

Training on Web Scraping Prices for CPI

How to RAP

Christophe Bontemps & Serge Goussev



WHAT DOES A RAP LOOK LIKE?



C

Idealy, Input (website) and output (report) are linked

WHAT DOES A RAP LOOK LIKE?



C

Many steps are needed to create a report

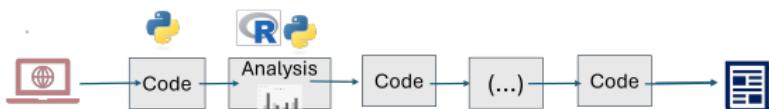
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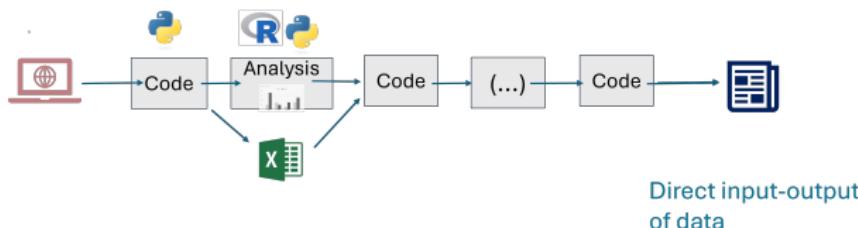
All steps should be linked in a structured process

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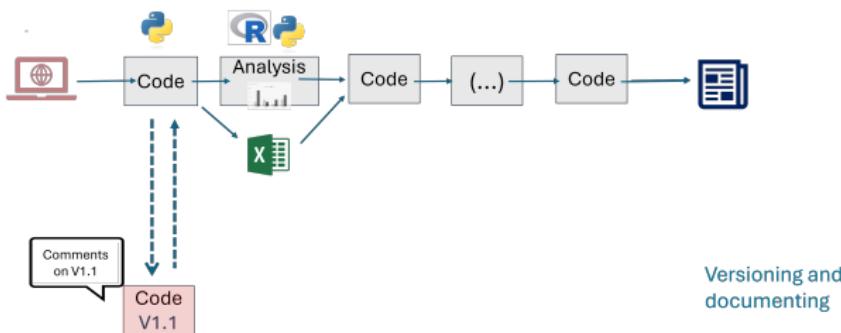
And only through code (Python, R, *Stata*), no copy/paste

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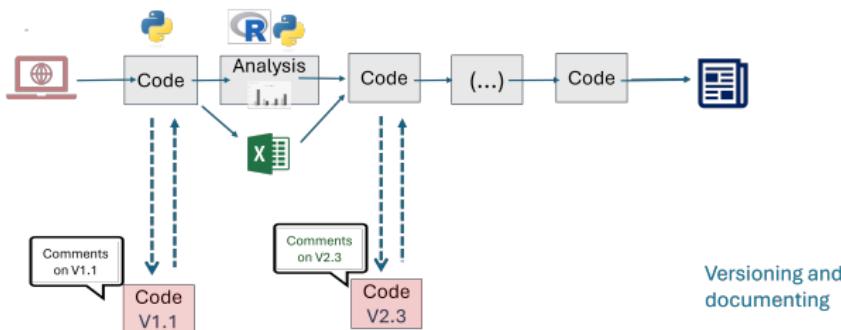
There may be side-products, but with explicit output-input links

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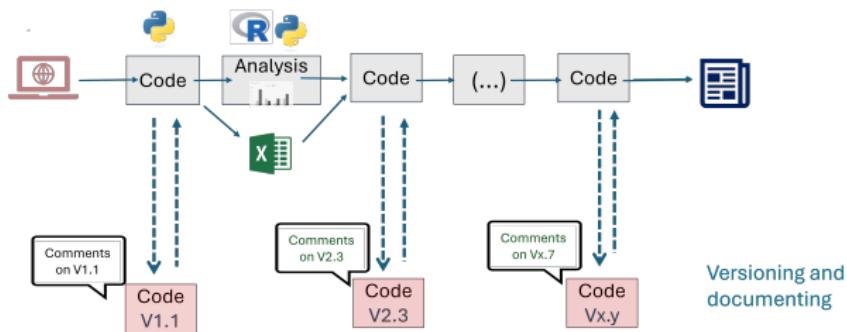
If needed, code can be updated (new versions)

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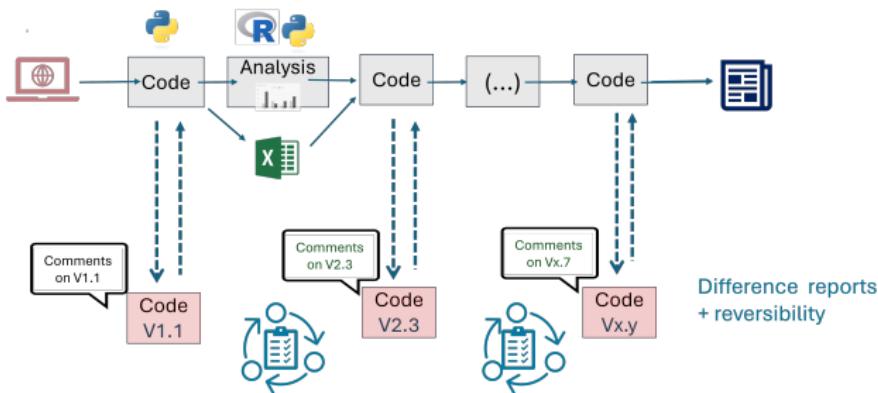
And comments added for each change

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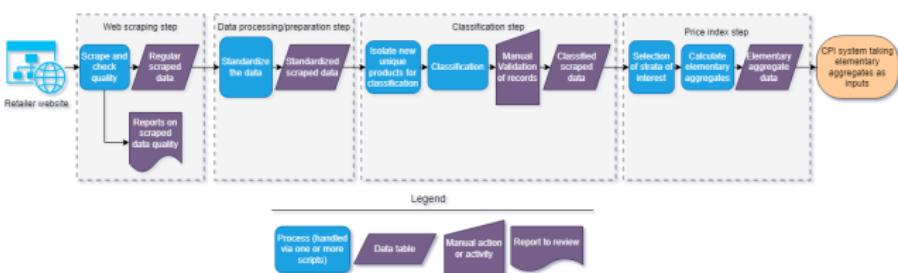
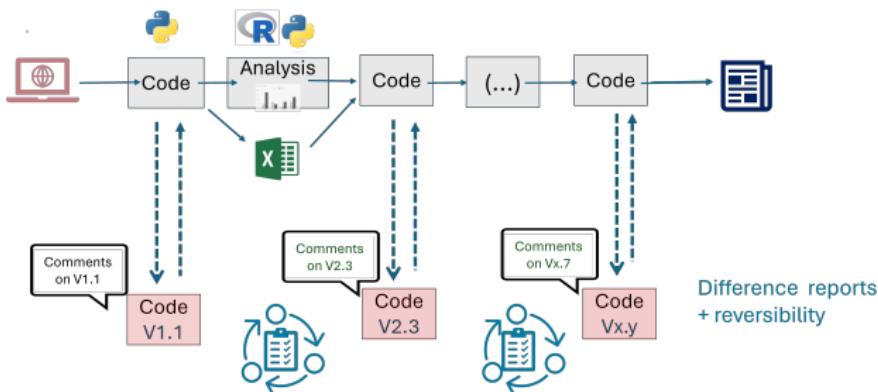
Documentation on the process builds up with code changes

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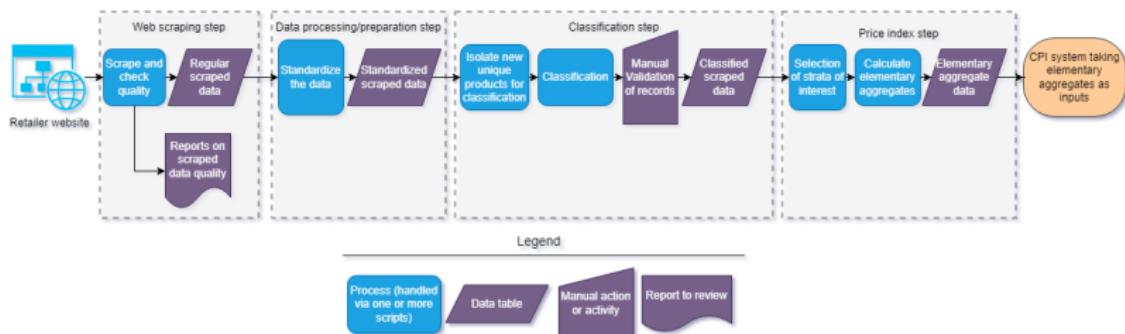


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RAP PRINCIPLES 1: AUTOMATION - MODULAR CODING

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- ▶ *Exercise part 1 (15 minutes)*

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 - *Look at a notebook that you developed for this course - and see how to separate out what you did into functions.*

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Tools: Draw.io, Figma, ···

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- ▶ *Exercise part 1 (15 minutes)*
 - *Look at a notebook that you developed for this course - and see how to separate out what you did into functions.*
 - *Create functions, use these functions in a main document*

RAP PRINCIPLES 2:

TRANSPARENCY - OPEN SOURCE - VERSION CONTROL

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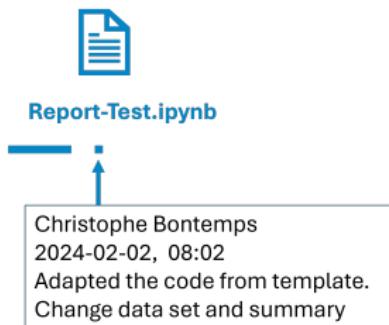
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- ▶ *Exercise part 2 (Afternoon session)*

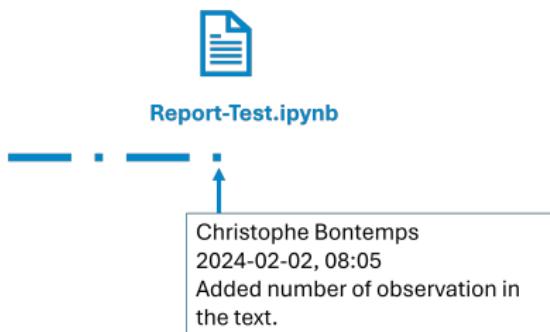
VERSION CONTROL MAIN COMMANDS

commit for every change!



