



Introducción a Git y GitHub

¿Cómo utilizar Git y GitHub?

“Harvard CS50’s Web Programming with Python and
JavaScript. Lecture 1. Git” por Brian Yu, usado bajo CC BY-NC-
SA 4.0. / Adaptado al Español

@IgnacioPalma

Hola! 🖐️

Mi nombre es Ignacio y soy
GitHub Campus Expert en
la Pontificia Universidad
Católica de Chile.

Comunidades

IA





Introducción a Git y GitHub

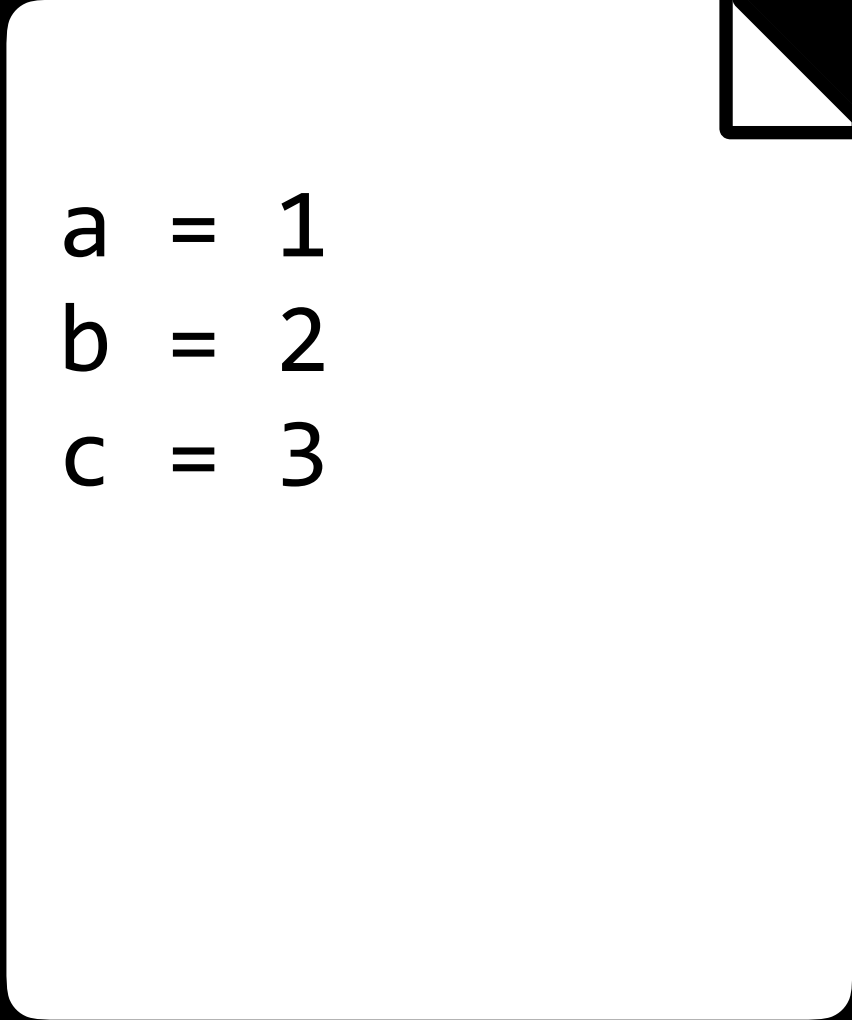
¿Cómo utilizar Git y GitHub?

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Git

git

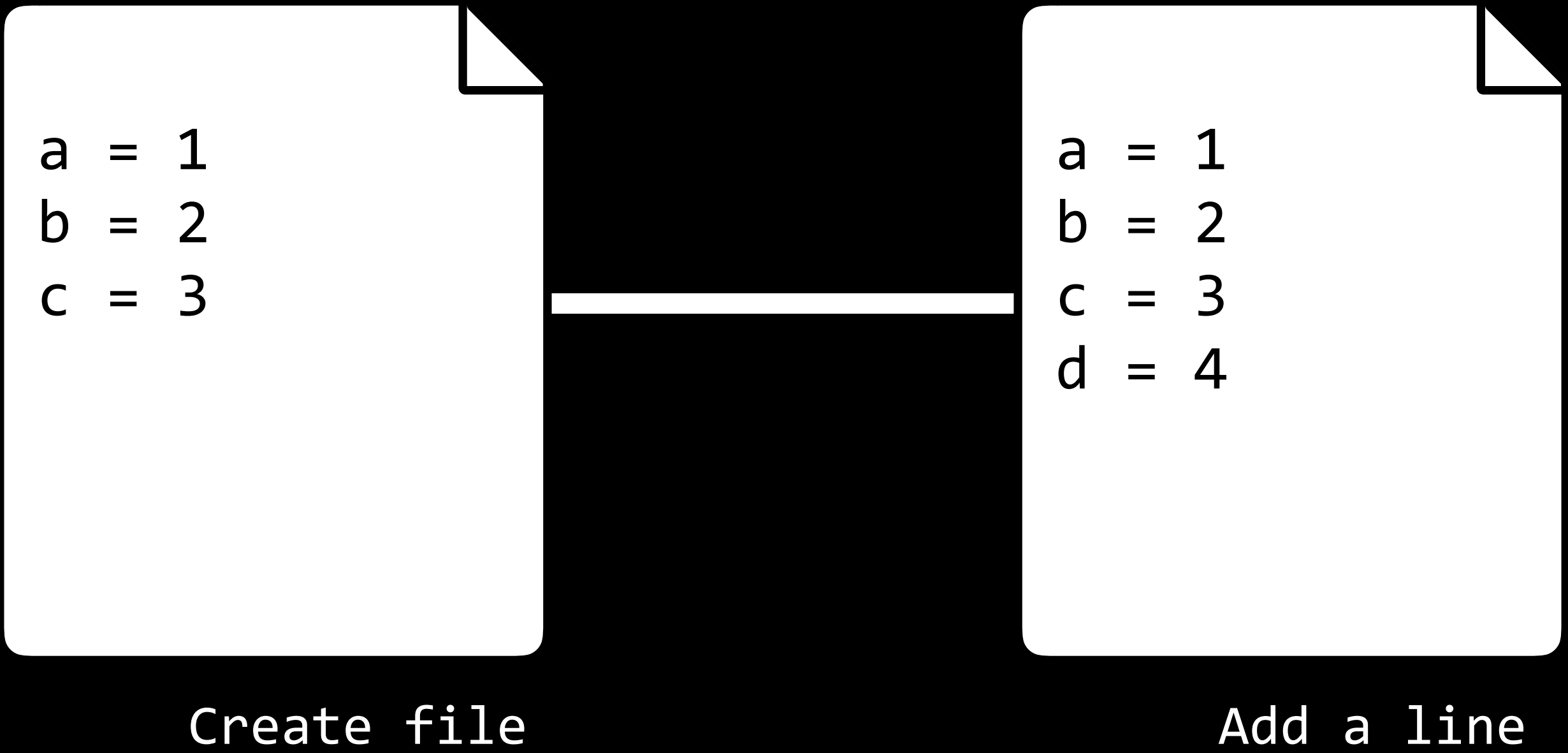
Keep track of changes to code.



```
a = 1  
b = 2  
c = 3
```

