



What Open-Source has for you?

Bhoomika Wavhal

(Mentor | Speaker | Open-Source Contributor

Google Cloud Facilitator)

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About Me



linkedin.com/bhoomikawavhal



github.com/wbhoomika/



twitter.com/wbhoomika



bhoomikawavhal@gmail.com

Agenda

- Version Control System (VCS)
- Git in detail
- GitHub
- Environment setup
- Demo

Version Control System (VCS)

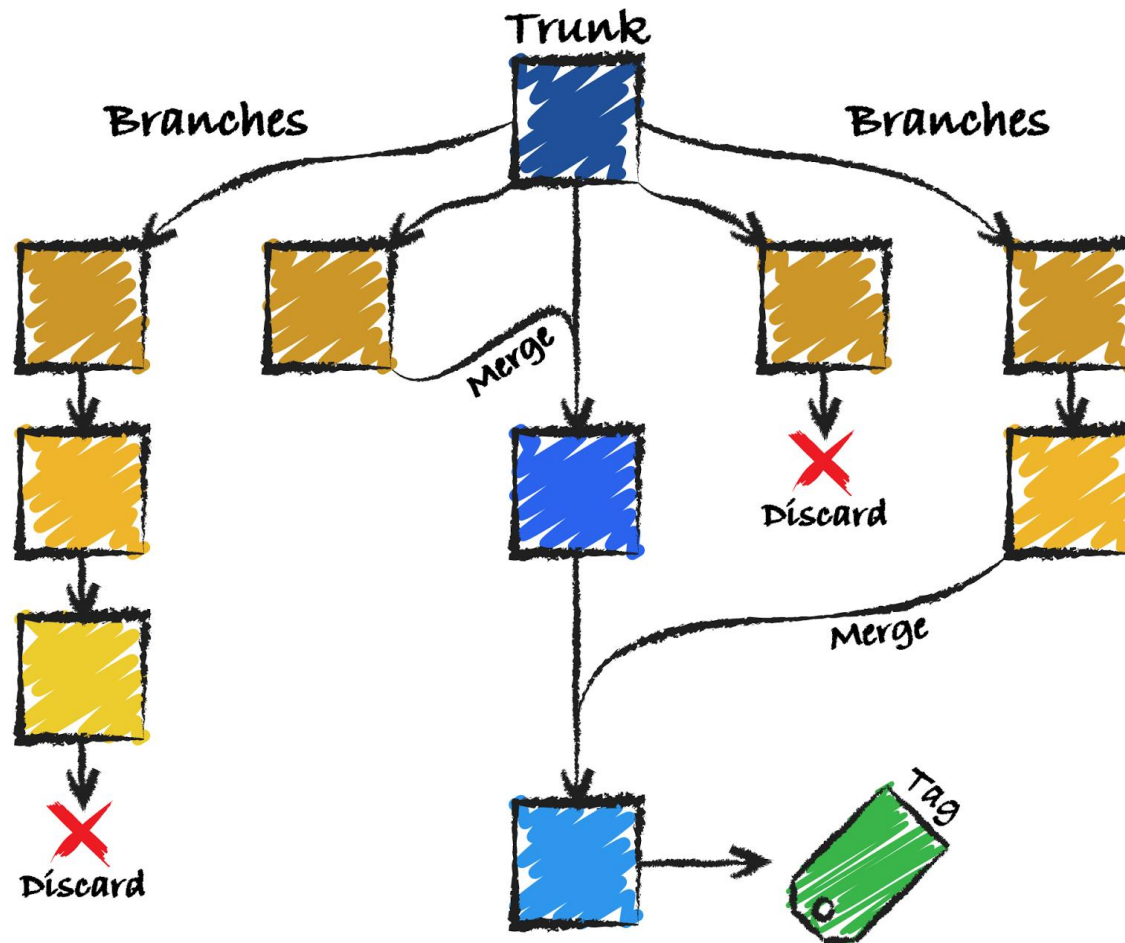
- **Tracks** are left.
- **Automatic backup** available.
- Can be **shared** on multiple computers.

Developers can **work together** through branches.

- Changes can be **recorded, compared and reverted**.
- Example: Git, Subversion (SVN), Concurrent Version System (CVS) and many more.

(It means if you screw things up or lose files, you can easily recover them.)

Version Control System (VCS)





git Vocabulary

Repository

Collection of stored code.

Branch

Indicator of divergence from base.

Issue

Default task or request to complete.

Fork

Copy of repository on your system.