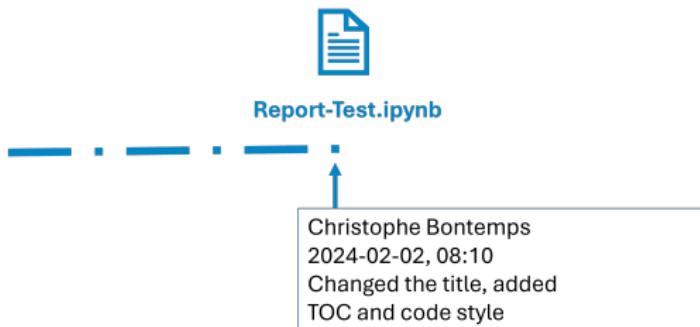
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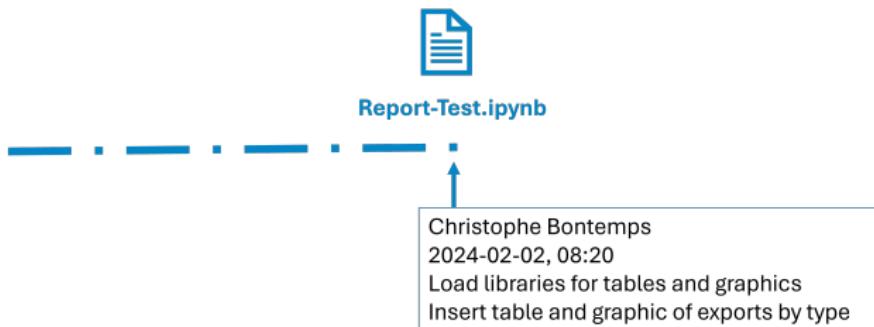
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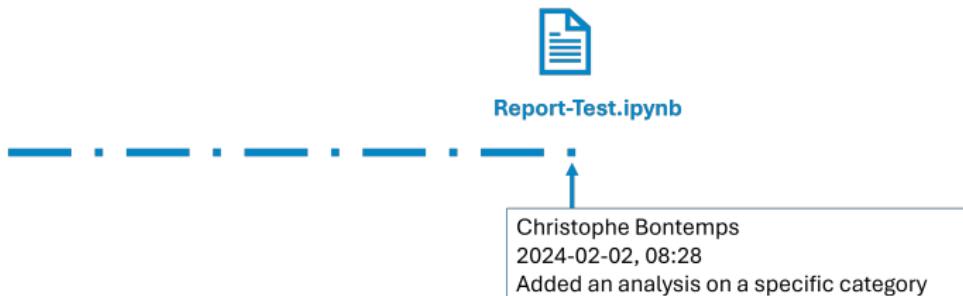
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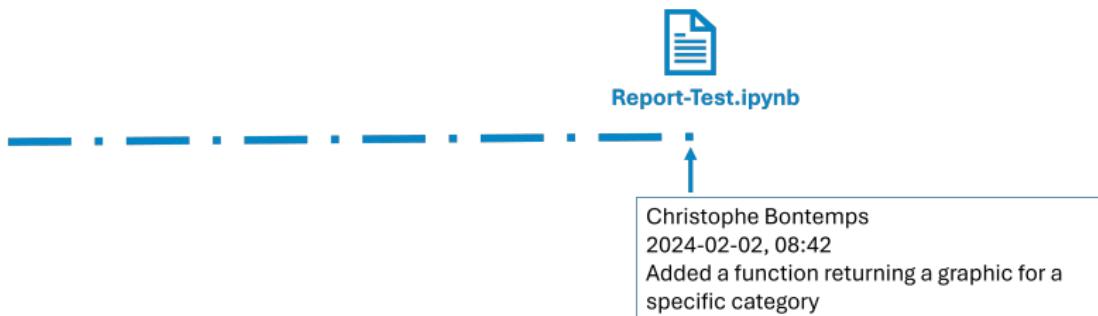
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Report-Test.ipynb



THE HISTORY OF THE FILE IS RECORDED!

Each version is documented (with *commits*)



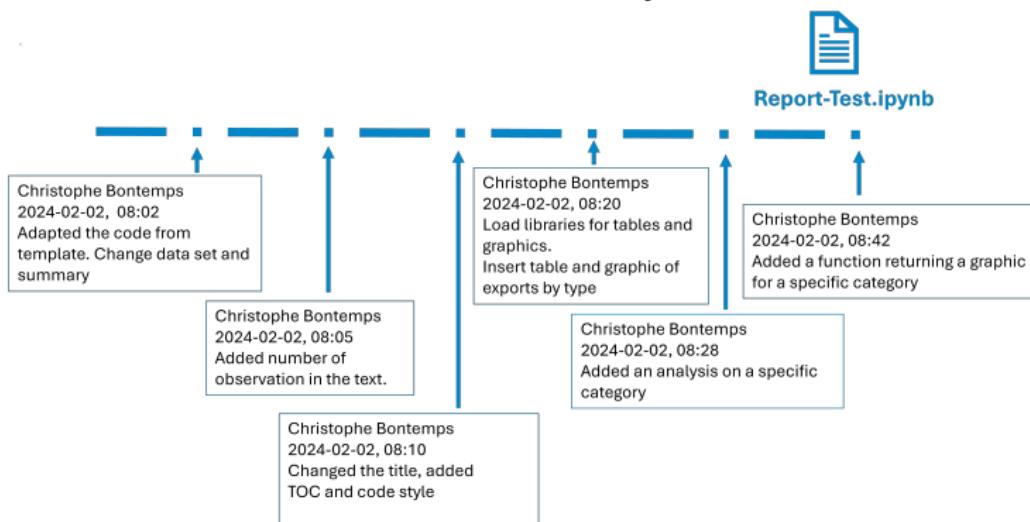
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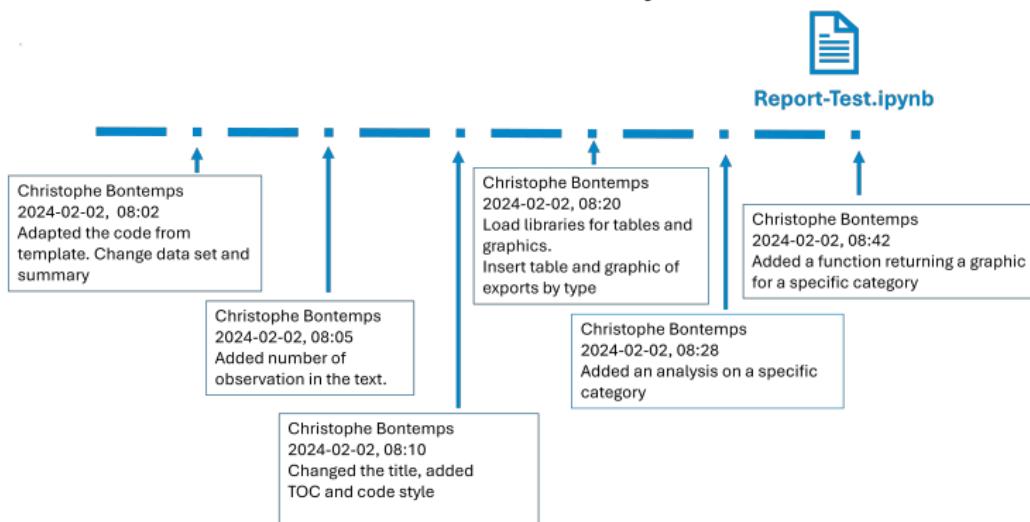
THE HISTORY OF THE FILE IS RECORDED!

Each version embeds the full history!



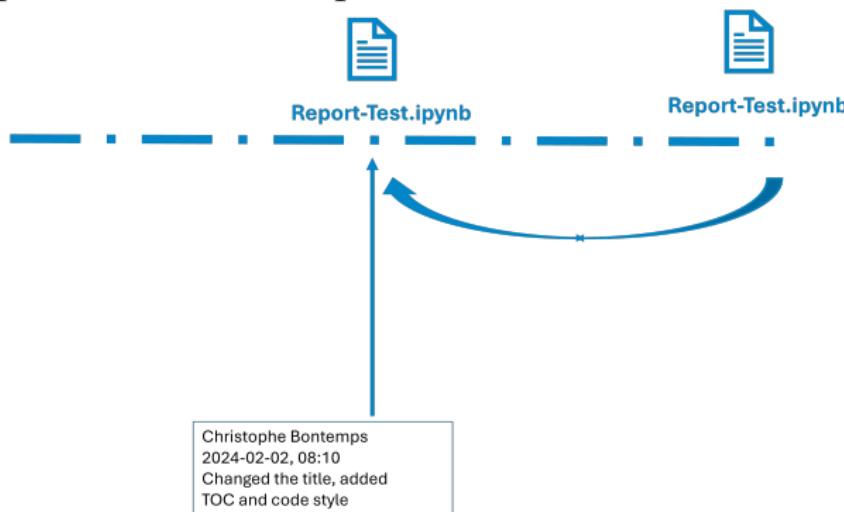
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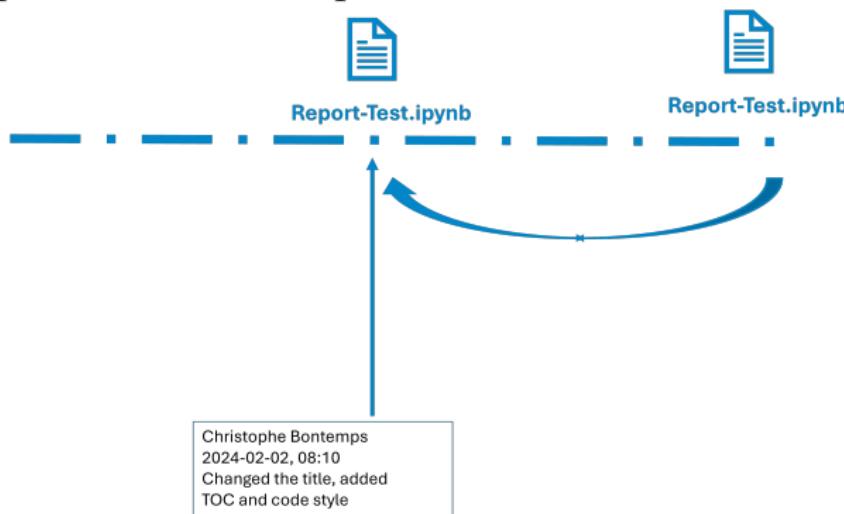
GOING BACK AND "UNDO" IS POSSIBLE

It is possible to review previous version...