Create file

Keep track of changes to code.



```
a = 1  
b = 2  
c = 3
```

Create file

```
a = 1  
b = 2  
c = 3  
d = 4
```

Add a line

Keep track of changes to code.

```
a = 1  
b = 2  
c = 3
```

The diagram illustrates a sequence of three code states connected by horizontal lines. The first state, labeled 'Create file', shows three lines of code: 'a = 1', 'b = 2', and 'c = 3'. The second state, labeled 'Add a line', shows the same three lines plus a new line 'd = 4'. The third state, labeled 'Remove a line', shows the first two lines 'a = 1' and 'b = 2', but the third line is now 'c = 3' and 'd = 4', indicating that the original 'c = 3' line has been removed and replaced. Each state is represented by a white document icon with a folded top-right corner.

Create file

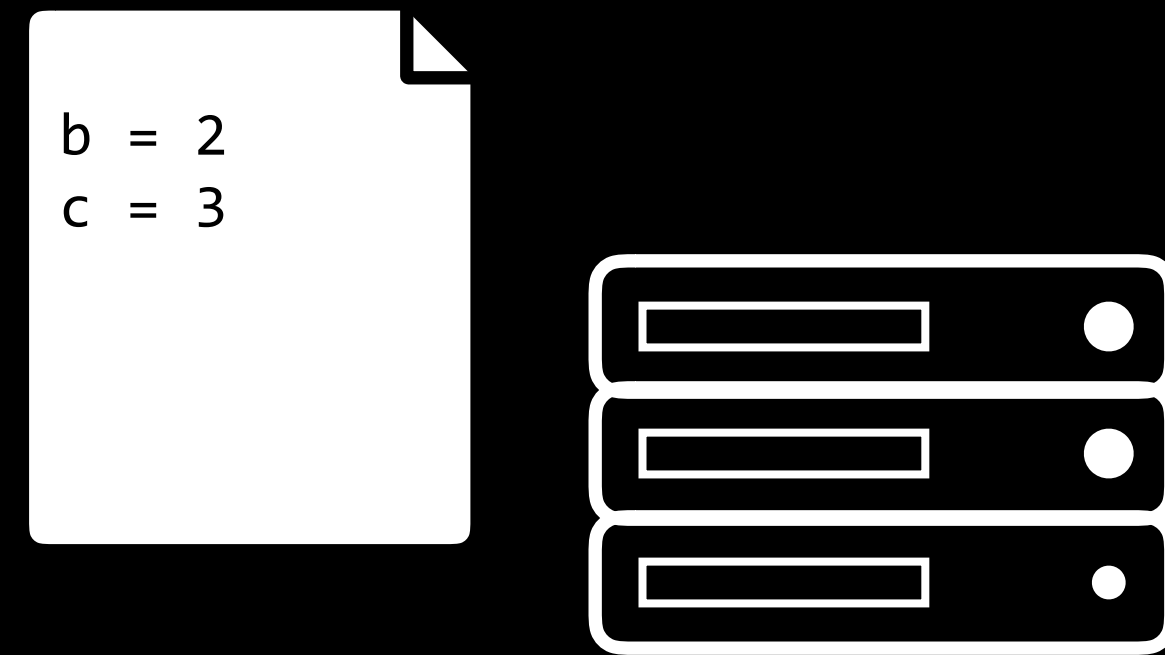
```
a = 1  
b = 2  
c = 3  
d = 4
```

Add a line

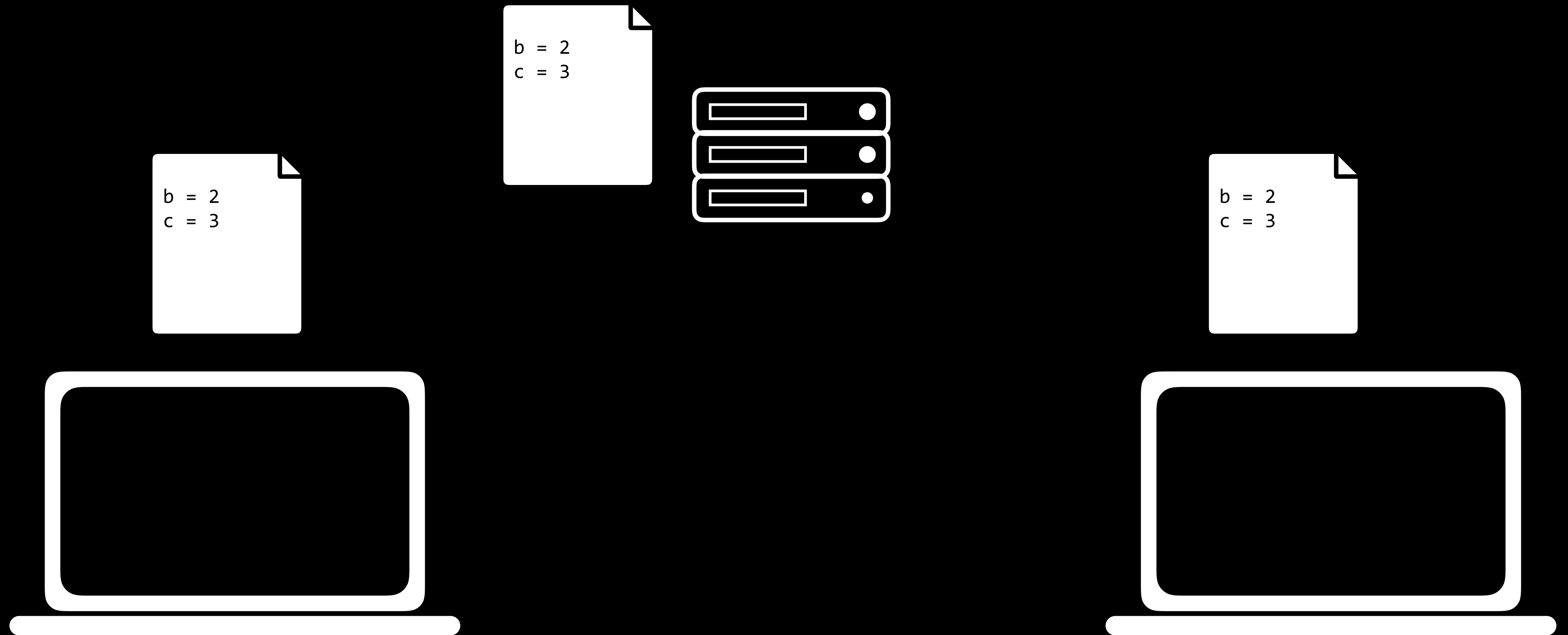
```
a = 1  
b = 2  
c = 3  
d = 4
```

Remove a line

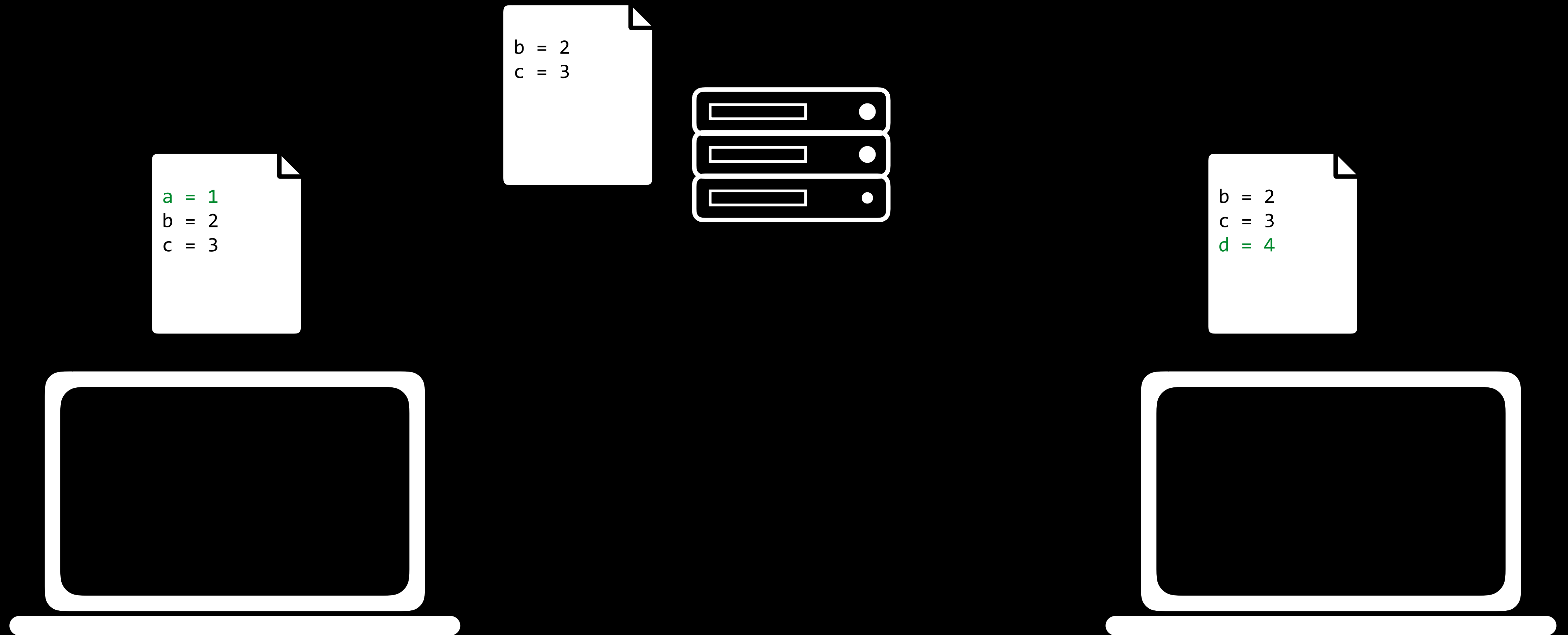
Synchronizes code between different people.



