## OBJECTIVES

This assignment provides hands-on experience in managing collaborative projects using Git and GitHub from scratch. Students will learn to initialize repositories, organize a team workflow, apply Git branching strategies, handle pull requests, enforce branch protection, and maintain a clean, linear history using simple git rebase.

By the end, students will be able to:

* Initialize and configure a local and remote repository.
* Manage branches and pull requests in a collaborative workflow.
* Use git rebase to keep branches up to date.
* Configure branch protection rules.
* Handle merge conflicts and release management effectively.

## IMPORTANT INSTRUCTIONS

* Group Size: Five (5) students per group.
* Team Lead: One student will act as the Team Lead, and the other four will be Team Members.
* Repository Setup: The Team Lead will create the local Git repository, set up the required folder structure, and connect it to a new GitHub repository.
* Repository URL: The Team Lead must paste the GitHub repository URL in this document before submission.
* User Configuration: Each student must configure Git with their lowercase username and university email before committing:  
   git config user.name "yourname"  
   git config user.email [your.email@ucp.edu.pk](mailto:your.email@ucp.edu.pk)
* Submission: Only the Team Lead will submit this document after filling in Table 1 and including the repository URL.
* Plagiarism: Identical repositories, commits, or copied content will result in zero marks.

## Table 1: Group Details

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sr # | Student Name | University Email | GitHub Username | Role (Lead/Member) | Branch Worked On |
| 1 | Muhammad Haris | L1f21bsse0067@ucp.edu.pk | solvifyharis | Lead | Yes  index.html (Home)  profile.html (Profile) |
| 2 | Faizan | l1f23bsse0101@ucp.edu.pk | [**feezzii**](https://github.com/feezzii) | Member | Yes  achievements.html (Achievements) |
| 3 | Khadija | L1F22BSSE0382@ucp.edu.pk | khadej79 | Member | Yes  projects.html (Projects) |
| 4 | Fatima | L1f22bsse0366@ucp.edu.pk | [**fatimairfan393-cmd**](https://github.com/fatimairfan393-cmd) | Member | Yes  skills.html (Skills) |
| 5 |  |  |  |  |  |

**Group Repository URL: https://github.com/DevopsF25/student-portfolio.git**

## SCENARIO

## Student Portfolio Showcase Website

Your team will collaboratively design a multi-page “Student Portfolio Showcase” website. The project will include five interlinked HTML pages, all styled using a single shared CSS file (styles/style.css). The Team Lead will initialize the repository structure from scratch and set up all required Git configurations and branches.

## REQUIRED FOLDER STRUCTURE

The Team Lead must create the following folder structure:  
  
student-portfolio/  
│  
├── .gitignore  
├── README.md  
├── src/  
│ ├── index.html  
│ ├── profile.html  
│ ├── projects.html  
│ ├── skills.html  
│ └── achievements.html  
└── styles/  
 └── style.css  
  
**Notes:**

* All HTML files must be inside the src/ folder.
* The shared CSS file must be inside the styles/ folder.
* Team Lead must create and commit a .gitignore file in the initial commit.
* All pages must link to ../styles/style.css.
* Website design should be consistent, neat, and responsive using CSS media queries.

## PAGE ASSIGNMENTS

|  |  |  |
| --- | --- | --- |
| Page | Description | Responsibility |
| index.html (Home) | Contains the website title “Showcase Hub,” group name, navigation links to all pages, and a short “About Team” section. | Team Lead |
| profile.html (Profile) | Displays one student’s photo, bio, and educational background. | Member 1 |
| projects.html (Projects) | Lists at least three projects with short descriptions and dummy links. | Member 2 |
| skills.html (Skills) | Lists technical and soft skills in table or list format with proficiency levels. | Member 3 |
| achievements.html (Achievements) | Highlights awards, certifications, or extracurricular achievements. | Member 4 |

## TASKS & MARKING (100 Marks)

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Task** | **Description** | **Marks** |
| **1** | **Initialize Local Repo & Create Remote** | Team Lead creates the student-portfolio/ folder, runs git init, adds .gitignore and README.md, commits, creates a **new GitHub repository**, connects it using git remote add origin <URL>, and pushes the first commit. | 10 |
| **2** | **Add Collaborators** | Team Lead adds all members as collaborators. Each member accepts the invitation. | 5 |
| **3** | **Create Folder Structure & Baseline Commit** | Team Lead creates src/ and styles/ folders, adds all placeholder files, commits, and pushes the project baseline to GitHub. | 10 |
| **4** | **Set Up Branches & Protection Rules** | Team Lead creates two branches — main (production) and develop (integration). Configure protection rules:• No direct pushes• Require Pull Requests• Require **2 approvals** for merges into develop and **3 approvals** for merges into main. | 10 |
| **5** | **Create & Assign Issues** | Team Lead creates five GitHub Issues using the format [Feature] PageName Implementation and assigns them to members. | 10 |
| **6** | **Clone Repo & Create Feature Branches** | Each member clones the repository and creates their branch from develop named feature/<page-name> (e.g., feature/skills-page). | 5 |
| **7** | **Implement Web Pages** | Each member develops their assigned page inside src/ and updates the shared styles/style.css. Each must add at least one CSS media query for responsiveness. | 20 |
| **8** | **Commit, Push & Pull Requests** | Members make multiple descriptive commits, push their branches to GitHub, and create Pull Requests into develop. Assign other members as reviewers and Team Lead as assignee. | 10 |
| **9** | **Rebase & Merge Pull Requests** | Before merging, each member rebases their branch with the latest develop:git fetch origingit rebase origin/developResolve conflicts (if any), push updates, and merge after **2 approvals**. | 10 |
| **10** | **Resolve Merge Conflicts** | If conflicts occur (especially in styles/style.css), the responsible member must resolve them locally, commit, and update the PR. | 5 |
| **11** | **Release Branch & Testing** | Once all features are merged into develop, Team Lead creates a branch release/v1.0. All members test the site and fix minor issues. | 5 |
| **12** | **Merge to Production & Sync Develop** | Team Lead creates a PR from release/v1.0 → main. Require 3 approvals before merging. Then merge release/v1.0 → develop to synchronize both branches. | 5 |

## SUBMISSION REQUIREMENTS

The **Team Lead** must submit:

1. The completed **Table 1**.
2. The **Group Repository URL** (pasted in this document).
3. Screenshots (clearly labeled) of:

* Repository initialization and remote setup
* .gitignore file
* Branch protection rules
* Issues and Pull Requests
* Conflict resolution (if any)
* Final merges to main
* (Optional) Repository Secret TEAM\_NAME

1. A short note (3–4 lines) summarizing teamwork and challenges faced.