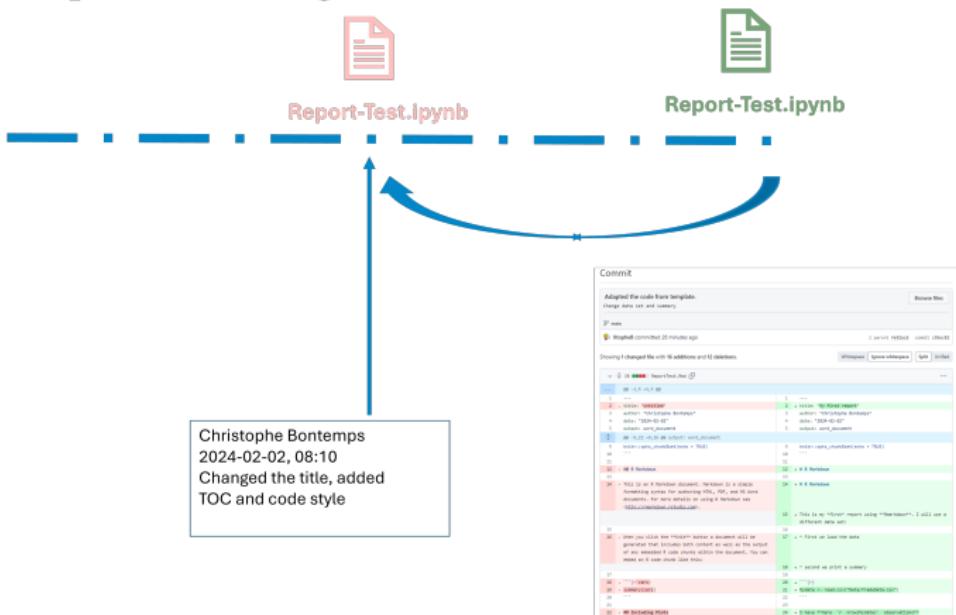
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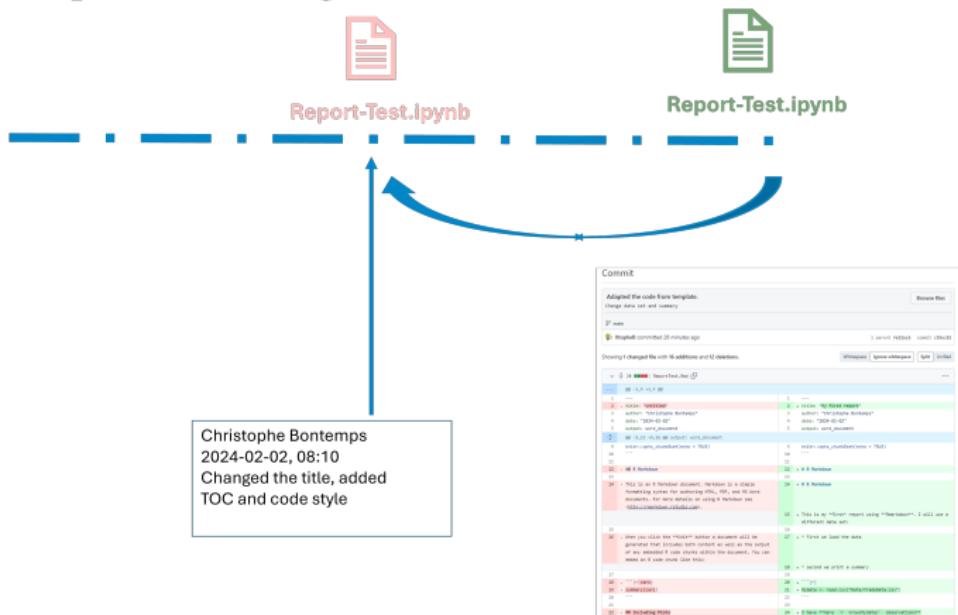
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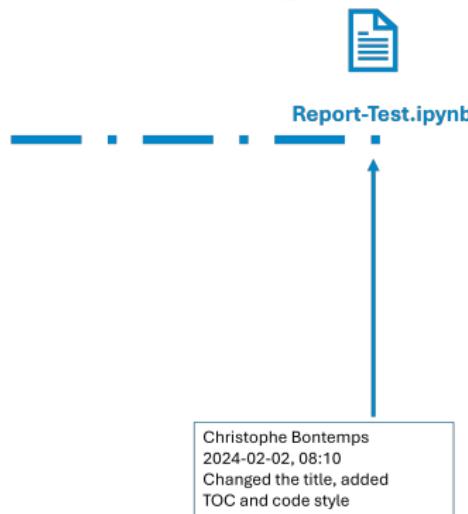
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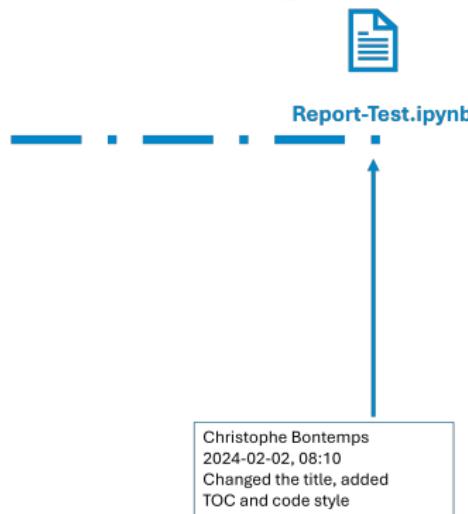
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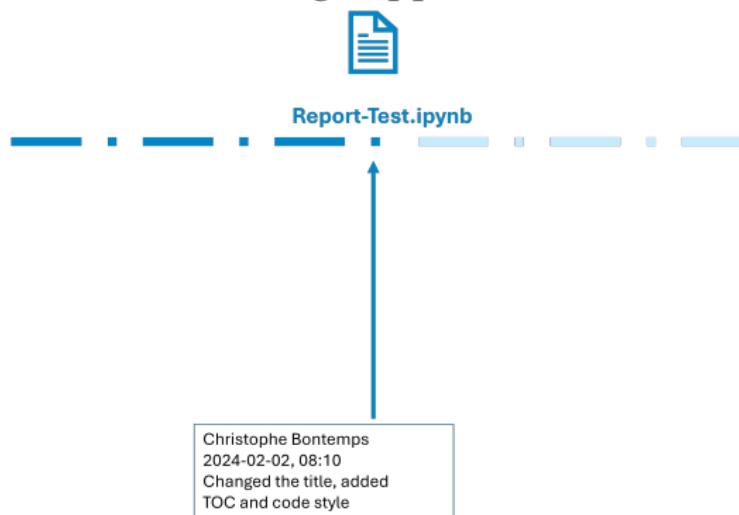
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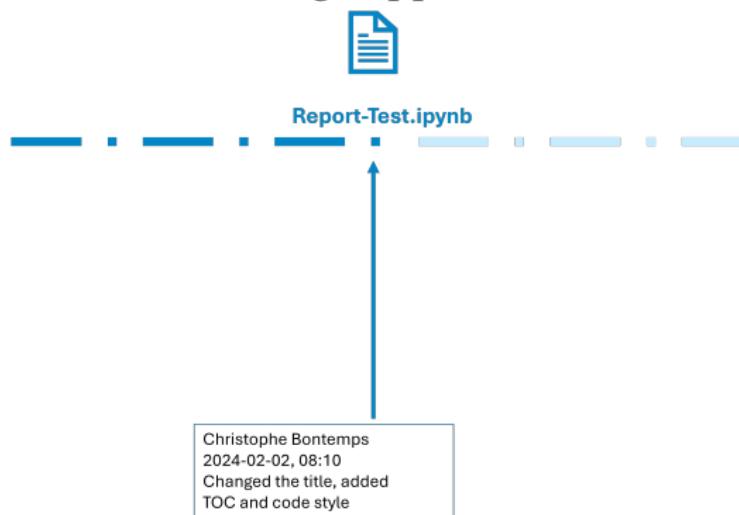
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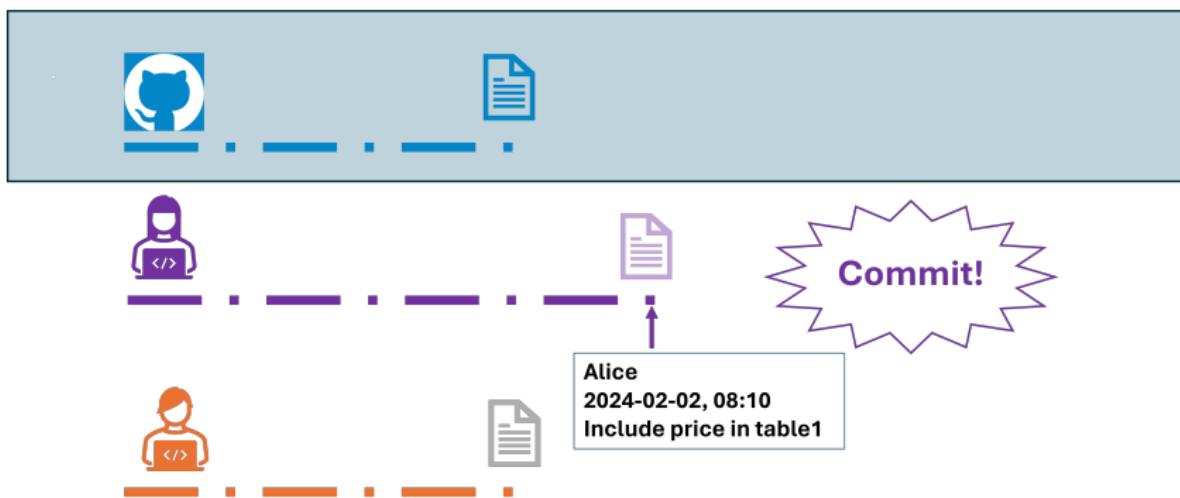
GIT FOR COLLABORATING