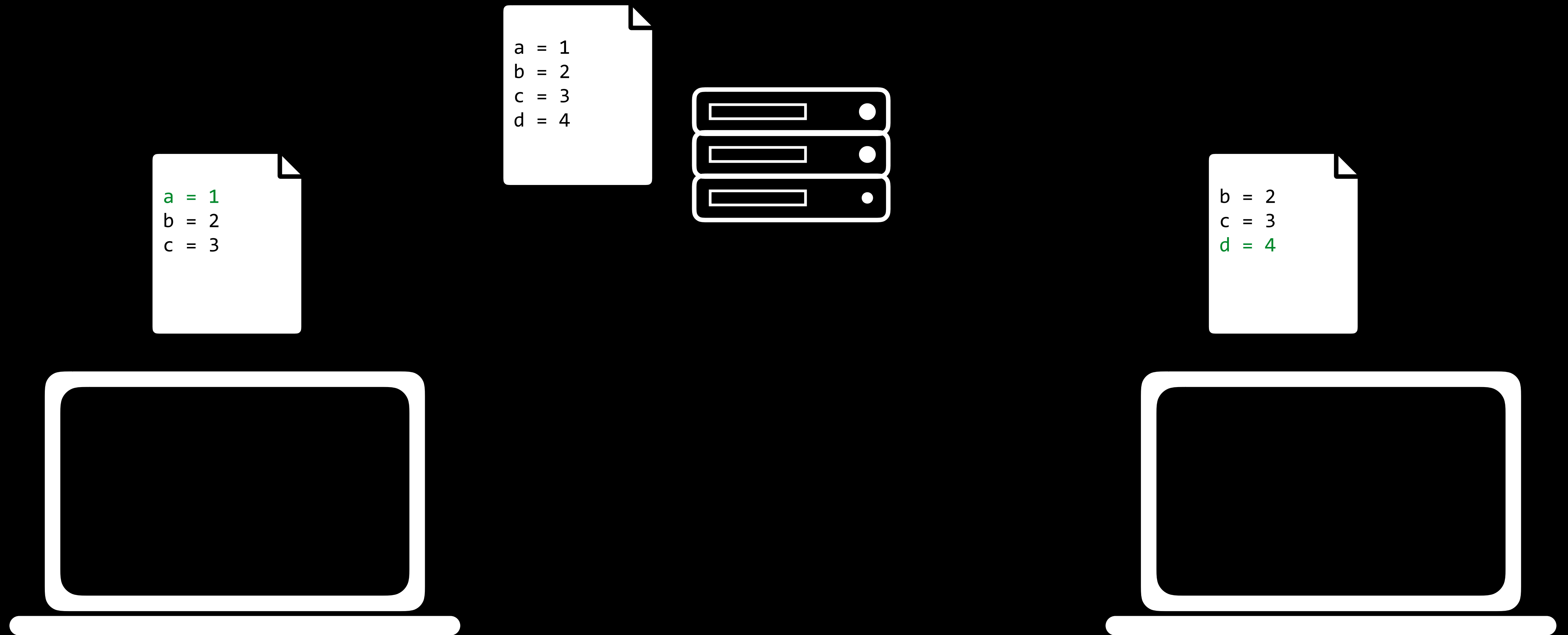
Synchronizes code between different people.



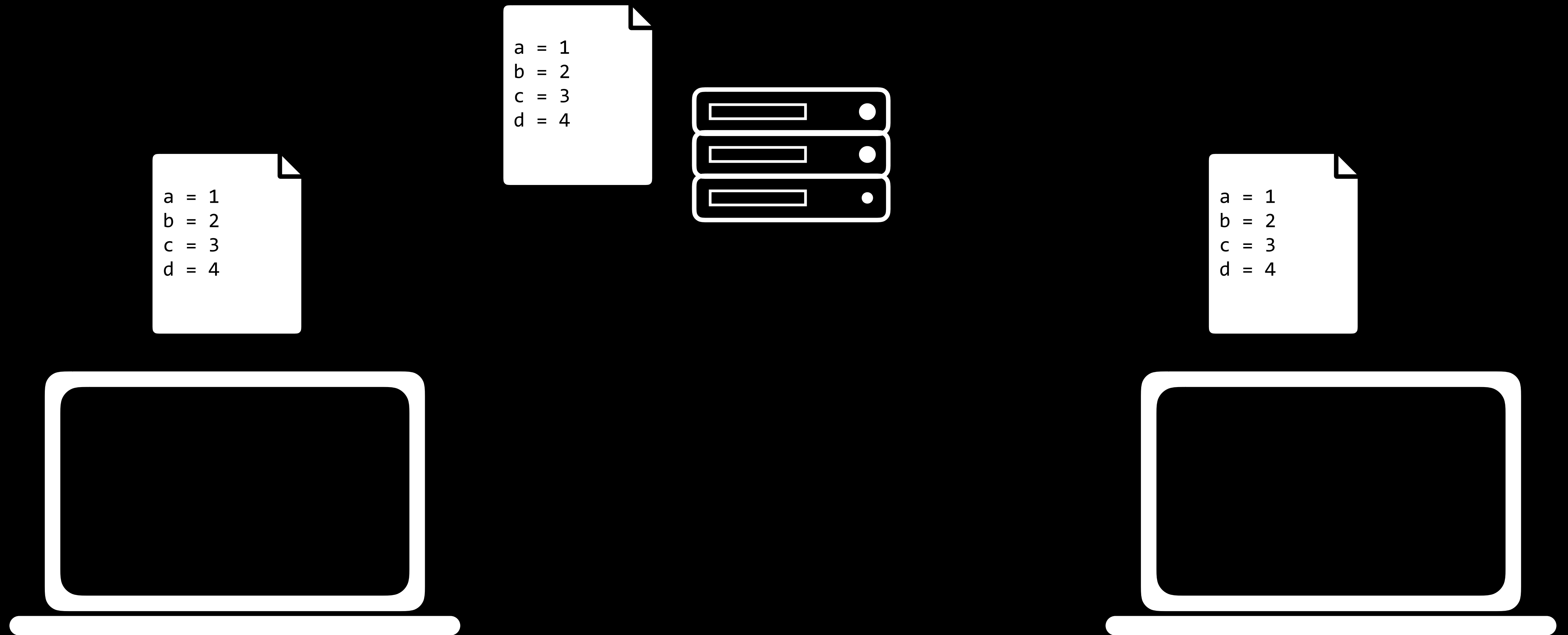
Synchronizes code between different people.



