

(An Institute under Ministry of HRD, Govt. of India) Ashok Rajpath, Patna - 800005 (Bihar)



# TechWrap'21

## Introduction to GIT and GITHUB

#### 1. What is GITHUB-

- ➤ GitHub is a collaborative development platform for hosting projects using the Git version control system.
- At a high level, GitHub is a website and cloud-based service that helps developers store and manage their code, as well as track and control changes to their code.

#### 2. Version Control-

- ➤ Keep a record of changes.
- ➤ Different users can make changes to the same shared documents at the same time.
- > Revert the change to the previous state.
- ➤ It is ideal for tracking changes in any collaborative project.

Resources- git-scm

<u>GFG</u>

### 3. Repository-

- ➤ A repository is used as a container to organize projects.
- They can contain folders, files, images, videos, spreadsheets, etc., everything your project needs.

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Creating first repo (video tutorial)



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#### 4. Branch-

- ➤ Branches are the way to work different versions of a repository at the same time.
- ➤ By default, when a repository is created for the first time, the branch called Master is also created, which is considered the 'definitive branch'.

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#### 5. Pull request-

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- > Pull Requests are a mechanism for developers to notify team members that they have completed a feature.
- ➤ Once the functionality branch is ready, everyone involved knows that they must review the code and merge it with the master branch.

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### 6. Merge-

Merge consists of the union or fusion of the branches that we have worked towards the Master branch or with another active branch.

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#### 7. Commit-

- ➤ On GitHub, when we finish saving the changes in our Project, they are called 'Commits'.
- ➤ Each Commit is associated with a 'Commit Message', which describes the change that was made in some of the files of our Project.

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### 8. Fork-

- ➤ A fork is a copy of a repository.
- Forking a repository allows you to freely experiment with changes without affecting the original project.
- ➤ Most commonly, forks are used to either propose changes to someone else's project or to use someone else's project as a starting point for your own idea.

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#### 9. Watch-

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➤ GitHub has made it easy to "watch" a project, which means you're notified whenever there are any updates or changes in the project.

### 10. Star-

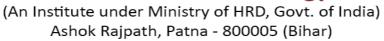
- ➤ Users on the GitHub website are able to "star" other people's repositories, thereby saving them in their list of Starred Repos.
- Some people use "stars" to indicate that they like a project, other people use them as bookmarks so they can follow what's going on with the repo later.

#### 11. GitHub Desktop-

- ➤ GitHub Desktop is an open-source tool that enables you to be more productive. GitHub Desktop encourages you and your team to collaborate using best practices with Git and GitHub.
- ➤ With GitHub Desktop you can:
  - o Add changes to your commit interactively
  - o Quickly add co-authors to your commit
  - o Checkout branches with pull requests and view CI statuses
  - Compare changed images

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#### 12. Further references-

- ➤ Github documentation
- ➤ Git Handbook
- > GFG Ultimate guide to github
- > Youtube playlists-
- o Telusko
- o Codewithharry