Alice and Bob work on the same file



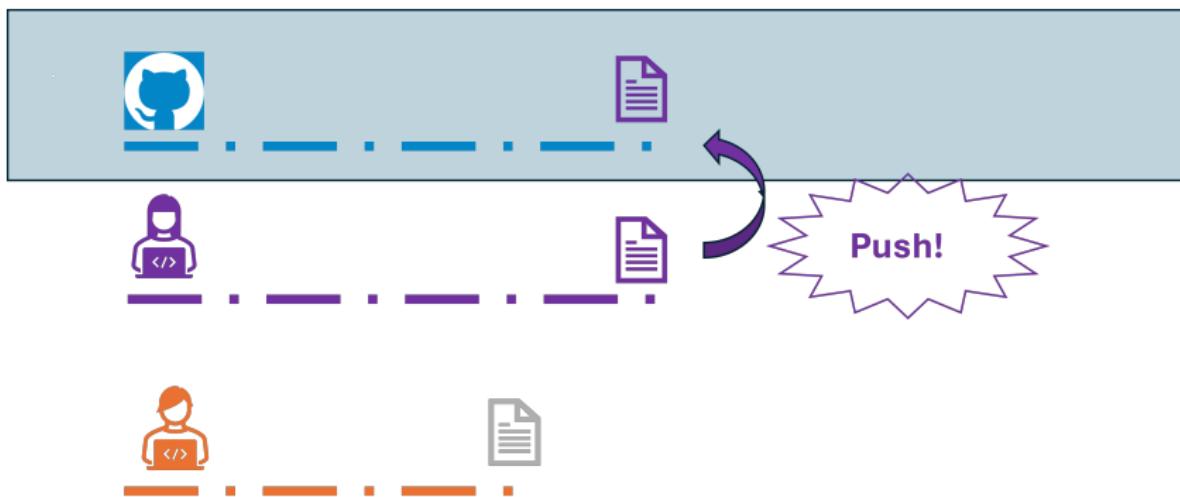
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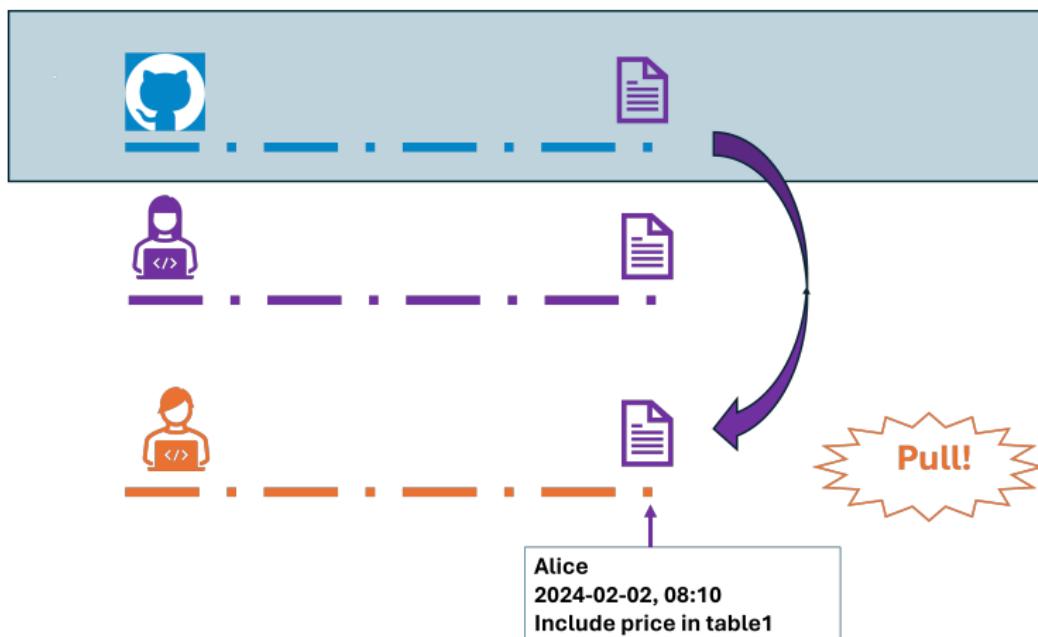
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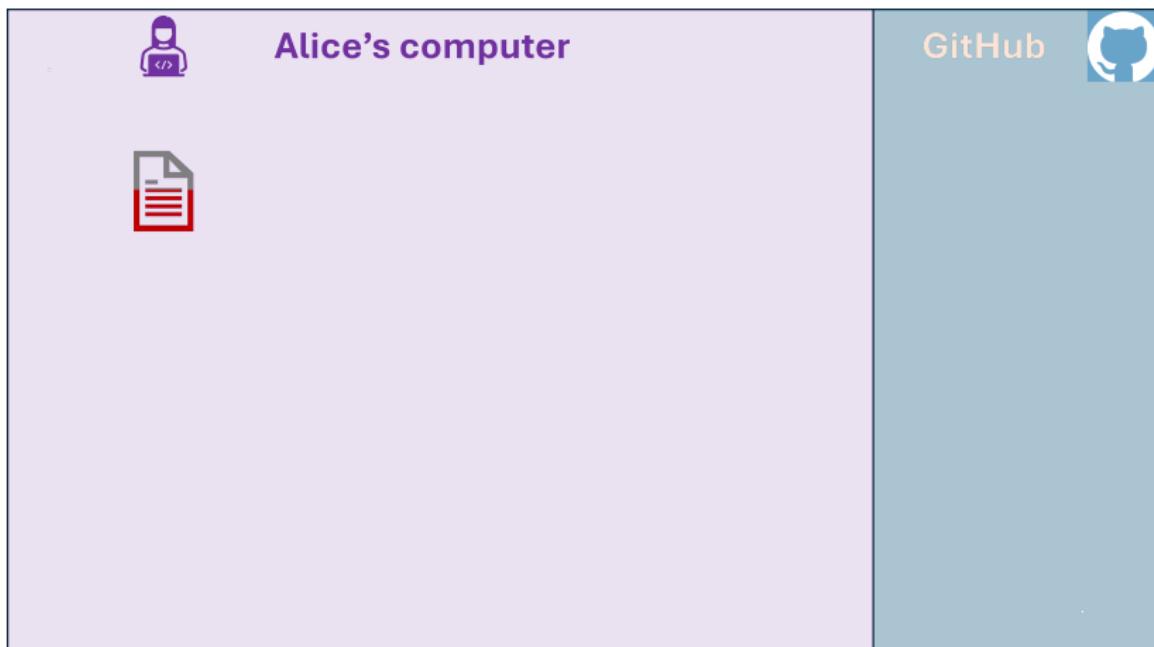
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- ▶ **Pull:**
→ Action of retrieving modified file(s) to local working directory

GIT FOR COLLABORATING: DETAILS

Alice and **Bob** work on the same file (Details)