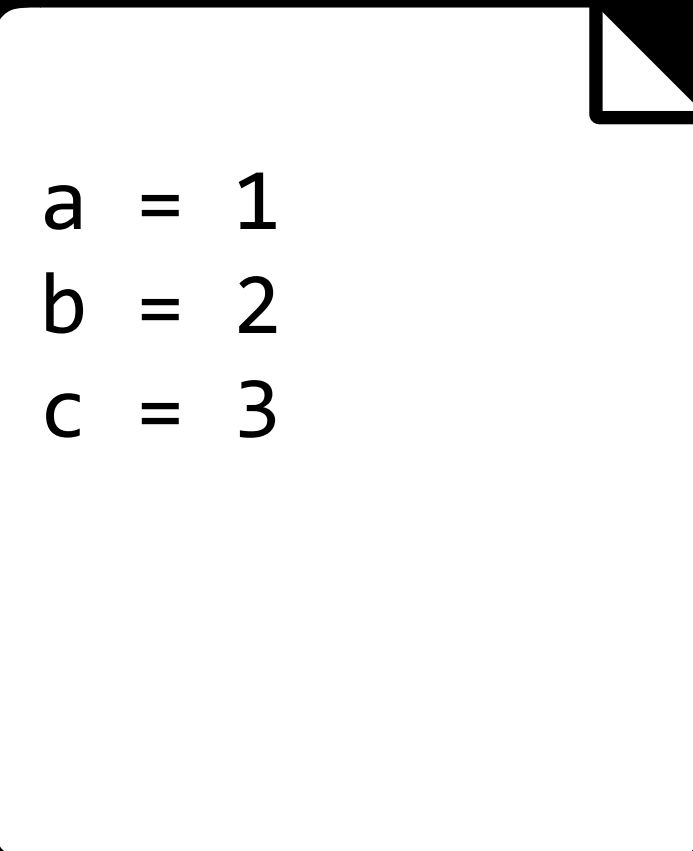
Synchronizes code between different people.



Synchronizes code between different people.

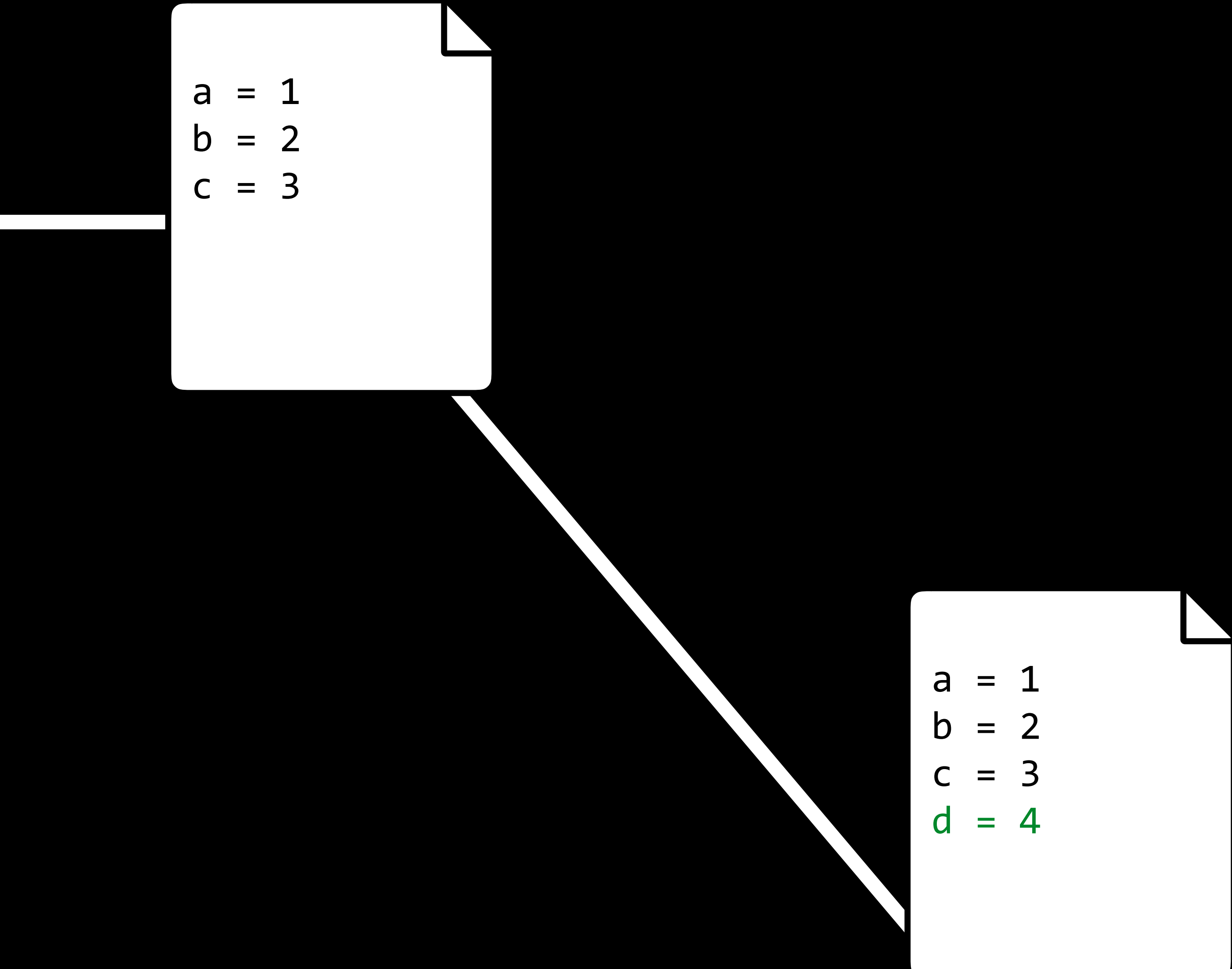


Test changes to code without losing the original.



```
a = 1  
b = 2  
c = 3
```

Test changes to code without losing the original.

