

# SSH GitHub Setup Guide

## 1 Generate SSH Key

Open terminal / Git Bash and run:

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

- Press **Enter** to accept the default file location.
- Press **Enter** again if asked for a passphrase (optional, but can be added for extra security).

This creates:

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

## 2 Start SSH Agent & Load Key

```
eval "$(ssh-agent -s)"  
ssh-add ~/.ssh/id_ed25519
```

You should see:

```
Identity added: /path/to/id_ed25519 (your_email@example.com)
```

## 3 Copy Public Key

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

Copy the **entire output** (starts with `ssh-ed25519`).

## 4 Add SSH Key to GitHub

1. Go to: [GitHub SSH Keys](#)

2. **Title** → e.g., `My Laptop`
  3. **Key** → Paste the public key
  4. Click **Add SSH key**
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## 5 Test SSH Connection

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

You should see:

```
Hi <your_username>! You've successfully authenticated.
```

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## 6 Configure Local Repo to Use SSH

Inside your project folder:

```
git remote add origin git@github.com:<username>/<repo>.git
```

Or, if it already exists:

```
git remote set-url origin git@github.com:<username>/<repo>.git
```

Verify:

```
git remote -v
```

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## 7 First Push

If your branch is `master`:

```
git push --set-upstream origin master
```

If your branch is `main`:

```
git push --set-upstream origin main
```

From now on, normal pushes:

```
git add .  
git commit -m "Your message"  
git push
```

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## 8 Optional: Force SSH for All GitHub URLs

```
git config --global --add url."git@github.com:".insteadOf "https://github.com/"
```

This ensures **all future GitHub repositories use SSH automatically**.

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### Notes:

- No passwords or tokens are needed once SSH is set up.
- If you ever switch machines, repeat steps 1–4 for the new machine.
- Keep your private key ( `id_ed25519` ) safe — never share it.