**WEEK 8 : H03**

**Objectives – Branching and Merging in GitLab**

**🔹 Explain Branching and Merging**

* **Branching** allows developers to work on new features or fixes **without affecting the main codebase** (main or master).
  + You can create a new branch using:
  + git checkout -b feature-branch
* **Merging** is the process of combining changes from one branch (like a feature branch) into another (like main).
  + This is usually done **after review** via a merge request (MR) in GitLab.

**🔹 Explain Creating a Branch in GitLab**

* In GitLab, you can create a branch in two ways:
  1. Locally (using Git CLI) and push to GitLab:
  2. git checkout -b new-feature
  3. git push origin new-feature
  4. Directly in GitLab UI:
     + Go to Repository > Branches > Create New Branch
* Branches are used for isolated development (features, fixes, experiments).

**🔹 Explain Creating a Merge Request in GitLab**

* A **Merge Request (MR)** is a request to merge your changes from one branch to another (typically into main or develop).
* Steps to create a Merge Request:
  1. Push your branch to GitLab.
  2. Go to GitLab repository > Merge Requests > New Merge Request.
  3. Choose source branch (your feature branch) and target branch (usually main).
  4. Add a title, description, and reviewers.
  5. Submit the merge request.
  6. Team members can then review, comment, approve, and finally merge the changes into the main branch.