# Lab 03 – Advanced Git Operations

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\*\*Roll No:\*\* 2023-BSE-077

\*\*Class:\*\* BSE5-B

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## Task 1 – Handling Local and Remote Commit Conflicts (Pull vs Pull --rebase)

### Remote Edit on GitHub

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\01remote\_edit.png

### Local Edit and Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\02local\_commit.png

### Attempt to Push and Observe Error

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\03push\_error.png

### Merge Local and Remote Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\04merge\_commit.png

### Push After Merge

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\05push\_after\_merge.png

### Rebase Local Commits on Remote Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\06rebase\_pull.png

### Push After Rebase

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\07push\_after\_rebase.png

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## Task 2 – Creating and Resolving Merge Conflicts Manually

### Local Conflicting Change

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\09local\_conflict\_edit.png

### Remote Conflicting Change

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\09remote\_conflict\_edit.png

### Local Conflict Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\10local\_conflict\_commit.png

### Pull with Rebase and Detect Conflict

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\12conflict\_message.png

### Attempt to Push and Observe Error

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\11conflict\_push\_error.png

### Resolving Conflicts in Editor

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\13resolved\_readme.png..png

### Continue Rebase After Conflict Resolution

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\13rebase\_continue.png

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\14rebase\_continue.png

### Push Resolved Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\15push\_after\_resolve.png

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## Task 3 – Managing Ignored Files with .gitignore and Removing Tracked Files

### Create Directory and Files

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\16push\_textfiles.png

### Add .gitignore File

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\17gitignore\_push.png

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## Task 4 – Create Temporary Changes and Use git stash

### Modify File and Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\19modified\_readme.png

### Attempt Branch Switch with Uncommitted Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\19checkout\_error.png

### Stash Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\20stash\_command.png

### Switch Branch Successfully

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\21branch\_switched.png

### Return to Feature Branch

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\22back\_to\_feature.png

### Check Clean Working Directory

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\22status\_clean.png

### Restore Stashed Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\23stash\_pop.png

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## Task 5 – Checkout a Specific Commit Using git log

### View Commit History

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\24log\_before\_checkout.png

### Checkout a Specific Commit (Detached HEAD)

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\25detached\_head.png

### Return to Main Branch

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\26back\_to\_main.png

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## Task 6 – Resetting Commits (Soft vs Hard Reset)

### First Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\27first\_commit.png

### Second Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\28second\_commit.png

### View Commit History Before Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\29log\_before\_reset.png

### Verify File Before Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\30file\_before\_reset.png

### Perform Soft Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\31soft\_reset.png

### View Commit History After Soft Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\32log\_after\_soft\_reset.png

### Verify File After Soft Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\33file\_after\_soft\_reset.png

### Perform Hard Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\35hard\_reset.png

### View Commit History After Hard Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\36log\_after\_hard\_reset.png

### Check File After Hard Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\37file\_after\_hard\_reset.png

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## Task 7 – Amending the Last Commit

### Initial Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\38first\_amend\_commit.png

### Amend Last Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\39amend\_commit.png

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## Task 8 – Reverting a Commit (Safe Undo on Remote Branch)

### Create Temporary Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\40commit\_temp\_file.png

### Revert Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\41revert\_commit.png

### Push Revert Commit

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\42revert\_push.png

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## Task 9 – Force Push (With Caution)

### Create New Branch

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\43new\_branch.png

### Make and Commit Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\44force\_commit.png

### Push Branch Normally

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\45push\_force\_branch.png

### Perform Hard Reset

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\46hard\_reset\_force.png

### Normal Push After Reset (Rejected)

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\47normal\_push.png

### Force Push Changes

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\49force\_push.png..png

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## Task 10 – Running Gitea in GitHub Codespaces via Docker Compose / Fork Gitea Repository

### Fork Gitea Repository

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\50forked\_gitea.png

### Open Codespace

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\51codespace\_loading.png

### Start Gitea Using Docker Compose

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\52docker\_up.png

### Access Gitea Install Page

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\53gitea\_install\_page.png

### Admin Setup

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\54admin\_setup.png

### Login and Dashboard

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\55gitea\_dashboard.png

### Create New Repository

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\56gitea\_new\_repo.png

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## Task 11 – Creating a GitHub Pages Portfolio Site

### Create GitHub Pages Repository

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\57github\_pages\_repo.png

### Add Local Static Site Files

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\58local\_static\_site.png

### Push Files to GitHub

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\59push\_static\_site.png

### Check GitHub Pages Settings

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\60github\_pages\_settings.png

### Visit Live Site

C:\Users\Lenovo\OneDrive\Desktop\cc\_sadafriaz\_077\_lab-2\lab 3\Screenshots\61live\_site.png

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## 📁 Folder Structure