

**Symbiosis Institute of Technology**

**Faculty of Engineering**

**CSE- Academic Year 2025-26**

**DevOps Lab Batch 2022-26**

| **Lab Assignment No:- 3** | |
| --- | --- |
|  | |
| **Name of Student** | Pranshu Gupta |
| **PRN No.** | 22070122156 |
| **Batch** | 2022-26 |
| **Class** | CS-B |
| **Academic Year & Semester** | 2024  7 |
|  | |
| **Title of Assignment** | Branching Development Model-Build a branching model to help your team understand the git workflow for faster work integration. |
| **Theory** | Used Git Flow branching model to manage development and releases.   1. **Main branch (main)**     * Contains the stable production-ready code.    * Only release merges and hotfixes go here.    * Example: Release v1.0 and urgent bug fix were merged into main. 2. **Development branch (develop)**     * Used for ongoing development and integration.    * New features are merged here before release.    * Example: Login feature branch was merged into develop. 3. **Feature branches (feature/\*)**     * Created from develop for new features.    * Merged back into develop once complete.    * Example: feature/login branch was created and merged. 4. **Release branches (release/\*)**     * Created from develop when preparing a new version.    * Allows final testing and fixes before release.    * Example: release/v1.0 prepared, then merged into both main and develop. 5. **Hotfix branches (hotfix/\*)**     * Created from main to fix urgent issues in production.    * Merged back into both main (for production) and develop (to keep codebase updated).    * Example: hotfix/urgent-bug was merged into both main and develop. |
| **Output Screenshot** | 1. Create a Git Repository:      1. Create a README file:      1. Creating develop branch:      1. Feature Branch:      1. Newly created branch:      1. Merge Feature into Develop:      1. Release Branch:      1. Merge Release into Main and Tag:      1. Hotfix branch:      1. Merge into both main and develop:   11. All the commits: 12. The final graph of all the commits:  13. All the final branches: |
| **Conclusion** | In this experiment, we successfully implemented the Git Flow branching model to manage a software project. The model provided a structured way to handle feature development, release preparation, and urgent bug fixes while keeping the main branch stable for production. |