Git Reset and Revert Lab - Step-by-Step Guide

# 🧪 Lab Setup Instructions (Step-by-Step)

## 🔧 Step 1: Create a Local Git Repository

mkdir git-reset-demo  
cd git-reset-demo  
git init

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## 📝 Step 2: Create a Sample File and Make Some Commits

echo "Line 1" > file.txt  
git add file.txt  
git commit -m "Commit 1: Add Line 1"  
  
echo "Line 2" >> file.txt  
git add file.txt  
git commit -m "Commit 2: Add Line 2"  
  
echo "Line 3" >> file.txt  
git add file.txt  
git commit -m "Commit 3: Add Line 3"

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A screenshot of a computer program

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## 🔄 Step 3: Demonstrate git reset options

### a. git reset --soft

git reset --soft HEAD~1  
# Effect: Removes the last commit, but keeps changes staged (in index)  
git status  
cat file.txt

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### b. git reset --mixed

git reset --mixed HEAD~1  
# Effect: Removes the last commit, keeps changes unstaged  
git status

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### c. git reset --hard

git reset --hard HEAD~1  
# Effect: Removes the commit and discards the changes too  
cat file.txt

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## 🔁 Step 4: Demonstrate git revert

# Re-add Line 3  
echo "Line 3" >> file.txt  
git add file.txt  
git commit -m "Commit 3: Add Line 3 again"  
  
# Revert last commit  
git revert HEAD  
# Effect: Creates a new commit that undoes the last commit  
git log --oneline  
cat file.txt

A screen shot of a computer program

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