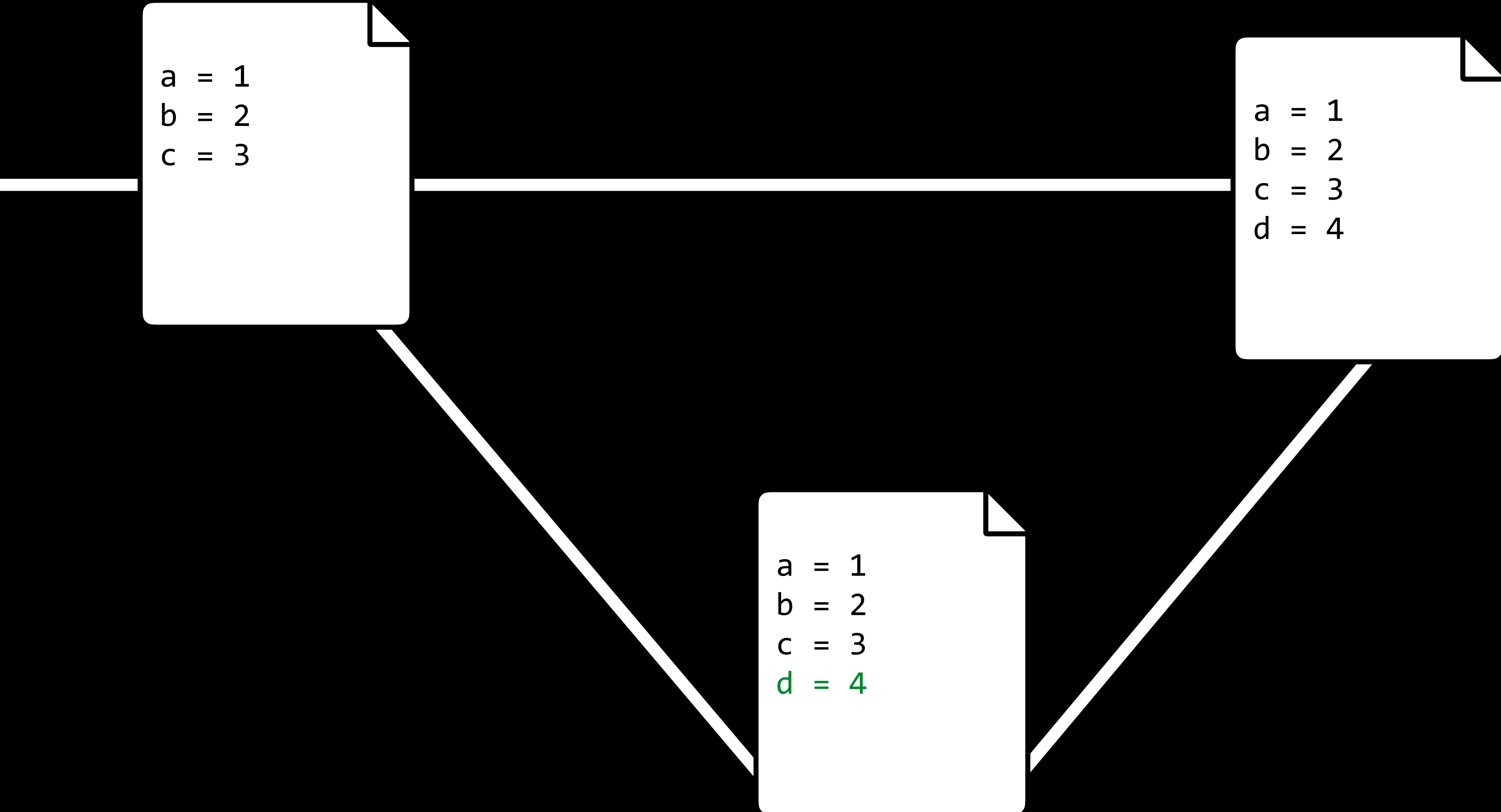


The diagram illustrates a workflow for testing code changes. It features two white rectangular boxes with a folded top-right corner, representing code files. The top-left box contains the original code: `a = 1`, `b = 2`, and `c = 3`. A horizontal line extends from the left edge of this box. A diagonal line connects the bottom-right corner of the top-left box to the top-left corner of the bottom-right box. The bottom-right box contains the same original code, but with an additional line `d = 4` in green text, representing a test change. The background is solid black.

```
a = 1  
b = 2  
c = 3
```

```
a = 1  
b = 2  
c = 3  
d = 4
```

Test changes to code without losing the original.



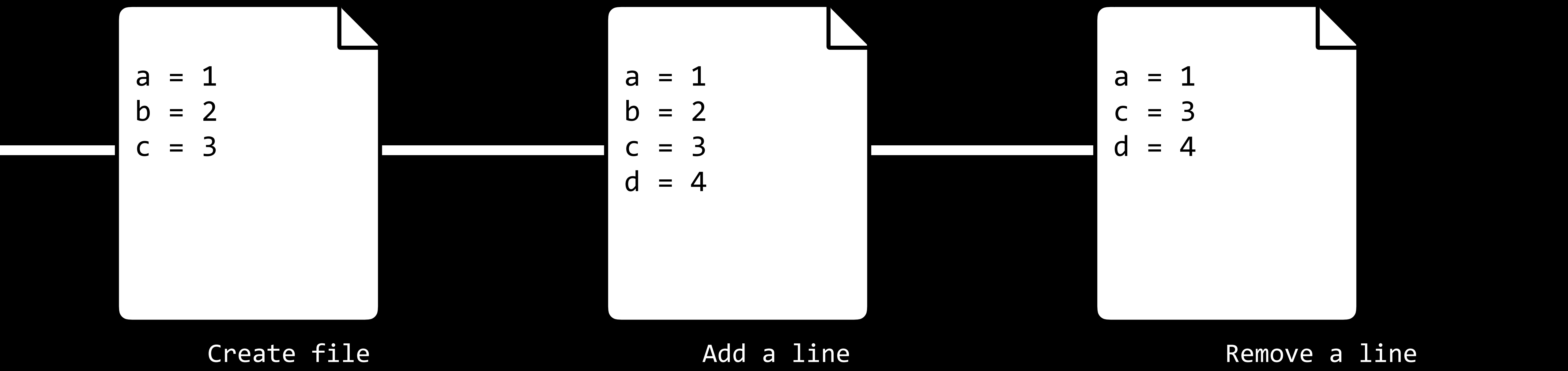
```
graph LR; A["a = 1  
b = 2  
c = 3"] --- B["a = 1  
b = 2  
c = 3  
d = 4"]; A --- C["a = 1  
b = 2  
c = 3  
d = 4"]; B --- D["a = 1  
b = 2  
c = 3  
d = 4"]; C --- D;
```

