**VERSION CONTROL TOOL**

Expt No: 01 Date:13/01/2023

**Aim: Study of version control tool-git.**

**Theory:**

**What is a “version control system”?**

Version control systems are a category of software tools that helps in recording changes made to files by keeping a track of modifications done in the code.

**Benefits of the version control system:**

* Enhances the project development speed by providing efficient collaboration,
* Leverages the productivity, expedites product delivery, and skills of the employees through better communication and assistance,
* Reduce possibilities of errors and conflicts meanwhile project development through traceability to every small change,
* Employees or contributors of the project can contribute from anywhere irrespective of the different geographical locations through this VCS,
* For each different contributor to the project, a different working copy is maintained and not merged to the main file unless the working copy is validated. The most popular example is Git, Helix core, Microsoft TFS,
* Helps in recovery in case of any disaster or contingent situation,
* Informs us about Who, What, When, Why changes have been made.

**Git 🡪features**

1. Data Structure & Algorithm Classes (Live) Bestseller.
2. System Design (Live)
3. Java Backend Developer (Live) Bestseller.
4. Full Stack Development with React & Node JS (Live)
5. Complete Data Science Program Trending.
6. Data Structure & Algorithm-Self Paced(C++/JAVA) Bestseller.
7. Data Structures & Algorithms in Python.

**Git** 🡪**Uses**

Git is used to tracking changes in the source code, enabling multiple developers to work together on non-linear development.

**Github 🡪 features**

* Product. Actions. Automate any workflow. Packages. Host and manage packages. Security. Find and fix vulnerabilities. Instant dev environments. ...
* Solutions. For. Teams. Startups. By Solution. CI/CD & Automation. DevOps. ...
* Open Source. GitHub Sponsors. Fund open source developers. GitHub community articles. Repositories. Topics. Trending. ...
* Pricing.

**Github** 🡪**Uses**

* Create and use a repository.
* Start and manage a new branch.
* Make changes to a file and push them to GitHub as commits.
* Open and merge a pull request.

**Implementation:**