

Understanding Repositories

Repository

- A repository is a centralized digital storage that developers use to make and manage changes to an application's source code.
- Allows for storing and sharing folders, text files, and other documents during software development.
- Key Features:
 - Track code changes
 - Simultaneous editing
 - Collaboration from any location

Importance of a Repository

- Main Benefits:
 - Safeguards main source code from direct changes
 - Reduces merge conflicts when multiple developers edit the same code
 - Facilitates testing before deployment
- Branching:
 - Developers can create branches to introduce new features or bug fixes without impacting the production version.

GitHub Repository

- GitHub is a cloud-based repo that allows for organized project management and collaboration.
- Built on Git, a version control system, with additional features for enhanced collaboration.
- Community Aspect:
 - GitHub also functions as an online open-source community where developers can connect, collaborate, and contribute to public projects.

GitHub Repository Working

- Create:
 - Developers can create a new repository or clone an existing one. Repositories typically include a README file to describe the project.
- Configure:
 - Developers add user information like name and email to the repo.
 - Changes are saved using the git commit command.
- Change:
 - Code changes are initially stored locally. Merging changes to the central repo occurs after conflict resolution if necessary.