**Summary of Git versioning system and how the basics works**

**1. Git**

* Git is a free tool to save and track code changes.
* Many people can work on the same project without overwriting each other.

**2. GitHub**

* GitHub is a website to store Git projects online.
* It helps people share code and work together.

**3. Basic Git Commands**

* git init → start a new project with Git
* git status → check what changed
* git add . → prepare file to save, or staging.
* git commit -m "message" → save changes with a message
* git push → send changes to GitHub
* git pull → get new changes from GitHub

**4. Branching and Merging**

* Branch → work on new feature without affecting main code
* Merge → combine branch changes into main code
* Merge conflicts → happens if two people change same file part

**5. Undoing Changes**

* git reset → go back to old version
* git checkout -- [file] → remove changes in a file
* Be careful, this can remove work permanently

**6. Fork and Pull Requests**

* Fork → make copy of someone else project
* Pull request → suggest changes to original project

**7. Best Practices**

* Commit often and use clear messages
* Use branch for new features or fixes
* Pull changes from main project regularly
* Keep each commit for one task or change only