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Department of Information Technology

Class: TECIT

Subject: LP-II (CWADL)

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Title: Version Control using GitHub

Problem Statement:

Create a version control account on GitHub and using Git commands to create repository and push your code to GitHub.

Objective:

To learn to create a repository on GitHub and version control.

Theory:

Git is a version control system. It was created by Linus Torvalds in 2005, and has been maintained by Junio Hamano since then. It helps you keep track of code changes and it is used to collaborate on code. Git and GitHub are different things.

GitHub is the largest host of source code in the world, and has been owned by Microsoft since 2018. GitHub makes tools that use Git.

Working with Git -

- Initialize Git on a folder, making it a repository.
- Git now creates a hidden folder to keep track of changes in that folder.
- When a file is changed, added or deleted, it is considered modified.

- You select the modified files you want to stage.
- The staged files are Committed, which prompts Git to store a permanent snapshot of the files.
- Git allows you to see the full history of every commit.
- You can revert back to any previous commit.
- Git does not store a separate copy of every file in every commit, but keeps track of changes made in each commit.

Steps to create version control account on GitHub and using Git commands to create repository and push your code to GitHub -

- Sign up for a GitHub account.
- Install Git.
- Create a new repository.
- Initialize a Git repository.
- Add files to the repository.
- Commit changes.
- Link your local repository to your GitHub repository.
- Push changes to GitHub.
- Using these steps, you can easily set-up version control for your projects, keep track of changes to your code, and collaborate with others.

Conclusion:

Git and GitHub provide a powerful and flexible platform for version control and collaborative software development. By learning these basic steps, you can start to use Git and GitHub for your own projects and join a global community of developers who are using these tools to build innovative software solutions.