Why do we need Version Control?

Before we deep dive into VCS, we'll try to figure out WHY part of the topic. Let's try to answer below questions:

- Have you ever made a change to code, realised it was a mistake and wanted to revert back?
- Have you ever had to maintain multiple versions of a product?
- Do you want to prove that a particular change broke or fixed a piece of code?
- Have you ever wanted to review the history of some code?
- Have you ever lost code or had a backup that was too old?
- Have you ever wanted to see how much work is being done, and where, when and by whom?
- Have you ever wanted to submit a change to someone else's code?
- Have you ever wanted to share your code, or let other people work on your code simultaneously?
- Have you ever wanted to experiment with a new feature without interfering with working code?

If you have experienced difficulties due to any of the above condition then that's an indicator to use Version Control in your project.

What is Version Control?

Version Control, also known as Revision Control or Source Code Management, is the management of changes to documents, computer programs, websites or other collection of information.

These changes are often identified as numbers or letter code, termed as revision number. Each revision is associated with meta data like timestamp, author(a person who made changes), etc. Revisions can be compared, restored or merged.

Benefits:-

1. Version tracking and branching
2. Tagging
3. Restoring Previous Version
4. Collaboration
5. Easy Integration with IDE and other tools

Some VCS softwares:-

CVS (Concurrent Version System), SVN(Subversion)
GIT , TFS(Team Foundation Server) , Mercurial

Birth of Git:-

In 2005, the relationship between the community that developed the Linux kernel and the commercial company that developed BitKeeper broke down, and the tool's free-of-charge status was revoked. This prompted the Linux development community (and in particular Linus Torvalds, the creator of Linux) to develop their own tool based on some of the lessons they learned while using BitKeeper.

Full Story:- https://git-scm.com/book/en/v2/Getting-Started-A-Short-History-of-Git

What is Git:-

Git is the new fast-rising star of version control systems. Initially developed by Linus Torvalds (creator of Linux Kernel), Git has recently taken the Web development community by storm. With a distributed version control system, there isn’t one centralized code base to pull the code from. Different branches hold different parts of the code.

what is Github:-

GitHub is a Git repository hosting service, but it adds many of its own features. While Git is a command line tool, GitHub provides a Web-based graphical interface. It also provides access control and several collaboration features,

Let’s See the commands:-