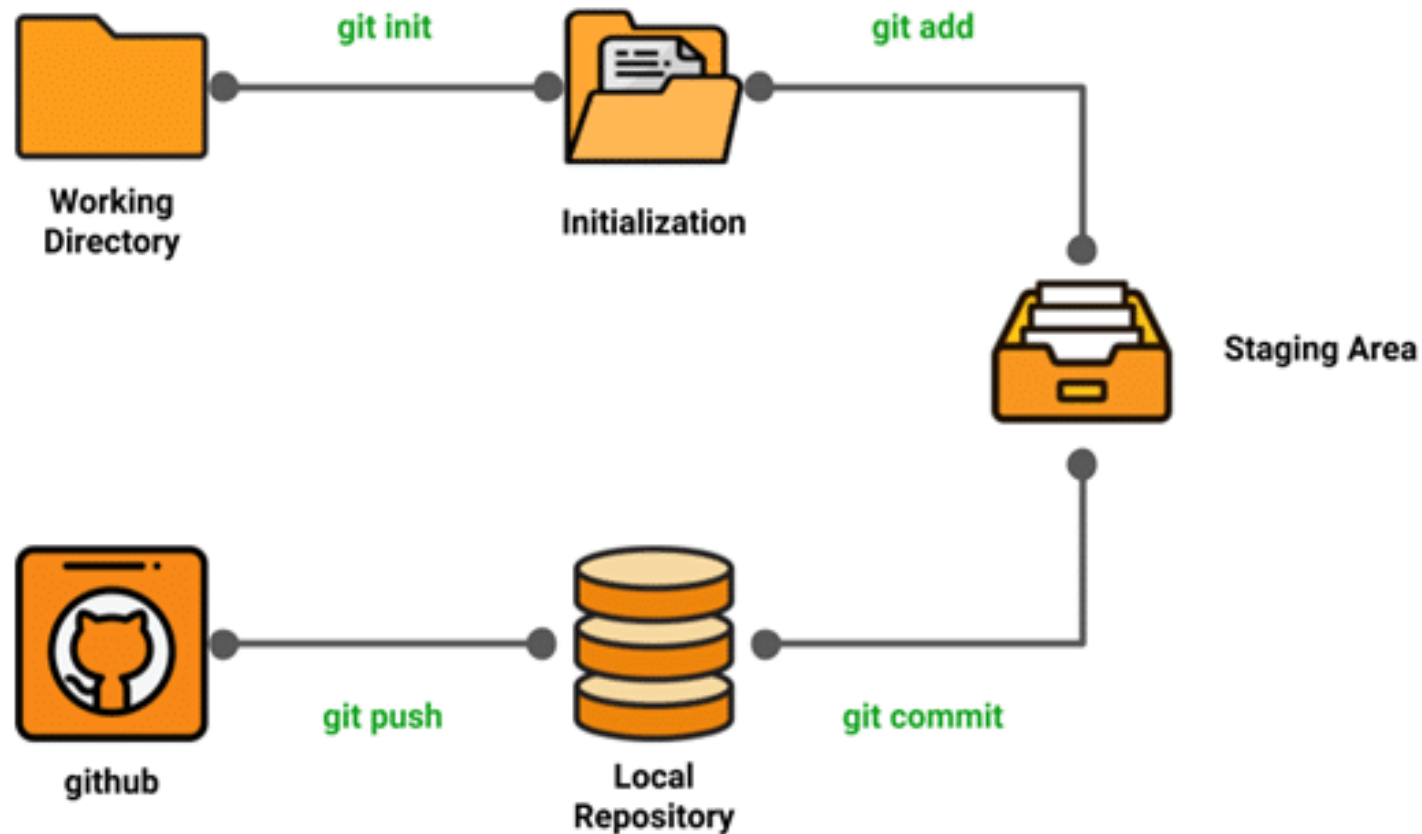
Organization

Collection on repositories.

Commit

Point in time snapshot with changes.

git and GitHub



Environment Setup



- Install Git
- Create a GitHub account
- Configure Git
- Create a local repository



git Installation

→ Linux (Debian)

Command: **sudo apt-get install git!**

→ Linux (Fedora)

