DATE : 11.12.2024

DT/NT : NT

LESSON : GIT & GITHUB

SUBJECT: Git & Github-1

BATCH : B 303

AWS-DEVOPS

TECHPRO EDUCATION

Contents:

- What is Git?
- Git Installation
- Git Commands

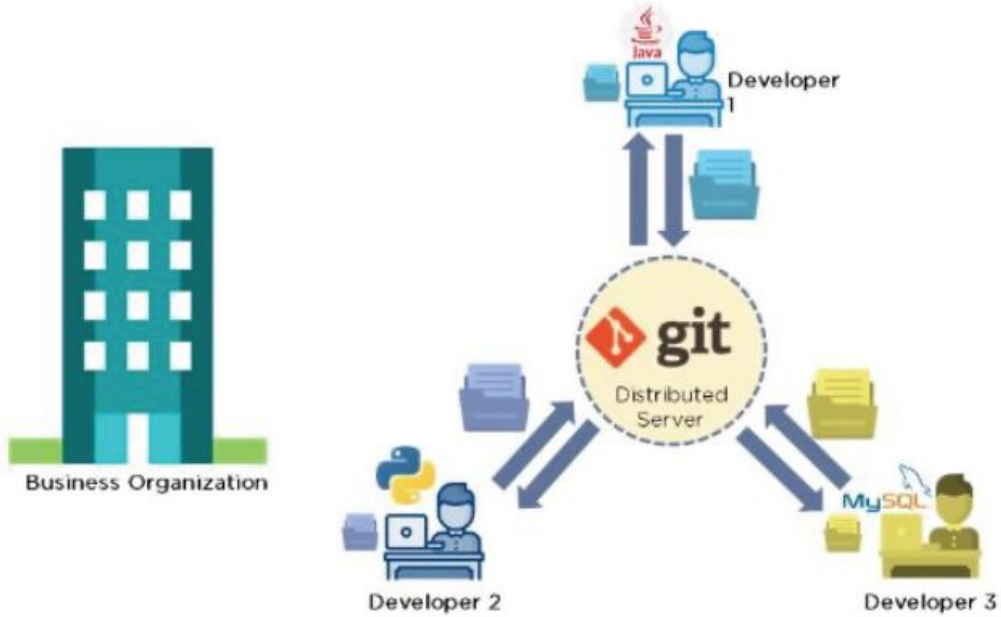
- Kahoot

What is Git?

- Git is a "version control system" that records changes.
- Git has a distributed structure, meaning each user has their own local copy. This allows you to work offline and save changes locally.

What is Git?

- Git operates through the command line.
  - Once you learn the basic commands and shortcuts, you can effectively manage your projects' version control as Git repositories (repository or repo).
- Git can manage different versions and changes of your project files through branches (branch)..
- Each change is called a "commit" and is identified by a unique identifier (hash)..



Why Use Git and GitHub??

LOCALE

- Managing versions locally
- Ability to work offline
- Ability to revert errors
- Switching between versions