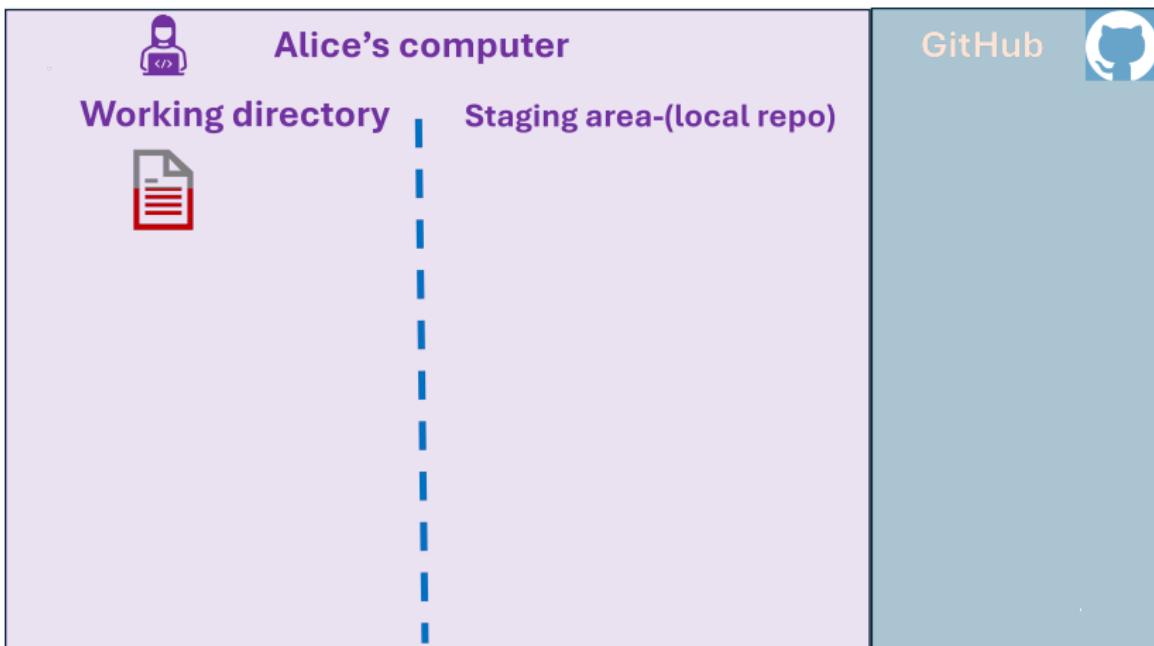
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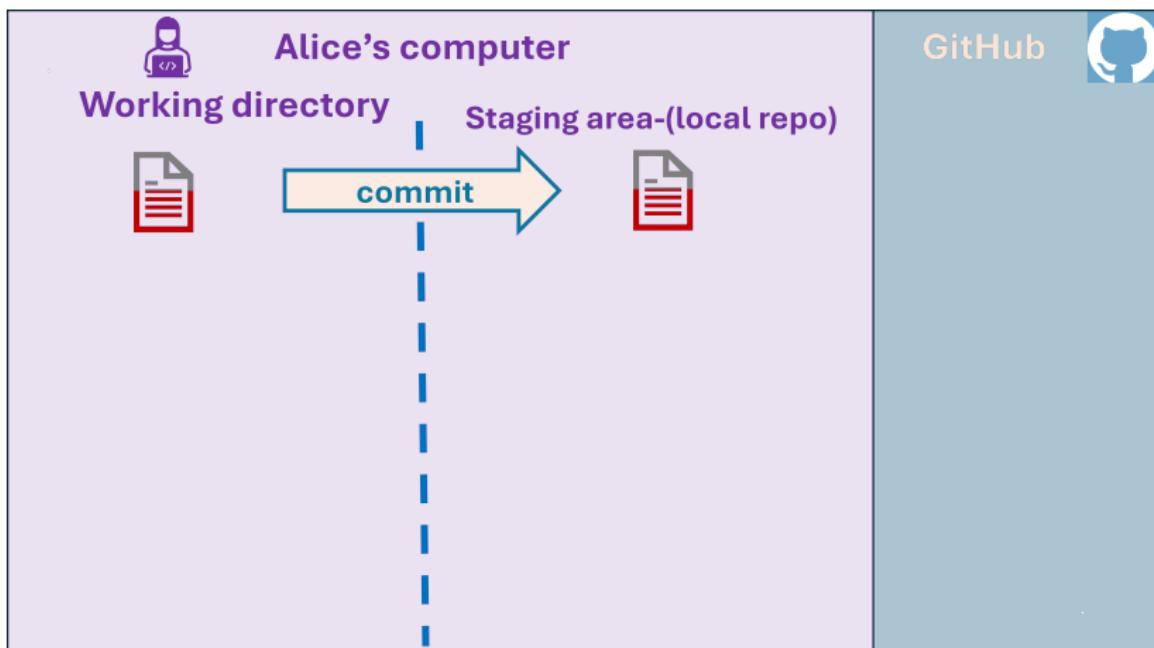
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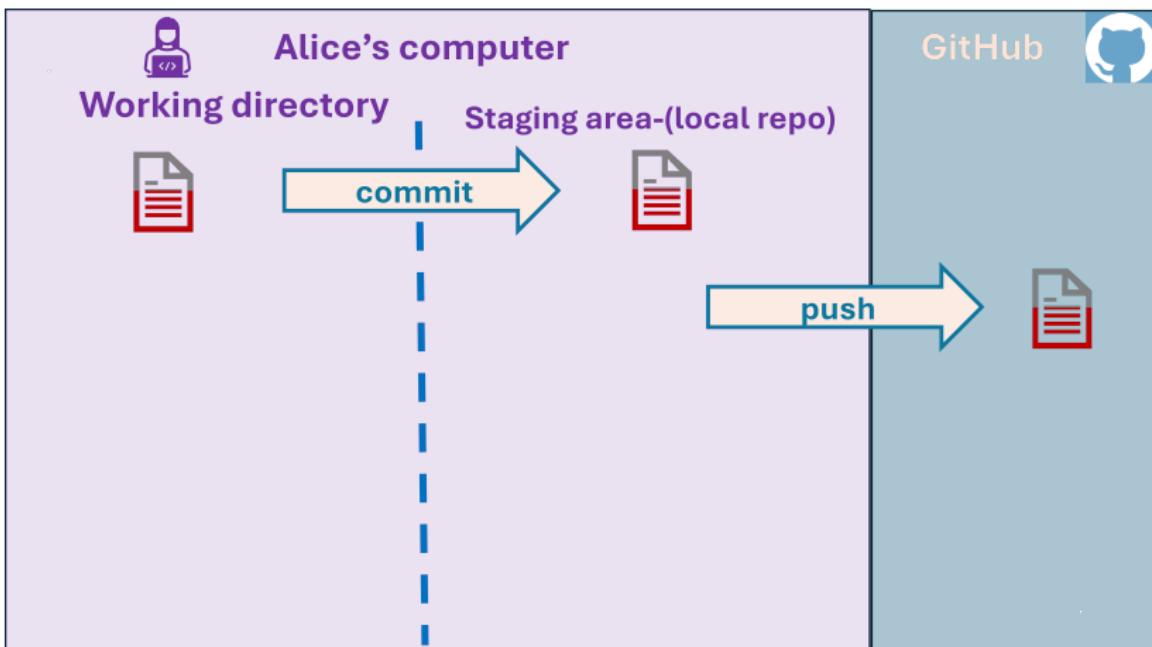
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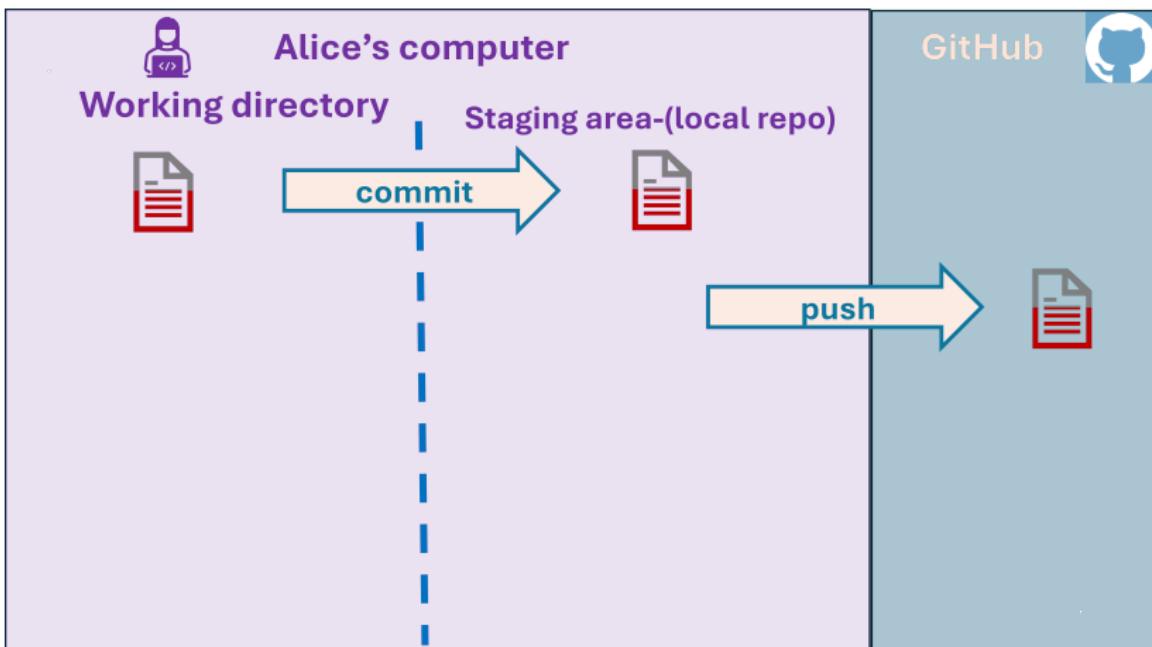
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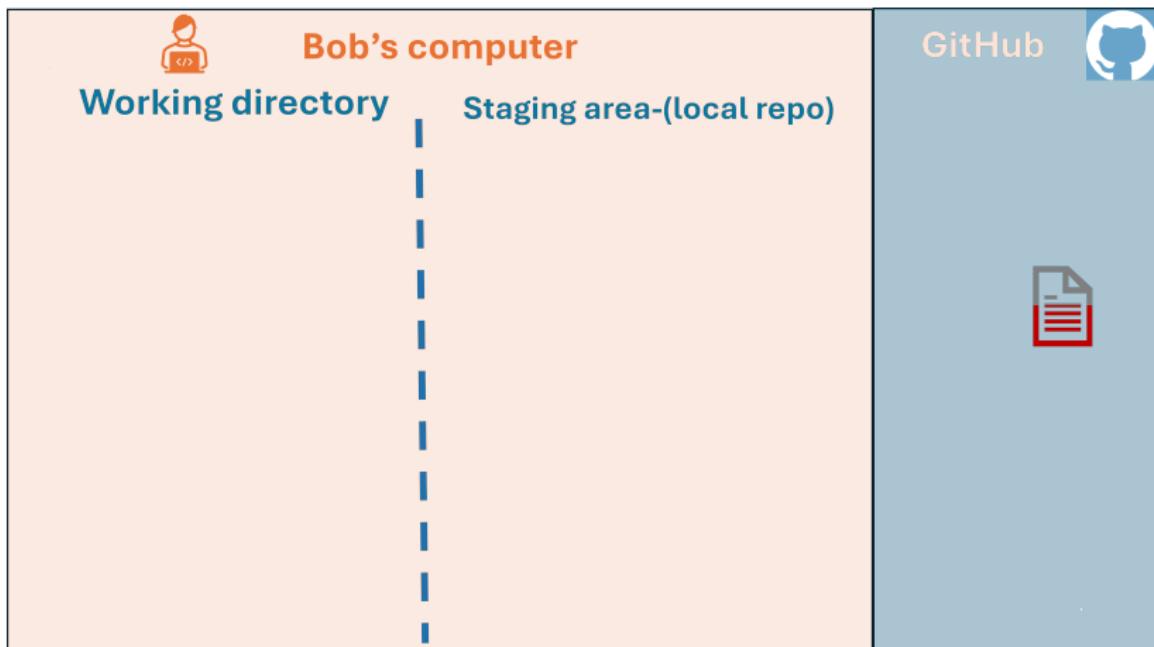
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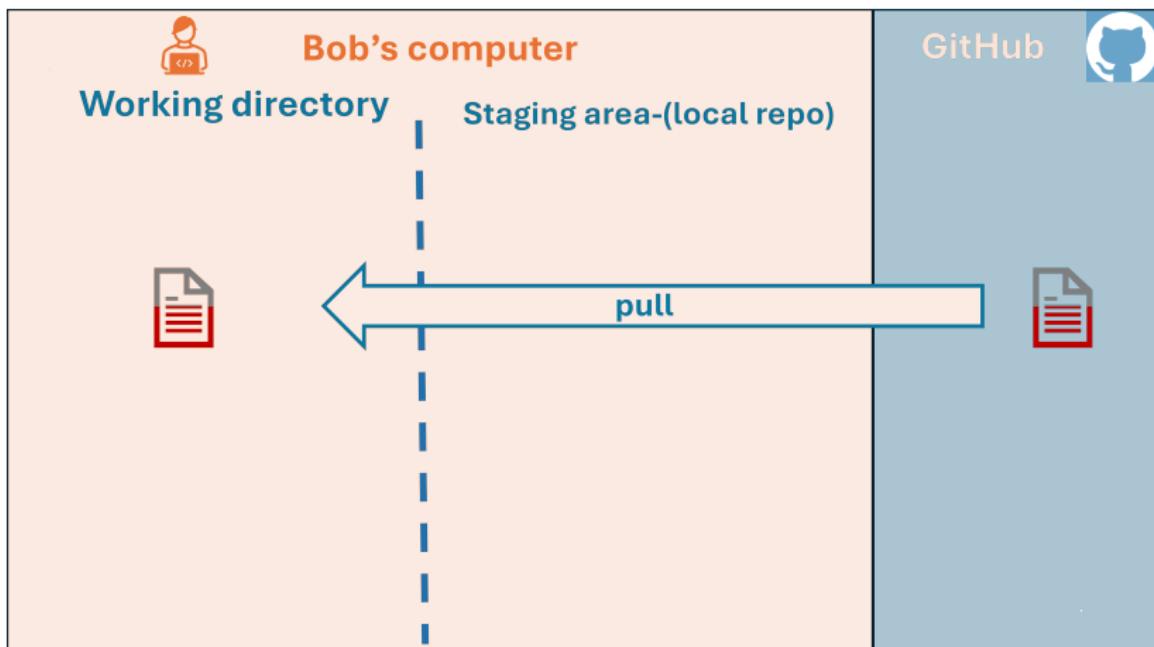
