

# Data Visualization with R Git tutorial

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# Creating a new repository

Create a new repository on GitHub.

Go to Settings > Collaborators to add new people to the repository.

Accept the invitation that you have received by email.

On your terminal, clone the repository.

```
git clone "https://github.com/MyName/example.git"
```

# Modifying the content of the repository

Check the changes in the repository.

```
git status
```

Track a new or a modified file.

```
git add README.md
```

Create a new commit with all the tracked changes.

```
git commit -m "My new commit"
```

Push the changes to the remote repository.

```
git push
```

# Creating a conflict

What happens if you try to push your local changes on the remote while the remote contains modifications that you do not have locally?

```
git push
```

```
To https://github.com/ADucellierIHME/example.git
! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/ADucellierIHME/example.git'
hint: Updates were rejected because the remote contains work that you do
hint: not have locally. This is usually caused by another repository pushing
hint: to the same ref. You may want to first integrate the remote changes
hint: (e.g., 'git pull ...') before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

# Identifying the conflict

Fetch the latest changes from the remote

```
git pull
```

```
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 971 bytes | 194.00 KiB/s, done.
From https://github.com/ADucellierIHME/example
   d594a48..8b962fd  main       -> origin/main
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
error: could not apply f803211... local modif
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
Could not apply f803211... local modif
```

# Solving the conflict

Check the files that have conflicts.

```
git status  
nano README.md
```

```
<<<<<< HEAD  
First modif.  
=====  
Second modif.  
>>>>>> f803211 (local modif)
```

Now we can get back to git add/commit/push.

# Additional resources on Git

Software carpentry tutorial:

<https://swcarpentry.github.io/git-novice/>