REMOTE

- Backup
- Project sharing
- Project deployment
- Collaboration

Git Installation

Download Link
https://git-scm.com/

Checking installed version of Git in terminal
git --version || git -v

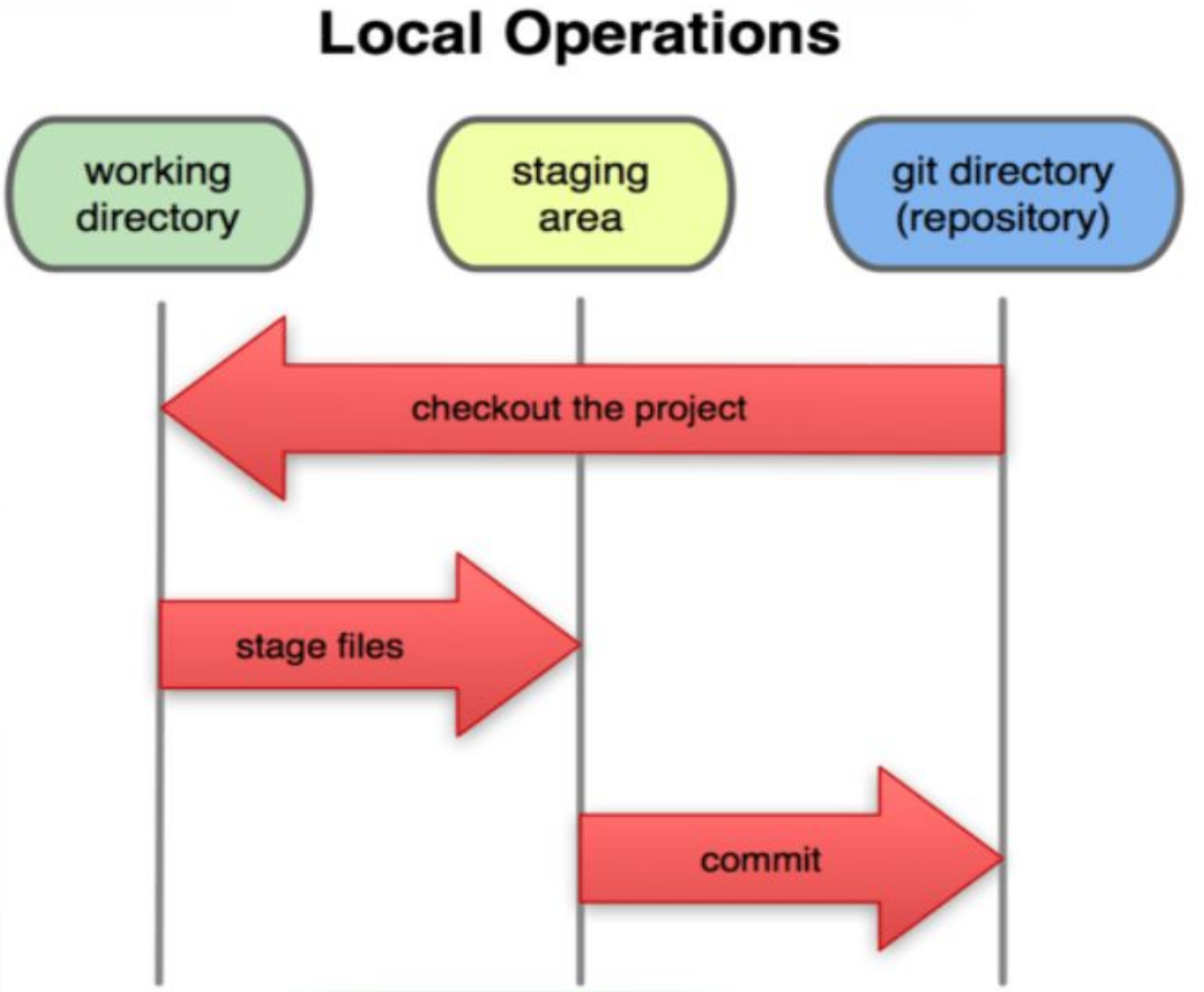
Git Config

```
#  Configuring Username and Email Address
 git config --global user.name "John Doe"
 git config --global user.email
"john.doe@example.com"
# To check the configurations, write the commands
without values.

# Configuring Editor Setting (optional)
 git config --global core.editor "nano”

# Enabling Colorful Outputs
 git config --global color.ui true
# Configuring the default branch
git config --global init.defaultBranch main
```

