The Course Outcomes (Skill Set) mentioned in the image outline what a student will achieve after completing the course. Here's a breakdown of these outcomes:

1. **Use the basics commands related to git repository**:
    - Students will learn foundational Git commands to create, initialize, and manage a Git repository.
2. **Create and manage the branches**:
    - They will gain skills in creating and handling branches in Git to facilitate parallel development and effective collaboration.
3. **Apply commands related to Collaboration and Remote Repositories**:
    - The course will teach how to collaborate with other developers by using remote repositories (e.g., pushing, pulling, fetching) and managing contributions.
4. **Use the commands related to Git Tags, Releases, and advanced git operations**:
    - Students will learn to tag specific points in a repository's history for release purposes and use more advanced Git functionalities for efficient version control.
5. **Analyze and change the git history**:
    - The course will cover how to inspect and modify Git history (e.g., using `rebase`, `cherry-pick`, or `reset`), enhancing understanding and control over a repository's evolution.

Program Outcomes (POs):

1. **PO1 - Engineering Knowledge:**
    - Understanding and applying Git commands, branches, and repositories develops technical expertise in version control systems, crucial for modern software engineering.
2. **PO2 - Problem Analysis:**
    - Analyzing and modifying Git history involves critical thinking and problem-solving for effective code management.
3. **PO3 - Design/Development of Solutions:**
    - Creating and managing branches, handling releases, and using advanced Git commands contribute to designing efficient software development workflows.
4. **PO5 - Modern Tool Usage:**
    - Proficiency in Git demonstrates the ability to use modern tools for software development, a key competency for engineers.
5. **PO9 - Individual and Teamwork:**
    - Learning collaboration commands (push, pull, remote) enables effective teamwork in shared codebases.

Program Specific Outcomes (PSOs):

1. **PSO1 - Software Development Proficiency:**
    - Applying Git for collaboration, branching, and version control supports efficient and error-free software development.

2. **PSO2 - Advanced Software Engineering Practices:**
    - Using advanced Git operations like tagging, releases, and history modification reflects mastery of industry-standard software engineering practices.

Alignment Summary:

The **Course Outcomes (CO)** strongly align with the **POs** related to technical knowledge (PO1, PO3), teamwork (PO9), and tool usage (PO5). Similarly, the **PSOs** focus on building expertise in software development practices and advanced engineering skills. This ensures the course contributes to achieving broader program-level outcomes.

Course outcomes (Course Skill Set):
At the end of the course the student will be able to:

- Use the basics commands related to git repository
- Create and manage the branches
- Apply commands related to Collaboration and Remote Repositories
- Use the commands related to Git Tags, Releases and advanced git operations
- Analyse and change the git history

Mapping Table

Project management with Git

Course Outcomes	POs	PSOs
CO1:Use the basic commands related to Git	PO1(Engineering Knowledge)	PSO1 (Software Development Proficiency)
CO2:Create and Manage branches	PO1,PO3(Design/Development of solutions)	PSO1
CO3:Apply commands related to collaboration and remote repositories	PO5((Modern tool usage)	PSO1
CO4:Use commands for Git tags, releases and advanced git operations	PO1, PO5	PSO2(Advanced Software Engineering practices)
CO5: Analyze and change the git history	PO2 (Problem Analysis), PO3	PSO2