a = 1
b = 2
c = 3

a = 1
b = 2
c = 3
d = 4

a = 1
b = 2
c = 3
d = 4

Revert back to old versions of code.



```
a = 1  
b = 2  
c = 3
```

Create file

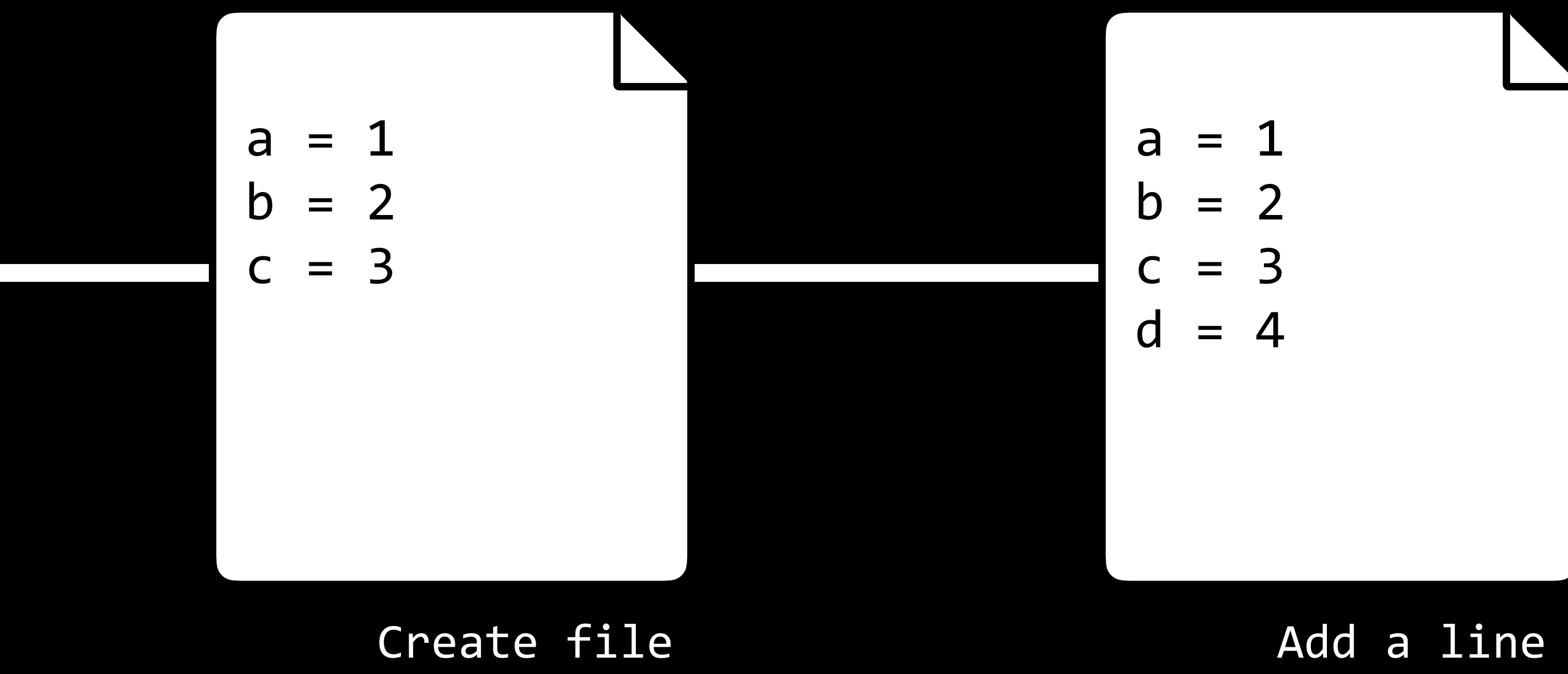
```
a = 1  
b = 2  
c = 3  
d = 4
```

Add a line

```
a = 1  
c = 3  
d = 4
```

Remove a line

Revert back to old versions of code.



```
a = 1  
b = 2  
c = 3
```

Create file

```
a = 1  
b = 2  
c = 3  
d = 4
```

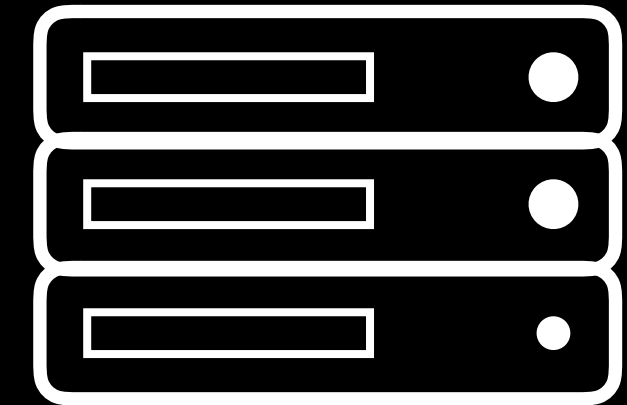
Add a line

GitHub

```
git clone
```

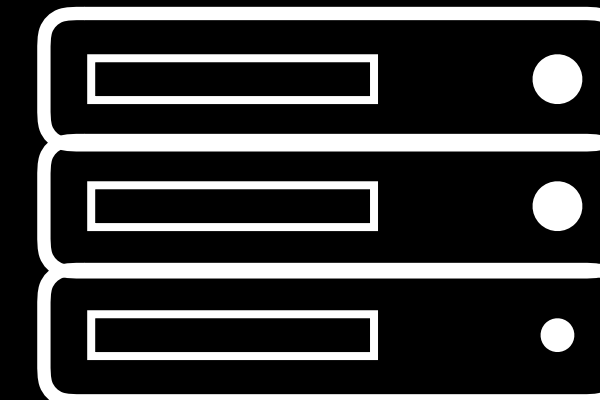
```
git clone <url>
```

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
git clone <url>
```

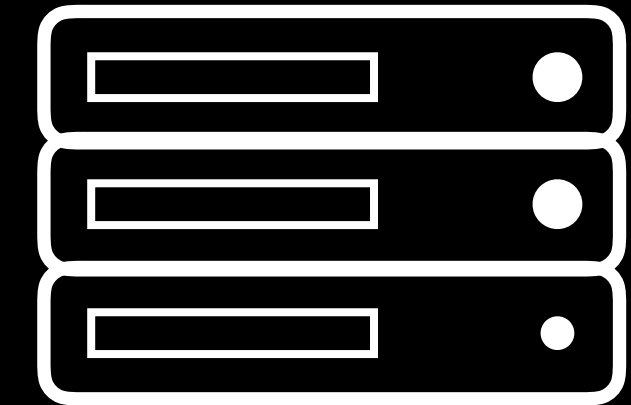
```
a = 1  
b = 2  
c = 3  
d = 4
```