Git Config

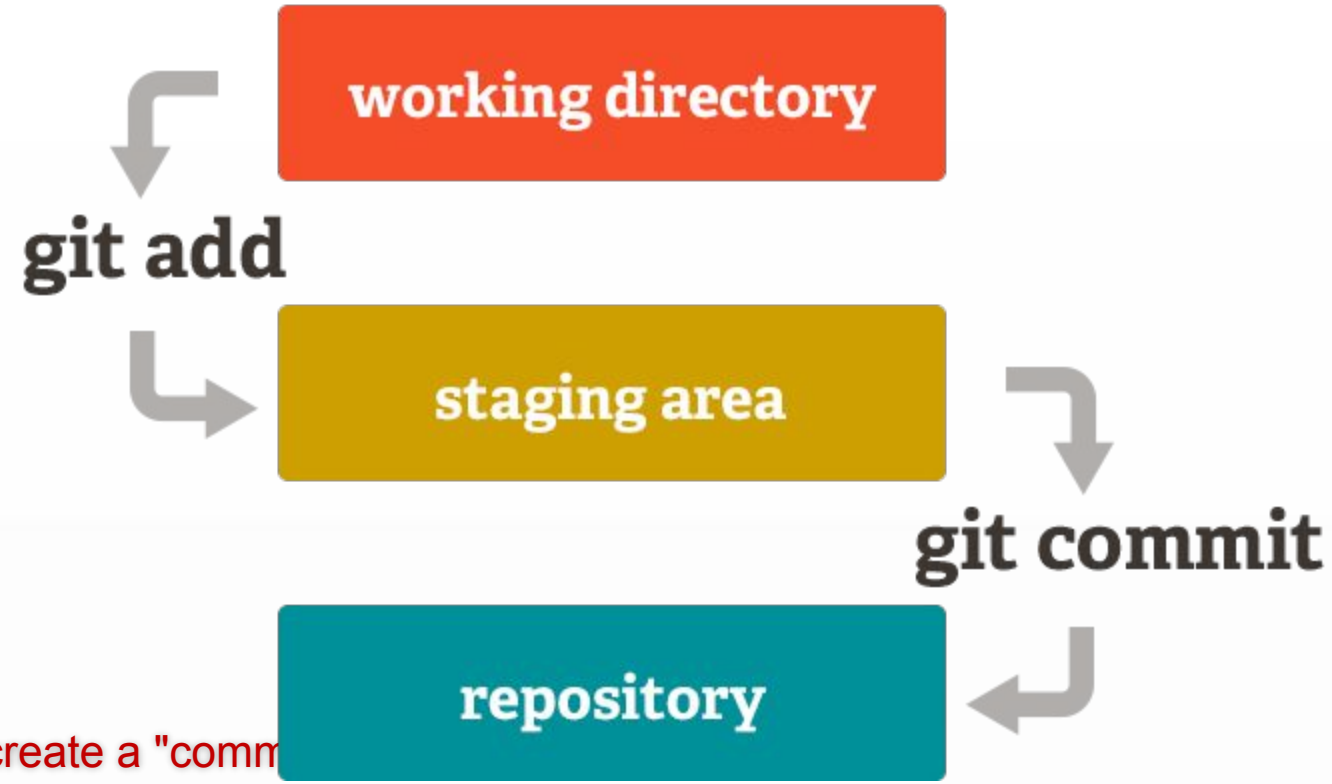
```
git config --global
```

Git Working Structure



Creating a Git Project

```
#  Initialize a Directory as a Git Repository
 git init
#  To check, you can type “ls –la” in the terminal..

# Create a file and add it to the repository
 echo "Hello, Git!" > myFile.txt

# Check that the file is in the staging area.
 git status
git add myFile.txt
# Check that the file is in the staging area.
 git status
# Having added the file to the repository, now let's create a "comm
 git commit -m "first commit"
# Let's view the project we created
 git log
```