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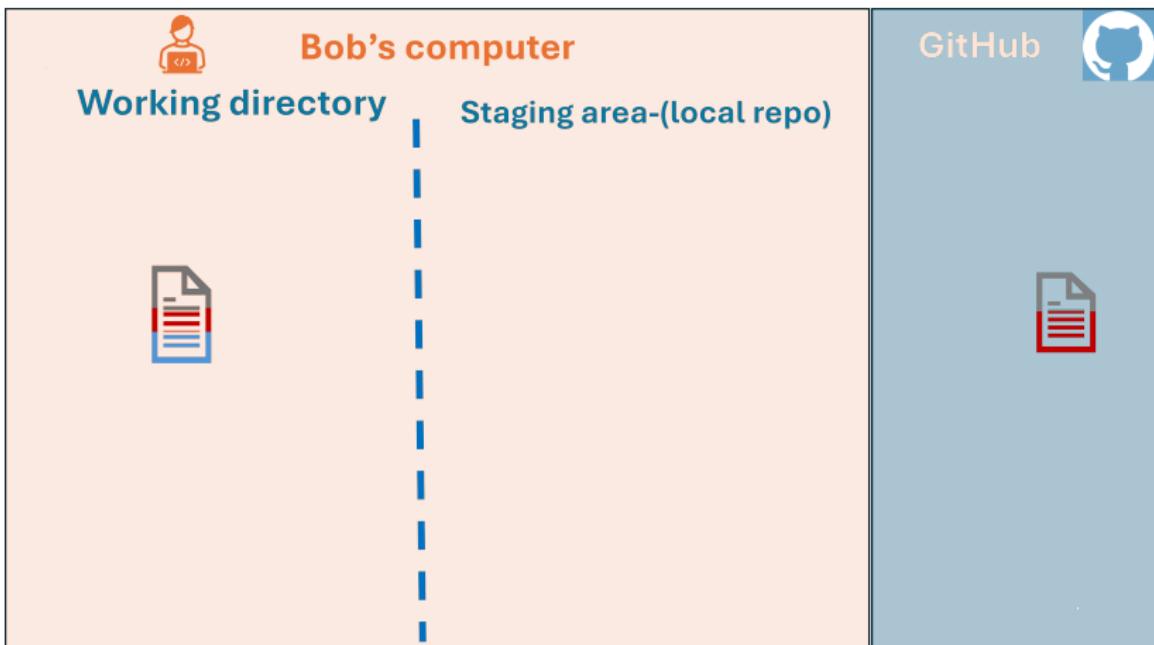
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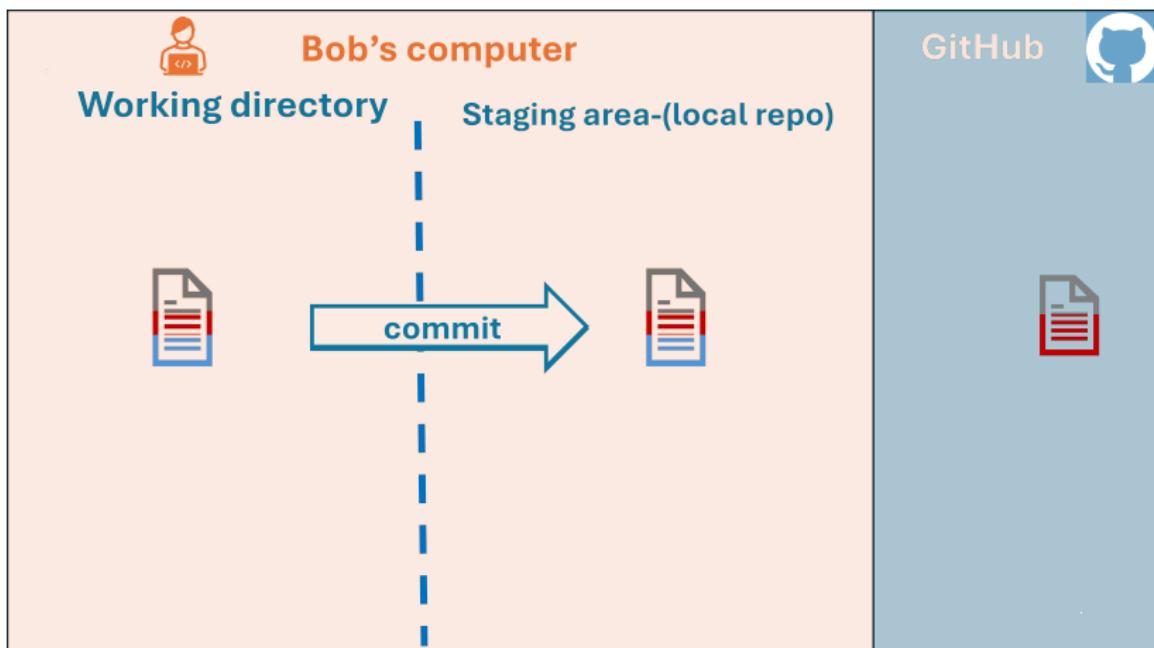
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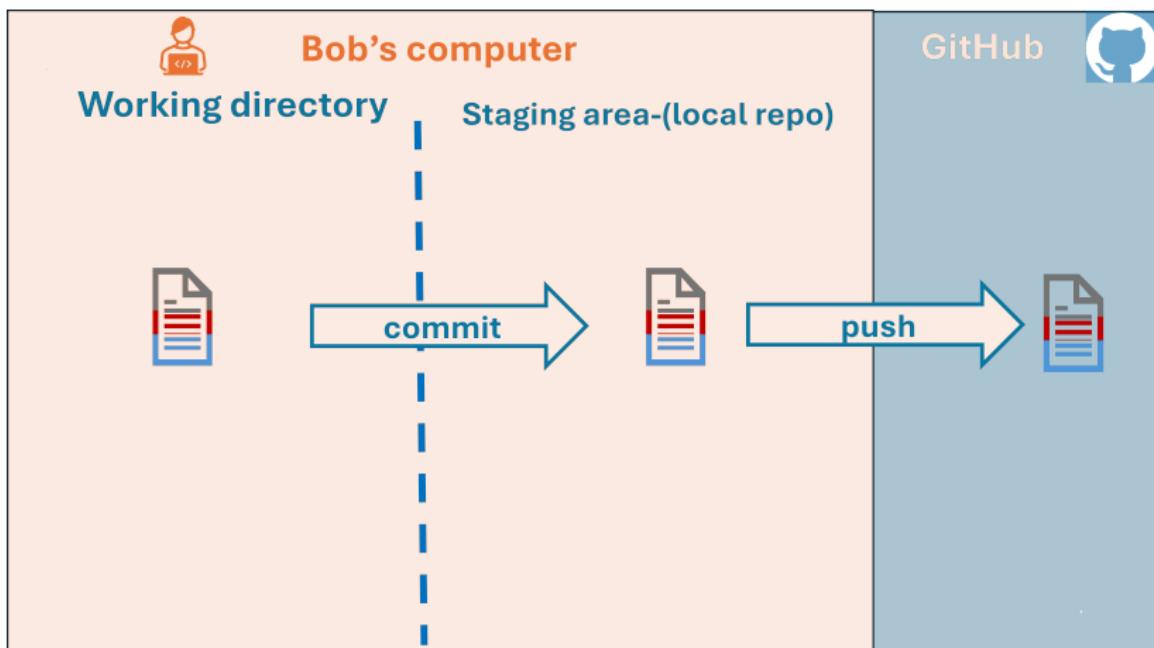
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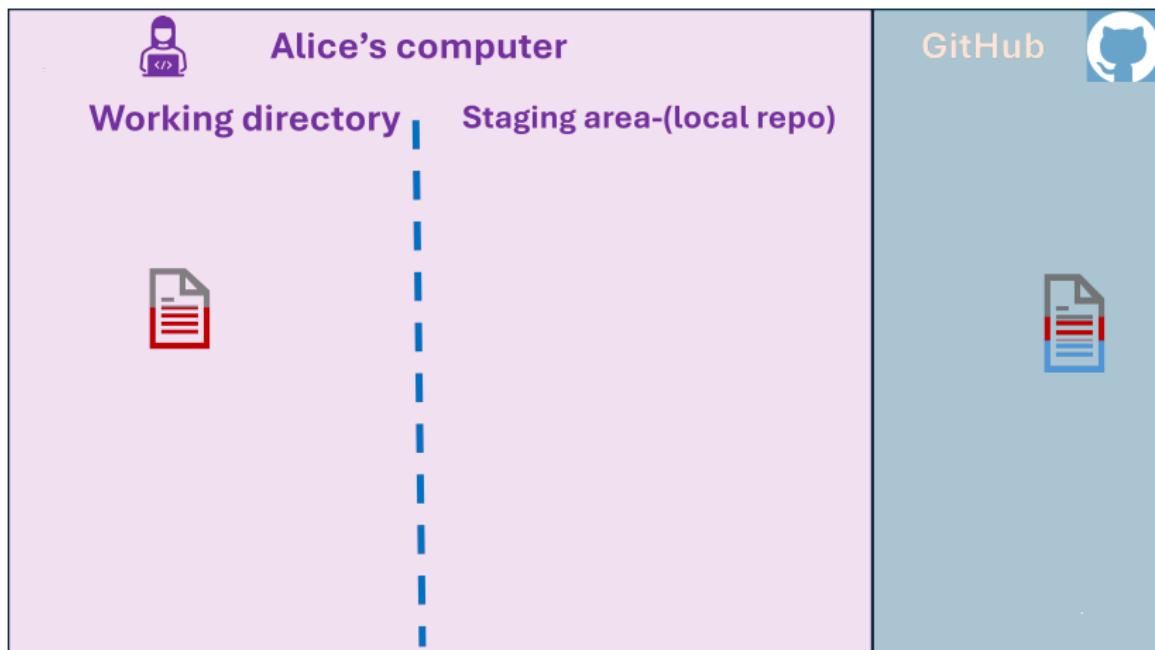
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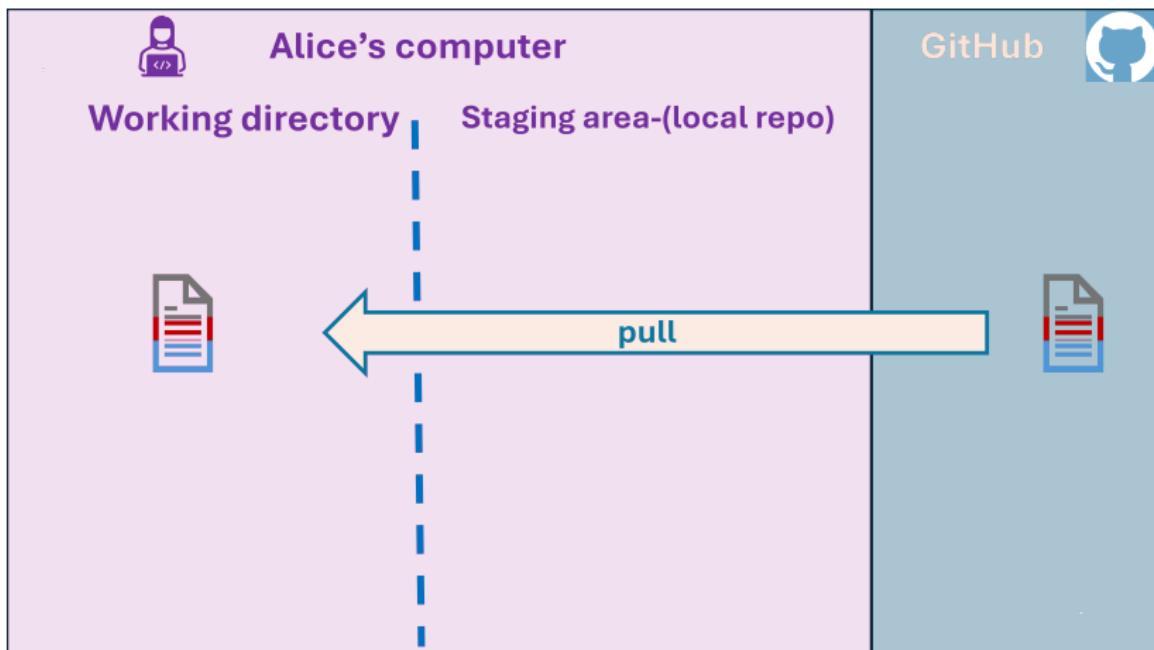
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Alice and Bob work on the same file (Details)



