**Resolving Conflicts During Merge**

* A **merge conflict** occurs in Git when changes from two branches affect the same part of a file, and Git cannot automatically determine which change to keep.
* **Steps to resolve a merge conflict:**
  1. **Identify the conflict** – When you run git merge, Git will stop and mark the conflicting files. The conflict markers <<<<<<<, =======, and >>>>>>> will show the differences between your branch and the branch being merged.
  2. **Open the conflicting file(s)** – Review the changes from both branches.
  3. **Manually edit the file** – Decide which changes to keep, or combine them if needed, then remove the conflict markers.
  4. **Mark the conflict as resolved** – After editing, run git add <file> for each resolved file.
  5. **Complete the merge** – Run git commit to finalize the merge and save the resolution.
* Tools like **Git mergetool** or GitLab’s **web editor** can also be used for resolving conflicts more easily.