Command: **sudo yum install git!**

→ Mac

<http://git-scm.com/download/mac>

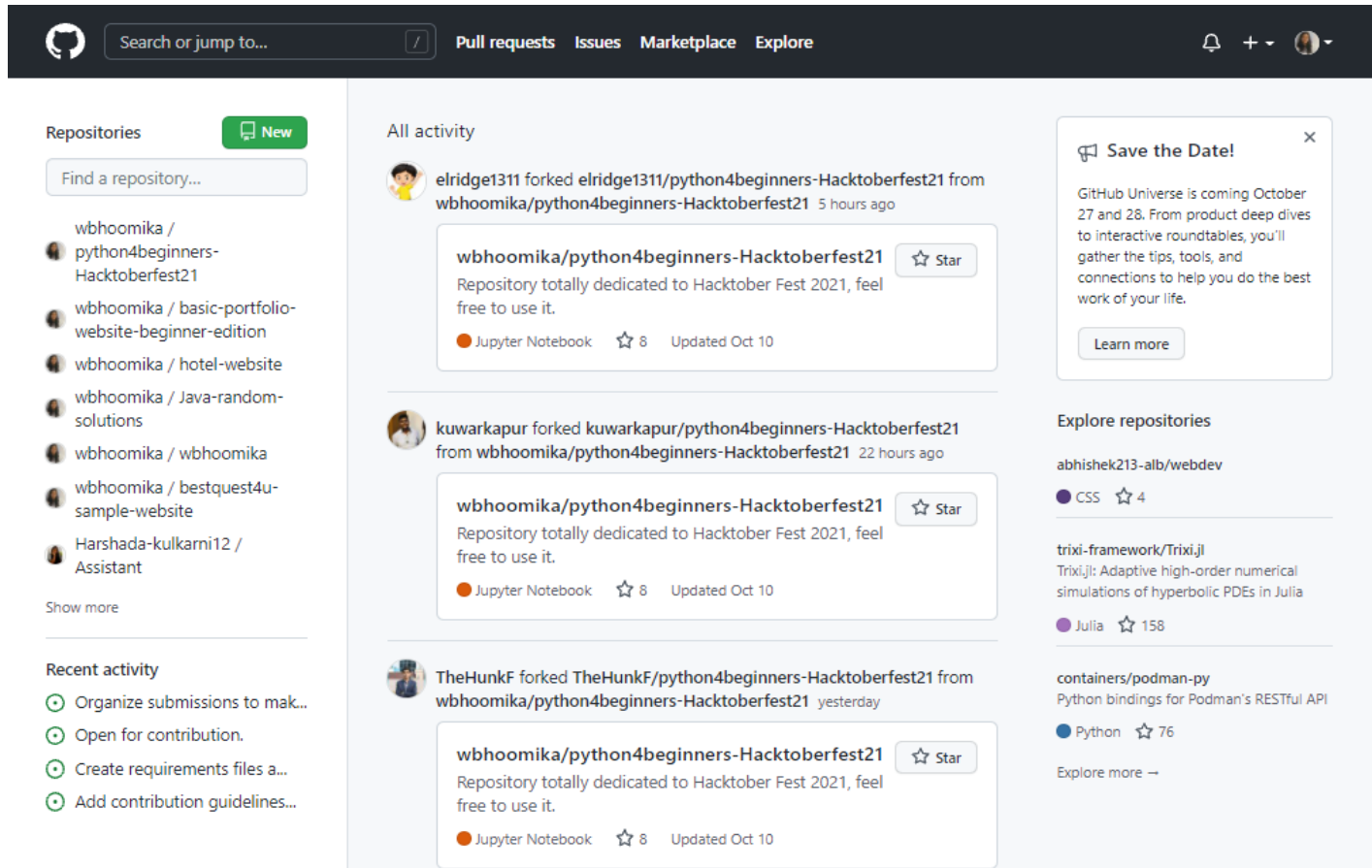
→ Windows

<http://git-scm.com/download/win>

Creating a GitHub account

- Go to <https://Github.com>
- Create a GitHub account
- Login

Creating a GitHub account



The screenshot shows the GitHub homepage with a dark header bar. The header includes the GitHub logo, a search bar, and navigation links for Pull requests, Issues, Marketplace, and Explore. On the left sidebar, there's a 'Repositories' section with a 'New' button and a list of repositories by user 'wbhoomika', including 'python4beginners-Hacktoberfest21', 'basic-portfolio-website-beginner-edition', 'hotel-website', 'Java-random-solutions', and 'wbhoomika'. Below this is a 'Recent activity' section with links like 'Organize submissions to mak...', 'Open for contribution.', 'Create requirements files a...', and 'Add contribution guidelines...'. The main content area, titled 'All activity', shows a list of repository forks, all pointing to 'wbhoomika/python4beginners-Hacktoberfest21'. Each fork entry includes the user's profile picture, the fork action, the repository name, a description, and a 'Star' button. On the right sidebar, there's a 'Save the Date!' announcement for GitHub Universe, followed by 'Explore repositories' with links to 'abhishek213-alb/webdev', 'trixi-framework/Trixi.jl', and 'containers/podman-py'.

Configure git

→ Generate key

```
ssh-keygen -t rsa -C "user@email"
```

→ Import public key into Github

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

→ Configure name and email

```
git config --global user.name "user1"
```

```
git config --global user.email "user1@email"
```

Let's go to demo

P.S. I will upload complete presentation after the session.