**Git and Git Commands Guide**

**Introduction to Git** Git is a distributed version control system that allows developers to track changes in their code, collaborate efficiently, and manage different versions of their projects.

**Installing Git**

1. Go to the official Git website: <https://git-scm.com/>
2. Download the appropriate version for your operating system (Windows, macOS, or Linux).
3. Run the installer and follow the setup instructions.
4. Verify the installation by opening a terminal or command prompt and running:
5. git --version

**Basic Git Commands**

1. **Configure Git** (Set up username and email for commits)
2. git config --global user.name "Your Name"
3. git config --global user.email "your.email@example.com"
4. **Initialize a Git Repository**
5. git init

This command initializes a new Git repository in the current directory.

1. **Clone a Repository**
2. git clone <repository\_url>

This command copies a remote repository to your local machine.

1. **Check Repository Status**
2. git status

Shows the current state of the working directory and staging area.

1. **Add Changes to Staging Area**
2. git add <file\_name>
3. git add . # Adds all files
4. **Commit Changes**
5. git commit -m "Your commit message"
6. **Push Changes to GitHub**
7. git push origin main

**How to Push Code to GitHub**

1. Create a new repository on GitHub.
2. Copy the repository URL.
3. In your local project folder, initialize Git if not already done:
4. git init
5. Add the remote repository:
6. git remote add origin <repository\_url>
7. Add and commit your changes:
8. git add .
9. git commit -m "Initial commit"
10. Push to GitHub:
11. git push -u origin main

Now, your code is successfully pushed to GitHub!

This guide provides an overview of Git and its essential commands for version control and collaboration. Let me know if you need further details or explanations!