

Git RealWorld Scenario – Practice Notes

1. Initialize Repository

```
mkdir devops_practice
cd devops_practice
git init
echo Hello DevOps > index.txt
git add index.txt
git commit -m "first"
```

2. Branch Creation and Work

```
git branch dev
git checkout dev
echo New line>>index.txt
git add .
git commit -m "new"
```

3. Merge to Master

```
git checkout master
git merge dev
```

4. Connect to GitHub Remote

```
git remote add origin https://github.com/yourrepo.git
git push -u origin master
```

5. Common Error – Non Fast Forward

Error occurs when remote has commits that local does not have.

Solution:

```
git pull origin master --rebase --allow-unrelated-histories
```

6. Merge Conflict Resolution

```
Open conflicted file
Remove <<<<<< ===== >>>>>> markers
git add index.txt
git rebase --continue
```

7. Final Push

```
git push -u origin master
```

Key Learning Points

- 1 Always pull before push
- 2 Avoid nested git repositories
- 3 Use rebase to keep history clean
- 4 Conflicts must be resolved manually
- 5 Branch based workflow is industry standard