



KIDS & TEENS FREELANCING TRAINING INSTITUTE

Git & GitHub Course Outline

Module 1: What is Git?

- Introduction to Git as a version control system
 - Real-life example: Tracking changes to a book manuscript or an artwork
 - Key benefits: Keeping history, collaboration, and working on different versions of a project
 - Installing Git and setting up GitHub account
 - Activity: Initialize a Git repository and make your first commit
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Module 2: Basic Git Commands

- Understanding Git commands: `git init`, `git status`, `git add`, `git commit`
 - Real-life example: Managing changes in a project, like a website
 - Working with the staging area and committing changes
 - Activity: Make and commit changes to a project locally
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Module 3: Branching and Merging in Git

- What is branching and how it helps with multiple features in development
 - Creating branches and merging them into the main branch
 - Real-life example: Working on different features without affecting the main project
 - Activity: Create a branch, make changes, and merge it back
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Module 4: Collaborating with GitHub

- Introduction to GitHub: Hosting code and collaborating with others
- Pushing your local repository to GitHub and managing repositories
- Real-life example: Contributing to an open-source project on GitHub

- Activity: Push your Git project to GitHub and explore its interface
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Module 5: Forking, Pull Requests, and Code Reviews

- Forking a repository, making changes, and submitting a pull request
 - Real-life example: Suggesting improvements to a project and getting feedback
 - How to work with code reviews and resolve conflicts in pull requests
 - Activity: Fork a repo, make changes, and submit a pull request for review
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Module 6: Managing Remote Repositories

- Understanding remote repositories and managing them with Git
 - Using `git remote`, `git pull`, and `git push` commands
 - Real-life example: Synchronizing your local project with team members
 - Activity: Collaborate on a shared project with other team members
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Module 7: Git Tools and Best Practices

- GitHub workflows, issues, and project management tools
 - Best practices for commit messages and keeping your Git history clean
 - Real-life example: Managing a large project with multiple contributors
 - Activity: Set up an issue tracker and use it to manage project tasks
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Module 8: Advanced Git Features

- Reverting commits, rebasing, and resolving merge conflicts
 - Using tags, stashing changes, and working with Git submodules
 - Real-life example: Rolling back a broken feature or fixing code conflicts
 - Activity: Resolve merge conflicts and use advanced Git features in a project
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Bonus Materials

- Git command cheatsheet and GitHub workflow guide
- Mini projects: Create a personal portfolio, work on a group project
- Access to GitHub actions, integrations, and resources for developers
- Certificate of Completion for Git & GitHub Mastery

