Git Demo: One-Page Command Sheet

1. Init & First Commit

```
mkdir hello-git && cd hello-git
git init
echo '#include <stdio.h>\nint main() { printf("Hello Git!\\n"); return 0; }' > hello.c
cat hello.c
git add hello.c
git commit -m "Add hello world program"
git log --oneline
```

2. Branching & Merging

```
git checkout -b print-name
echo '// by Tracy' >> hello.c
git commit -am "Add author comment"

git checkout main
git merge print-name
```

3. Revert a Commit

```
git log --oneline        # copy a commit ID
git revert <commit-id> --no-edit
```

4. Merge Conflict Demo

```
# Setup
mkdir merge-conflict-demo && cd merge-conflict-demo
git init
echo "int main() { return 0; }" > main.c
git add main.c
git commit -m "Initial commit with main.c"

# Create Conflicting Branches
git checkout -b feature-a
echo "// Feature A added" >> main.c
git commit -am "Add comment for feature A"

git checkout main
git checkout -b feature-b
echo "// Feature B added" >> main.c
git commit -am "Add comment for feature B"
```

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```
# Merge and Trigger Conflict
git checkout feature-b
git merge feature-a      # Conflict!
cat main.c
```

Quick Conflict Resolution (Both Lines)

```
echo 'int main() { return 0; }\n// Feature B added\n// Feature A added' > main.c
git add main.c
git commit -m "Resolve merge conflict by keeping both features"
```

5. Useful Extras

```
git status
git diff
git log --graph --oneline --all
git checkout -- hello.c     # discard local changes
```