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REMARKS AND ISSUES

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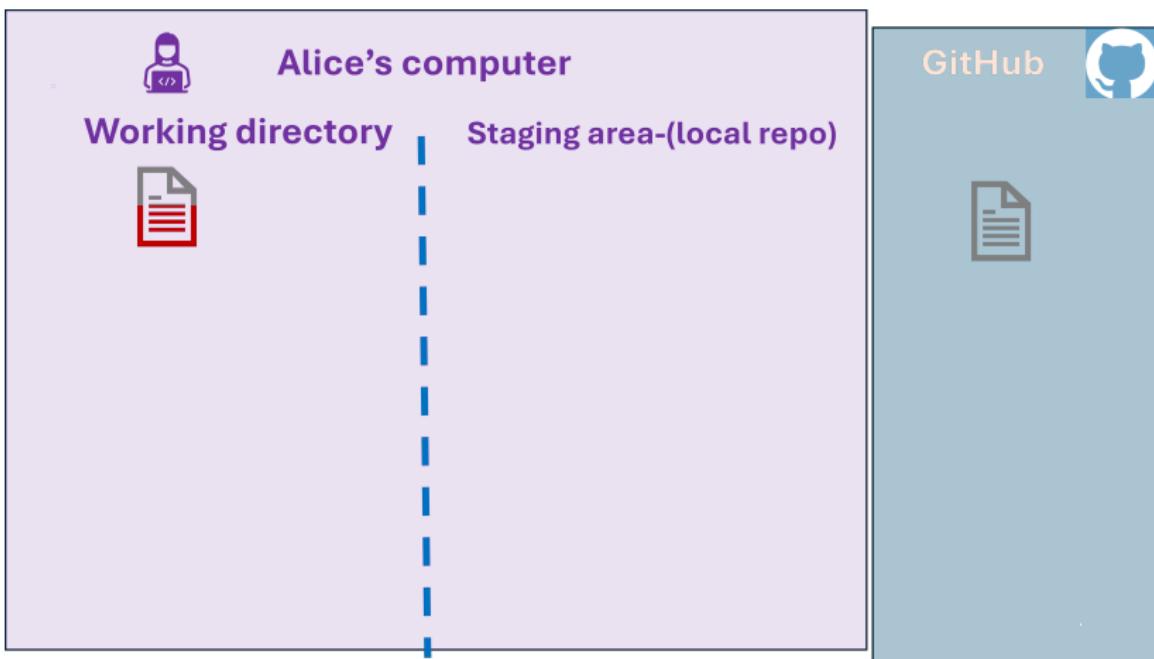
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- ▶ Every commit has an identifier (hash or SHA)
- ▶ Git manage complex situations
- ▶ Many actions available directly in Visual Studio

