

**Assignment: Git Understanding**  
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## Git Understanding

1. Introduction to Git:
  - Git is a distributed version control system (VCS) used for tracking changes in source code during software development.
  - Key Concepts: Commits, branches, repositories, merges and pull requests.
2. Understanding Git Workflow:
  - Local workflow: Making changes, staging changes, committing changes.
  - Remote workflow: Pushing changes to the remote repository, pulling changes from the remote repository
3. Git Commands:
  - Basic Commands
    - i. `git init`
    - ii. `git add`
    - iii. `git commit`
    - iv. `git status`
  - Branching Commands
    - i. `git branch`
    - ii. `git checkout`
    - iii. `git merge`
  - Remote Commands
    - i. `git remote`
    - ii. `git clone`
    - iii. `git push`
    - iv. `git pull`
4. Introduction to GitHub:
  - It is a web-based platform that hosts Git repositories and provides additional collaboration tools such as issue tracking and project management
  - We can host projects up to the size of 1GB.
5. VS Code Integration with Git:
  - Built-in support: VS Code offers seamless integration with Git, enabling users to perform common version control tasks like staging changes, committing, pulling, pushing, and resolving conflicts directly within the editor.
  - Extensions: VS Code allows developers to enhance Git functionality through extensions.
  - Workflow Optimization: by having Git within VS Code, developers can streamline their workflow, improving productivity and code quality through features like code review, branching, and merging.