Git Diff

View All Changes in the Working Area

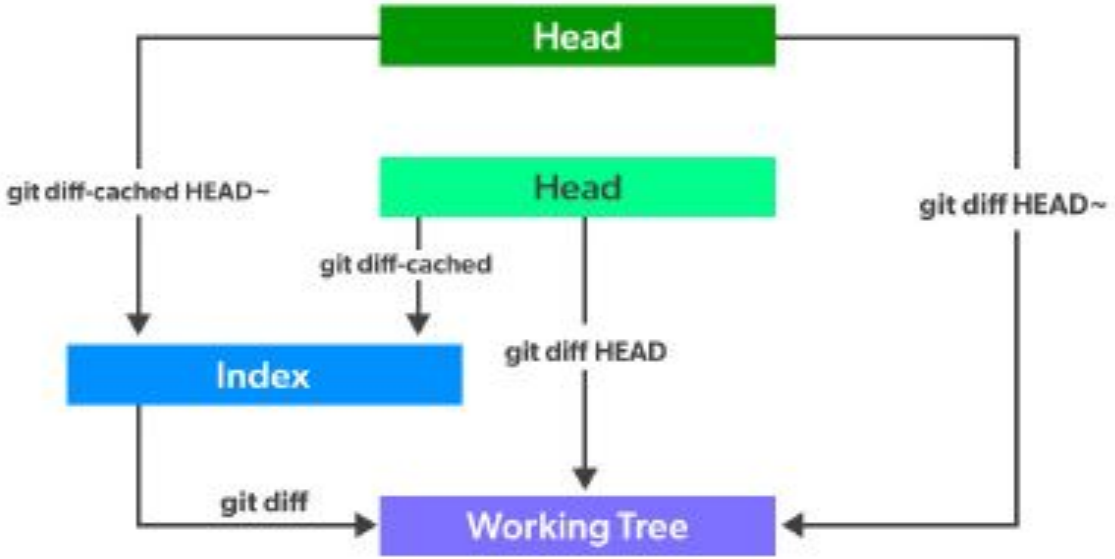
git diff

Compare Changes in the Working Area with a Specific Commit

git diff <commit_id>

Compare Two Different Commits

git diff <branch_or_commit_1> <branch_or_commit_2>



Git Checkout

Switch Between Versions (Commits)

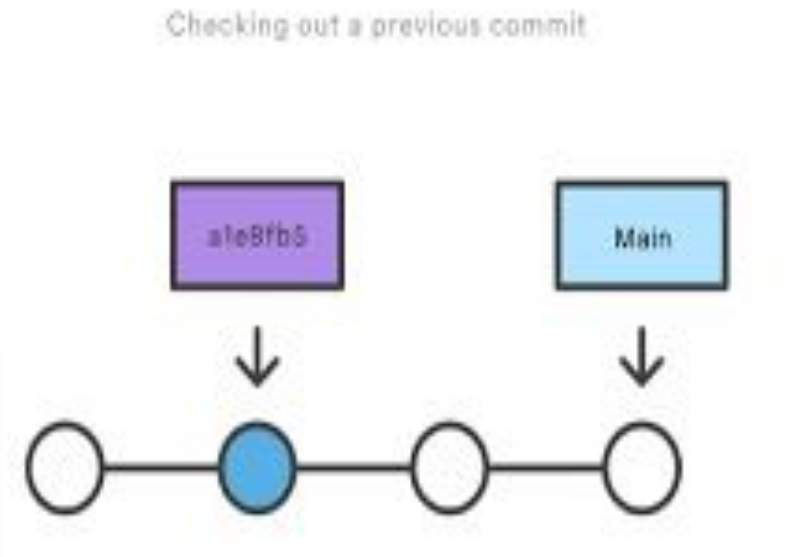
- git checkout <commit_id> .

Switch Between Areas (Staging and Working Directory)

- git checkout -- <file_name>

Not:The git checkout command has three primary uses:

- Switching between versions.
- Switching between areas.
- Branching.