GIT FOR COLLABORATING: COMPLEX SITUATIONS

Alice and **Bob** work on the same file **at the same time**

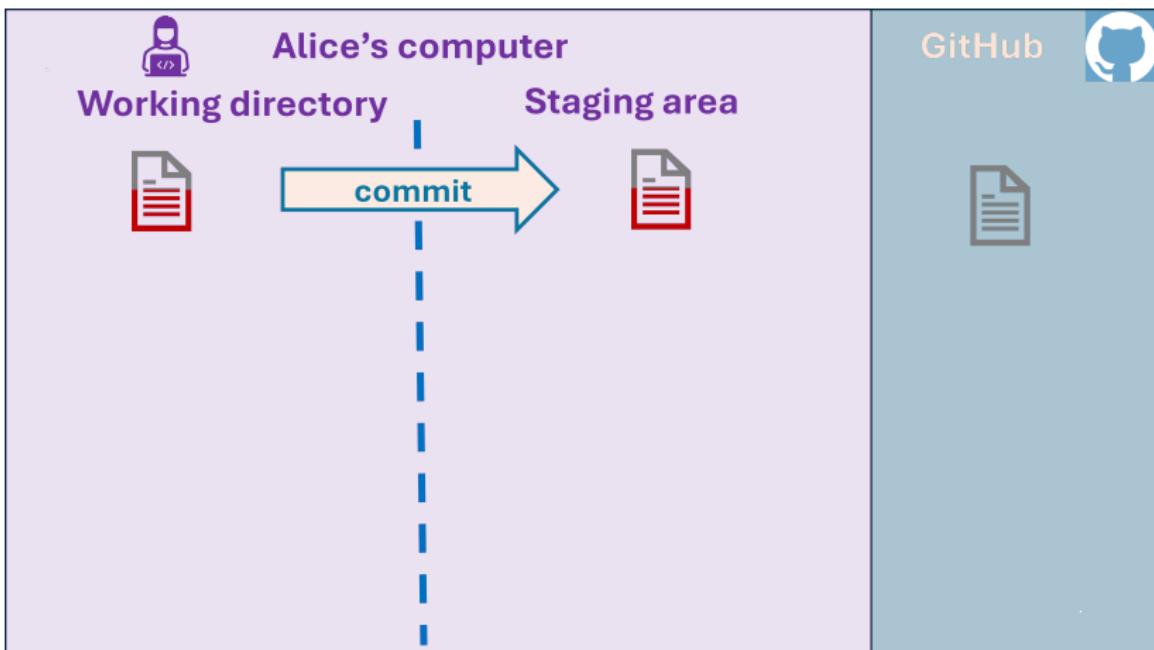
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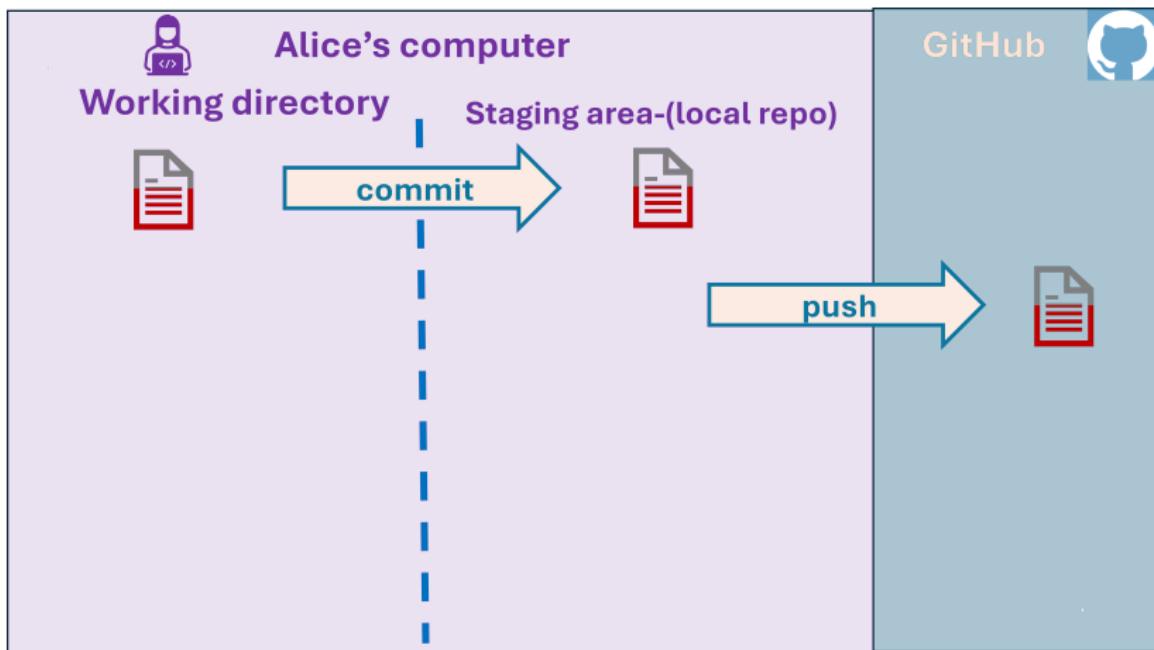
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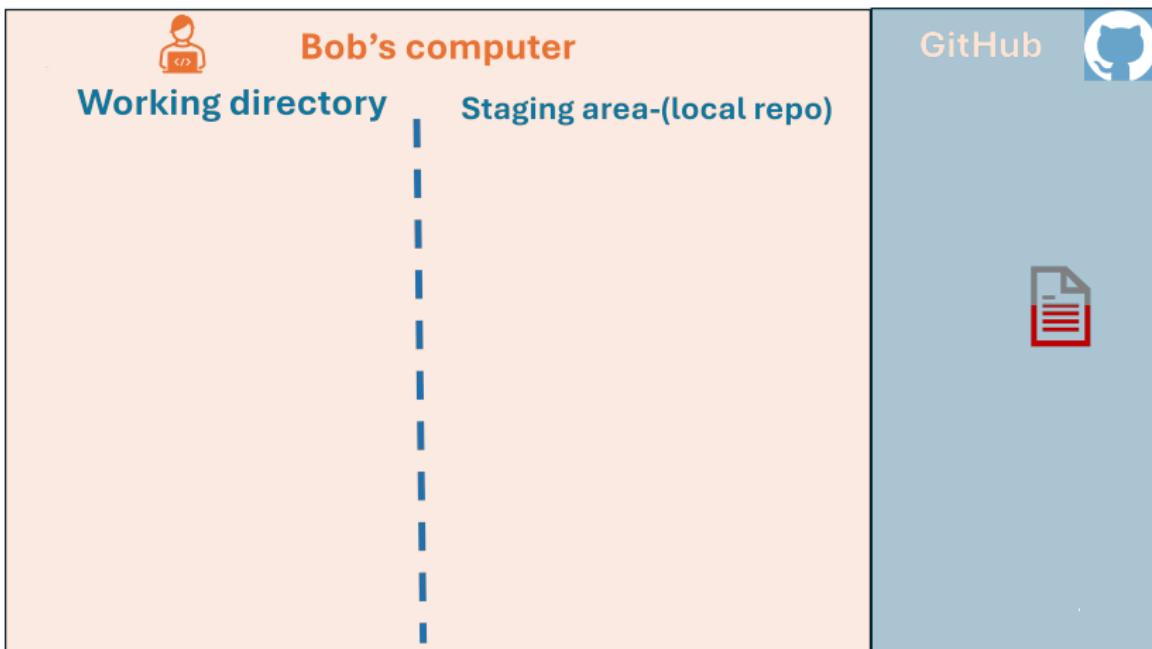
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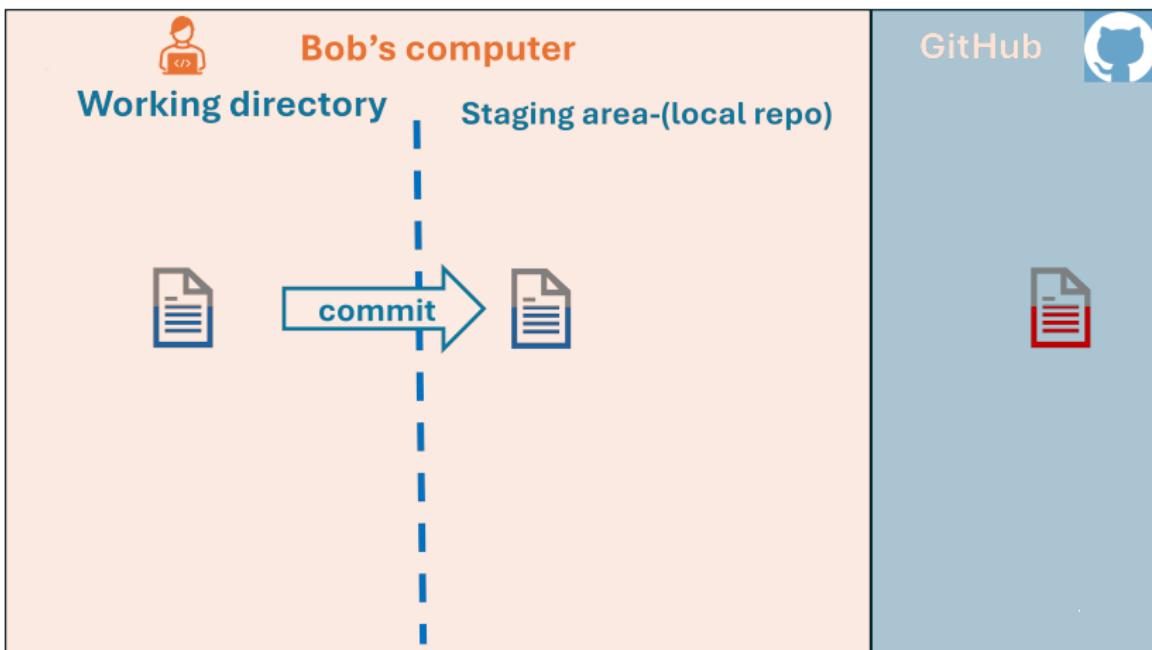
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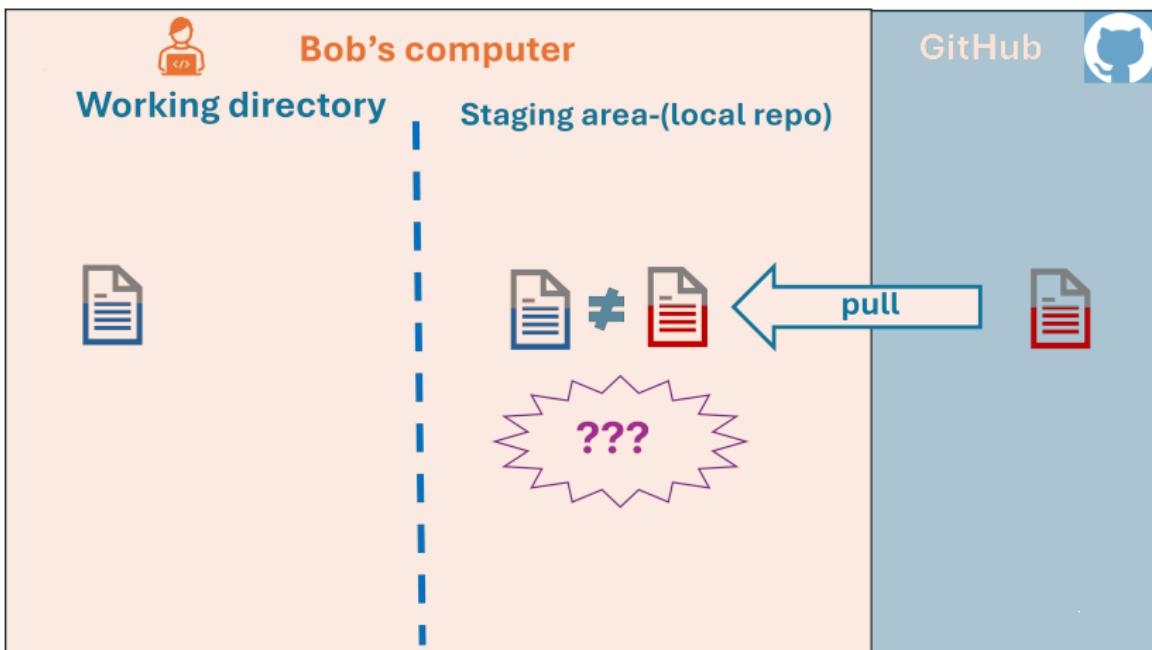
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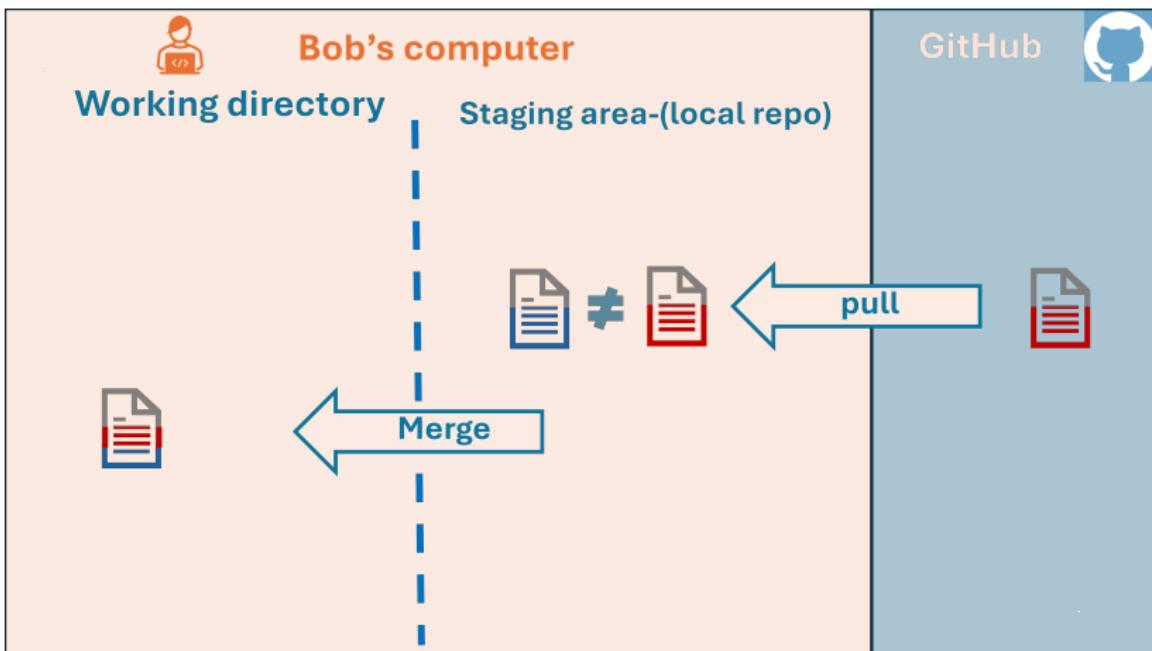
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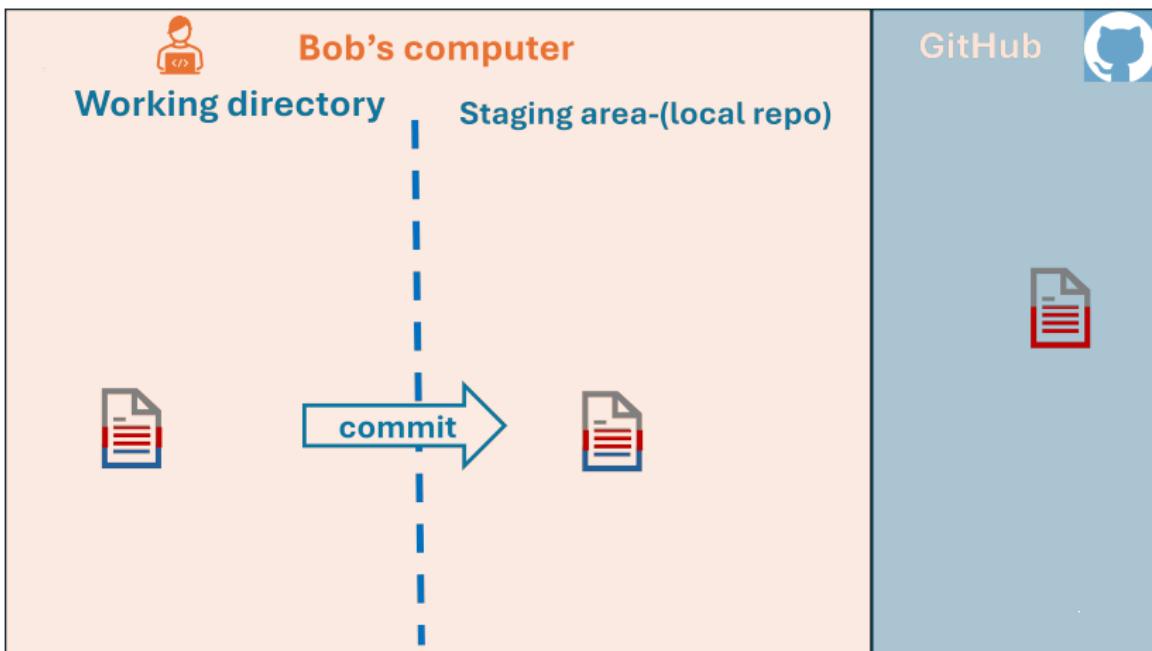
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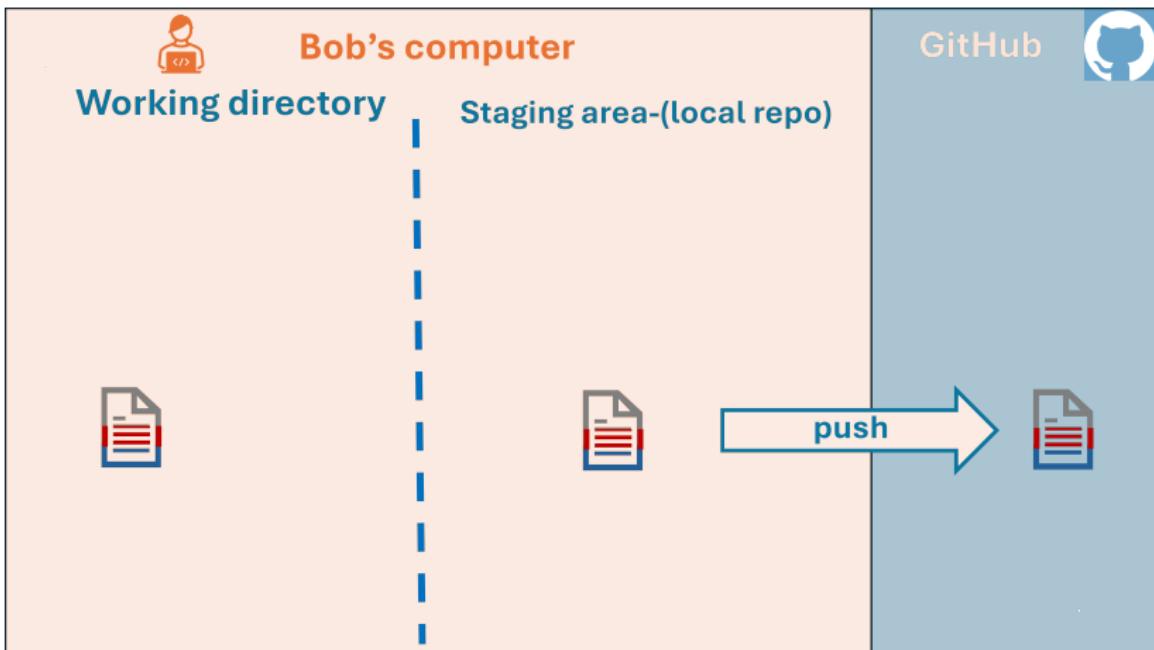
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Tea Break



RAP PRINCIPLES 3 :

GOOD (CODING) PRACTICES

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- ▶ Good coding practices

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- ↪ Write for humans, not for machines

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- ▶ Good coding practices
- ↪ Write for humans, not for machines
- ▶ Testing

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- ▶ Peer-review

RAP PRINCIPLES 3 : GOOD (CODING) PRACTICES

- ▶ Good coding practices
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- ▶ Peer-review
- ▶ *Exercise part 3: Coding, documenting, testing. (15 minutes)*

TOWARDS A FULL RAP

- ▶ In short,

RAP
=

Reproducible documents
+
Version Control
+
Automation

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- ▶ Each of these notion require training
- ▶ New tools, new challenges, new problems...
- ↪ Requires time, patience and training
- ▶ Doing RAP is like doing sports: You'll not becoming a champion immediately!
- ▶ Practicing regularly helps progressing though, starting from Bronze level