



Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (SCSVMV)

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(Sponsored and run by Sri Kanchi Kamakoti Peetam Charitable Trust)

Software Configuration Management (SCM) Tools - GitHub

Is to practice discipline of tracking and controlling changes in software, part of the broader field of configuration management.

Functions of SCM Includes:

- Version Control(VCS)
 - o Git, Mercurial, SVN (Sub version)
 - o Atlassian stash, IBM ClearCase
- Change management
 - o Review/approval, etc process through tools like Jira
- Build management
 - o CI/CD pipelines with static code, code completion, coverage tools integrated and automated. Ex: Jenkins, GitHub Actions, Maven, Gradle, Make, etc
 - o Static Code analyser – SonarQube, JSLint for JS
 - o WhiteSource(Mend) for OpenSource Security, License mgmt., etc
 - o Blackduck for Governance and Compliance
 - o JaCoCo – for Java C
- Release
 - o QA/UAT, sign off, etc., integrated in a planned release
- Configuration
 - o Blue/green deployments
 - o Env specific config files like config.yaml
 - o Docker config
 - o Dependency config
- Audit and Reporting
 - o SecCheck, Dashboards, Logs, Reports on code/GDPR compliance, etc

GitHub:

- built on top of Git, a free and open source VCS
- Either we can use browser based tool (cockpit, web interface/dashboard) or installed tools like GitHub Desktop

Basic Git workflow:

1. **Clone** a repository (copy it locally).
2. **Make changes** to files.
3. **Stage** changes (git add).
4. **Commit** changes with a message (git commit).
5. **Push** commits to a remote repository (git push).
6. **Pull** updates others have made (git pull).
7. **.gitignore** to exclude files

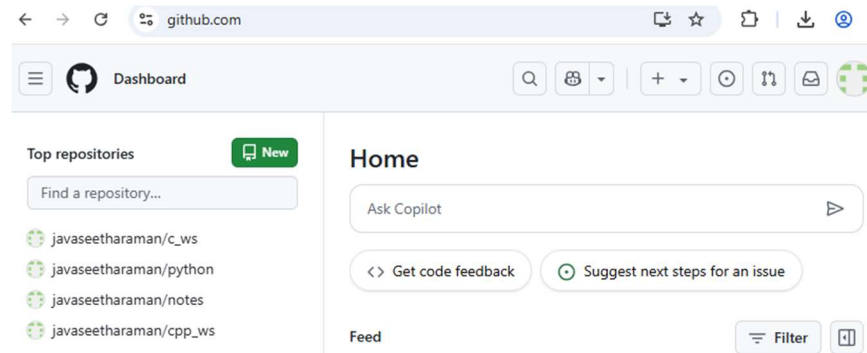
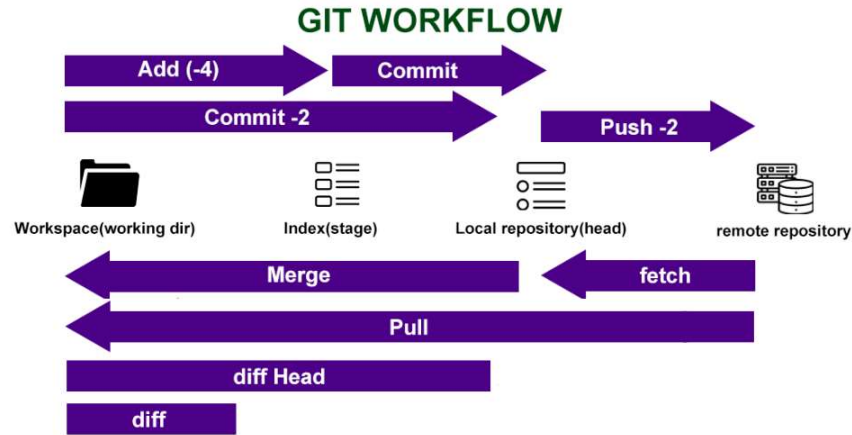
Basic GitHub Flow:

- Register with mailId in <https://github.com/>
- Login
- Repo actions



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- Search repositories, issues, users.
- Create Repo/Issues
- Look my issues
- PRs I created, for my review
- Profile management
- Licensed like none(private), BSD, MIT, Apache, GNU, Mozilla



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Create New Repo:

Create a new repository [Try the new experience](#)

A repository contains all project files, including the revision history. Already have a project repository elsewhere?
[Import a repository.](#)

Required fields are marked with an asterisk (*).

Owner * javaseetharaman /

Great repository names are short and memorable. Need inspiration? How about [ubiquitous-invention](#) ?

Description (optional)

- ☒ Public
Anyone on the internet can see this repository. You choose who can commit.
- ☐ Private
You choose who can see and commit to this repository.

Initialize this repository with:

- ☐ Add a README file
This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore

.gitignore template: None

Choose which files not to track from a list of templates. [Learn more about ignoring files.](#)

Choose a license

License: None

A license tells others what they can and can't do with your code. [Learn more about licenses.](#)

You are creating a public repository in your personal account.

Create repository

Repository Summary View:

javaseetharaman / c_ws

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

C_WS Public Pin Watch 0 Fork 0 Star 0

main

Code

	csalab1 syllabusLessonPlan added	43d36d1 · last month	🕒 20 Commits
	.gitignore	Update .gitignore	last month
	LICENSE	Initial commit	last month
	ProbSolvingTech-I BCA-Iesson ...	syllabusLessonPlan added	last month
	Problem Solving Techniques - I ...	syllabusLessonPlan added	last month
	README.md	Initial commit	last month
	arrySort.c	arraySorting and StrManip pgms added	last month
	dollarTower.c	added programs on dollarTower and ...	last month

About

No description, website, or topics provided.

Readme

Apache-2.0 license

Activity

0 stars

0 watching

0 forks

Releases

No releases published

[Create a new release](#)



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Steps to add Collaborators to our Repo:

1. Go to your repository on GitHub.
2. Click on the "Settings" tab (⚙️) at the top of the repo.
3. In the left sidebar, click "Collaborators and teams" (or "Manage access").
4. Click "Invite a collaborator".
5. Enter the person's GitHub username or email.
6. Select their role (default: Read-only for viewers).
7. Click Add or Send Invitation.
 - Once accepted, they can view (and optionally contribute to) the repository based on their permission level.
 - Without adding, anyone can view our public repo
 - Reviewers are allowed only for PR on branch merge

Frequent Commands cheat sheet:

1. Setup/Init
 - git config --global user.name "Your Name"
 - git config --global user.email "you@example.com"
2. Start New/Existing Project
 - git init - Initialize a new Git repository in the current folder.
 - git clone <https://github.com/username/repo.git> - Clone a remote GitHub repo to your local machine.
3. git status - See current changes and staged files.
4. Stage files to include in the next commit.
 - git add filename
 - git add . # Add all changes
5. Commit staged changes.
 - git commit -m "Your commit message"
6. Push your commits to the remote GitHub repository.
 - git push origin branch-name
7. Fetch and merge changes from the remote repo.
 - git pull origin branch-name
8. Download changes without merging.
 - git fetch

Branching:

9. List all branches
 - git branch
10. Create new Branch
 - git branch new-branch
11. Switch to a different branch.
 - git checkout new-branch
12. Create and switch to a new branch.
 - git checkout -b feature/new-feature
13. Merge another branch into your current branch.
 - git merge branch-name

git rm, git log, git diff,