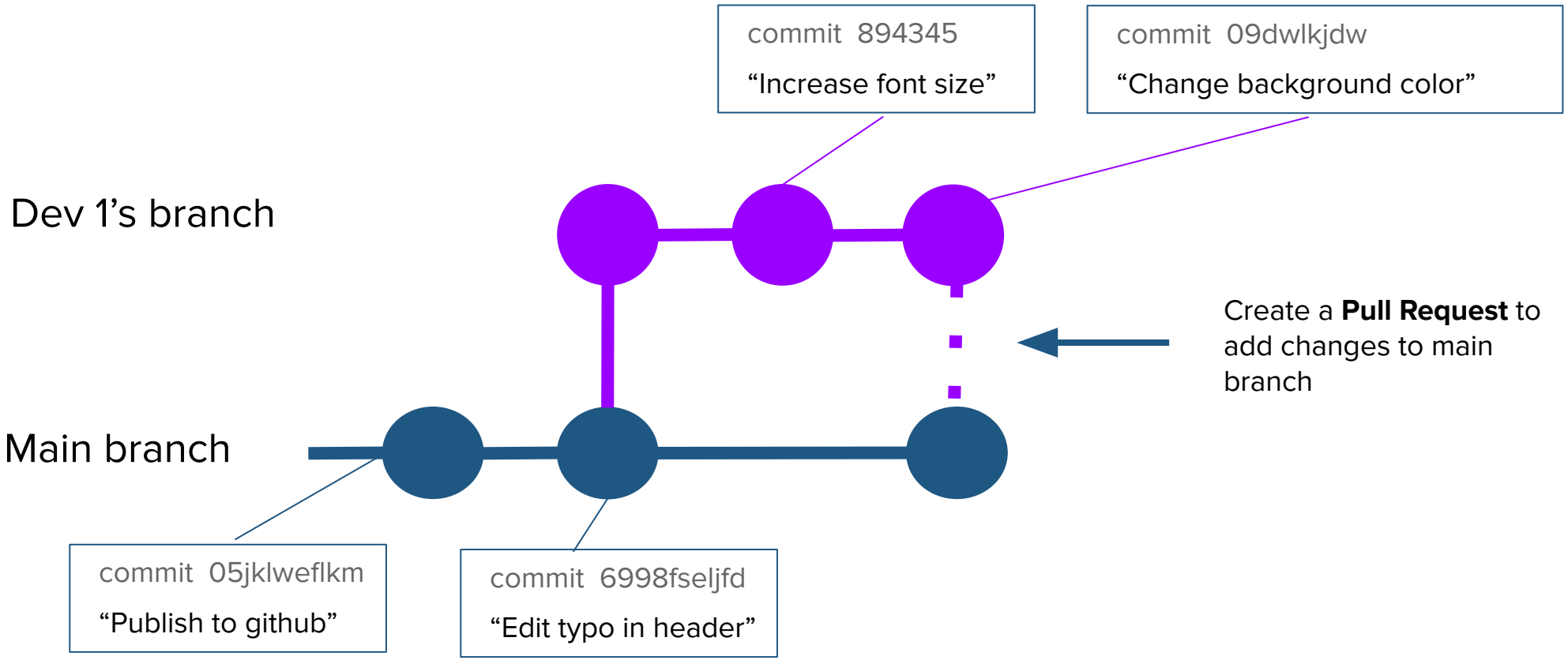
Function	Git Command
Get working copy	git clone ‘github repo url’
Commit	git commit -m “Message”
Push	git push
Pull	git pull



Branches & Pull Requests

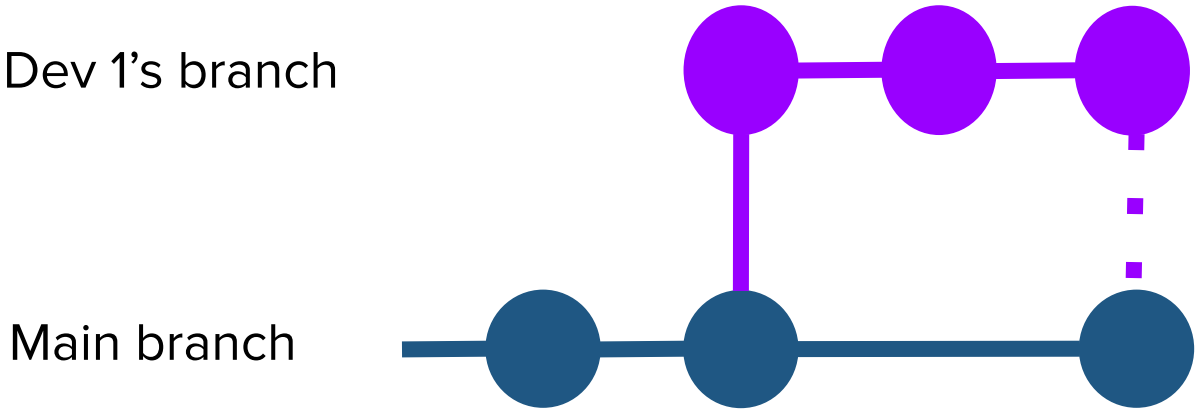


Branches & Pull Requests



Branch: version of repo that diverges from main, and allows developers to work independently
Main/Master: the source of truth/production ready state for a software repository
Pull Request: an event where a developer signals that they are ready to have their changes merged into the main branch/repository

Function	Git Command
Get working copy	git clone ‘github repo url’
Create local branch	git checkout -b “branch_name”
Commit	git commit -m “Message”
Push	git push
Create Pull/Merge Request	Create a Pull Request in UI
Pull	git pull



Essential Git Commands for Open Source Day

COMMAND	DESCRIPTION
Fork Repo (Github UI)	Creates a personal copy of the main git repo in your github account
git clone <github_url>	Clone the (personal copy) project to your local computer
git checkout -b “name_of_your_branch”	Create a branch
git add .	Add all changes you are ready to stage for commit
git commit -m “Commit Message”	Stage your local changes with a message giving a description of the changes
git pull	pull any changes/updates from the main branch
git push	push your changes up to your local repository
Create Pull Request (Github UI)	alert the main repository that you are ready for your changes to be added

Git Cheat Sheet: https://education.github.com/git-cheat-sheet-education.pdf

Live Coding Session

bit.ly/osd-git-2022

Make an Open Source Contribution using:

1. Terminal
2. Github Desktop

Q&A

Thank you!

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