Git Branch

Create a New Branch

git branch <new-branch-name>

Switch from Current Branch to New Branch

git checkout <new-branch-name>

List All Branches

git branch

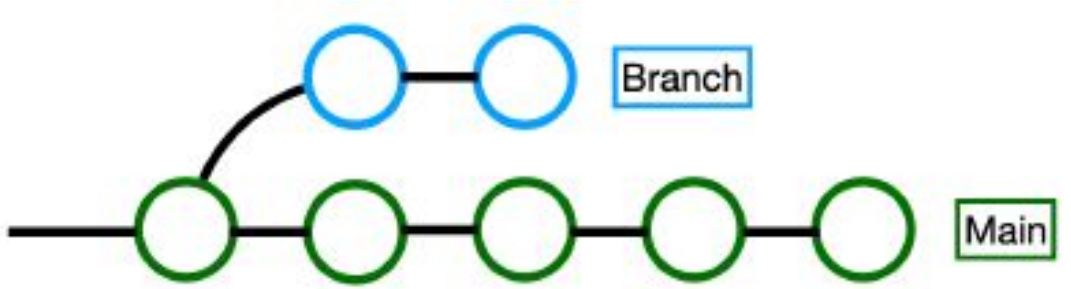
Delete a Branch

git branch -d <branch-name>

View Remote Branches

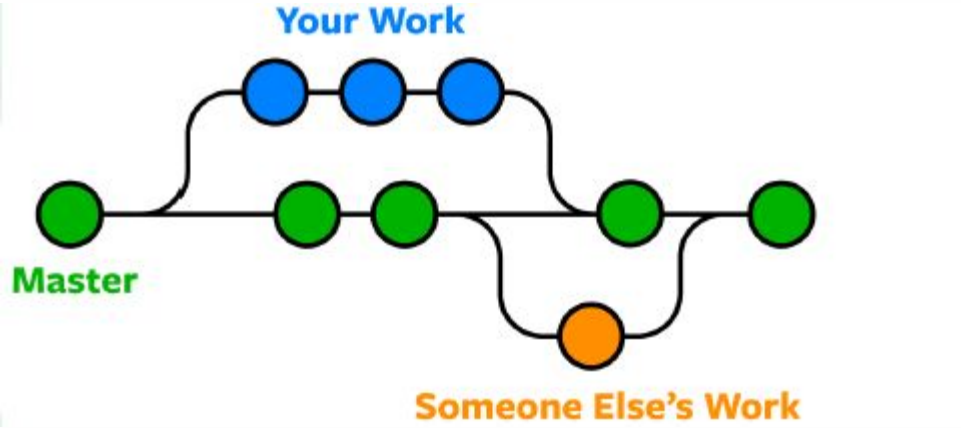
git branch -r

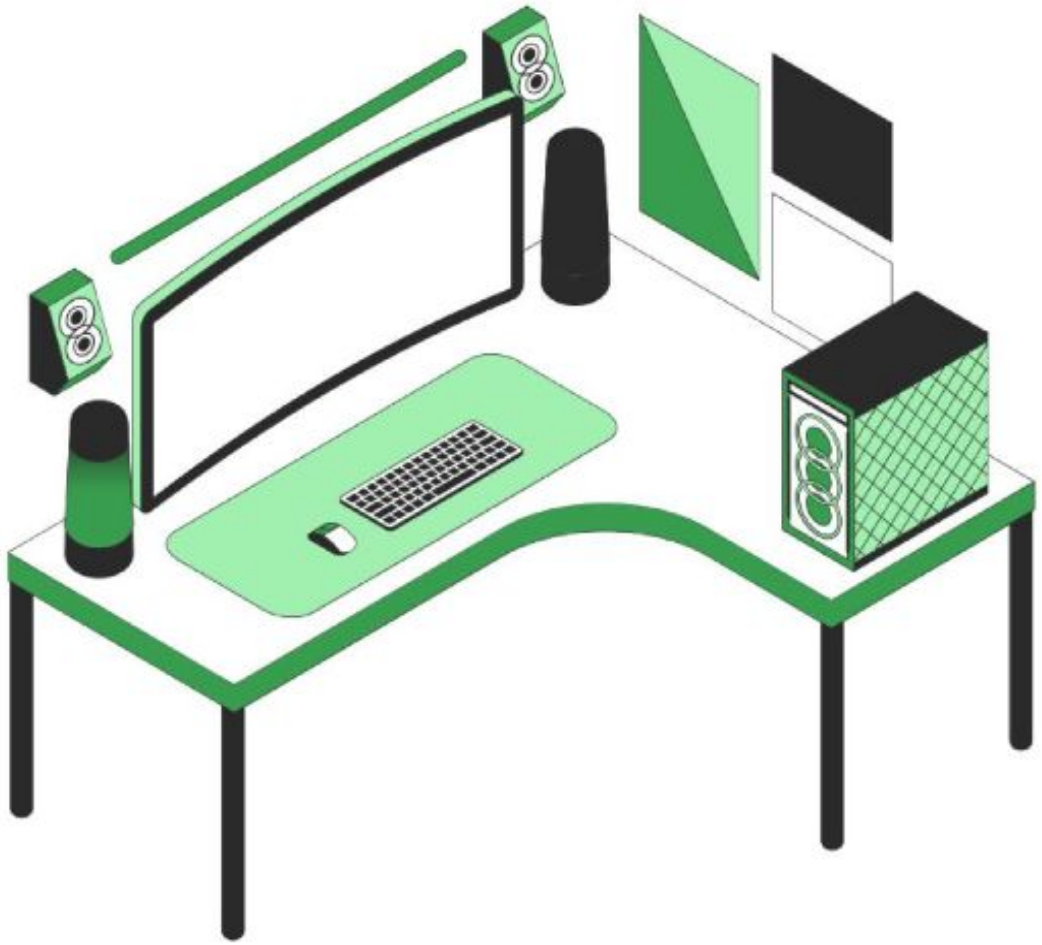
Not : We will revisit this command in the context of GitHub..



Git Merge

```
# Switch to Main Branch
git checkout main

# Merge a New Branch into the Main Branch
git merge <yeni-branch-adı>
```





Do you have any questions?

Send it to us! We hope you learned something new.