VERSION CONTROL

1. Meaning of version control:

Version control is a systematic approach to tracking and managing changes in software code or other documents. It keeps a history of changes, allows you to restore previous versions and facilitates collaborative work on projects.

2. Advantages of version control:

Provides the ability to track and restore previous versions of code.

Allows multi-user collaboration on projects, avoiding conflicts.

Ensures data reliability and recoverability.

Helps identify and correct errors.

Allows you to separate functionality and experiments into separate branches.

3. Scope of Version Control: Version control is used in software development (eg, Git, SVN), design project management, documentation writing, and project management of any kind where it is important to track and coordinate changes.

4. Examples of commands (Git):

git init: Creates a new repository.

git clone: Clones a remote repository to the needed computer.

git add: Adds changes to the repository.

git commit: Commits changes to the history of repository.

git push: Pushes commits to a remote repository.

git pull: Updates a local repository from a remote repository.

git branch: Displays a list of branches and creates new ones.

5. Explanation of concepts: Version control allows you to create a history of changes (commits), work with branches (separate versions of code), work together on projects, resolve conflicts when merging changes, and restore previous versions of code using the commands listed above. All these aspects help to improve the quality of development, reduce the risk of data loss and facilitate the team's work together.