Git and Github setup

1. Install Git

Open your terminal and run:

```
# Debian/Ubuntu
sudo apt update
sudo apt install git -y

# Fedora
sudo dnf install git -y

# Arch Linux
sudo pacman -S git
```

Verify installation:

```
git --version
```

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2. Configure Git

Set your name and email (these will be attached to commits):

```
git config --global user.name "Your Name"
git config --global user.email "your_email@example.com"
```

Check your config:

```
git config --list
```

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3. Generate SSH Key (recommended for GitHub)

This lets you connect securely without entering a password each time.

```
ssh-keygen -t ed25519 -C "your_email@example.com"
```

Press **Enter** for the default location (`~/.ssh/id_ed25519`), and optionally set a passphrase.

Start the SSH agent:

```
eval "$(ssh-agent -s)"
```

Add the key:

```
ssh-add ~/.ssh/id_ed25519
```

Copy the key to your clipboard:

```
cat ~/.ssh/id_ed25519.pub
```

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4. Add SSH Key to GitHub

1. Go to GitHub → Settings → SSH and GPG Keys
2. Click **New SSH Key** → paste the copied key → save.

Test the connection:

```
ssh -T git@github.com
```

If successful, you'll see:
`Hi username! You've successfully authenticated…`

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5. Create & Clone Repositories

Create a new repo locally

```
mkdir myproject
cd myproject
git init
echo "# My Project" >> README.md
git add README.md
git commit -m "Initial commit"
```

Connect to GitHub

```
git remote add origin git@github.com:your-username/your-repo.git
git push -u origin main
```

(Replace `main` with `master` if your branch is named so.)

Clone an existing repo

```
git clone git@github.com:username/repo.git
```