```
git clone <url>
```

```
git clone <url>
```

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4
```

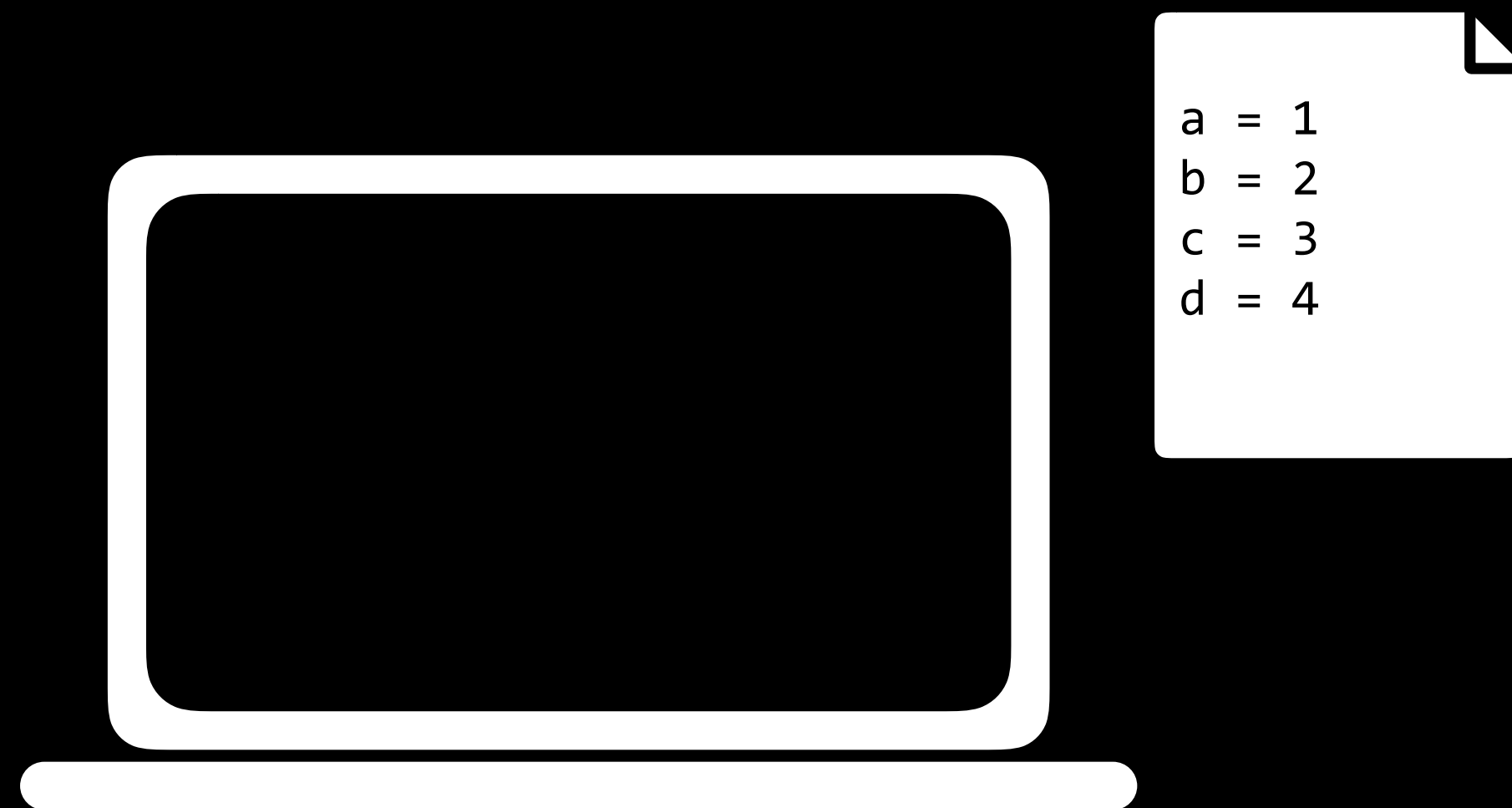
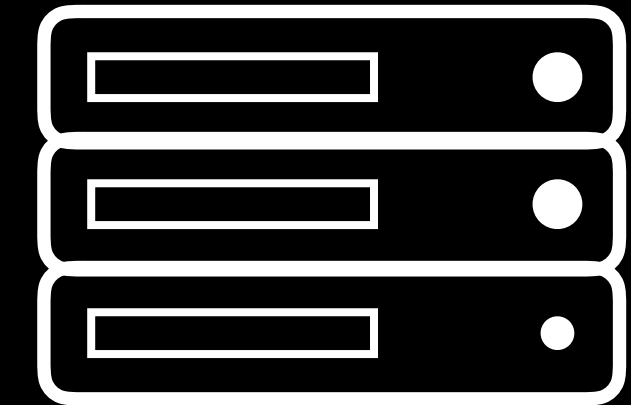
```
git clone <url>
```

```
git add
```



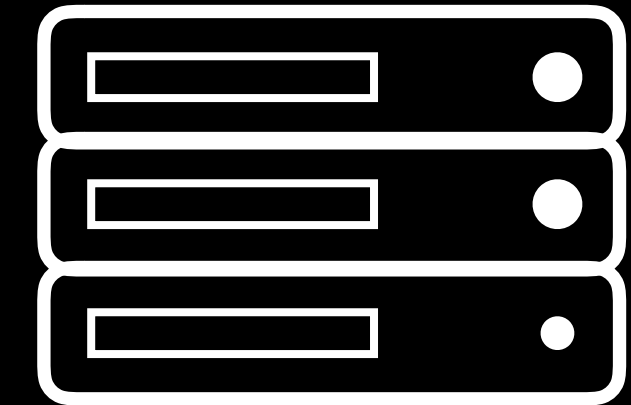
```
git add <filename>
```

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
git add <filename>
```

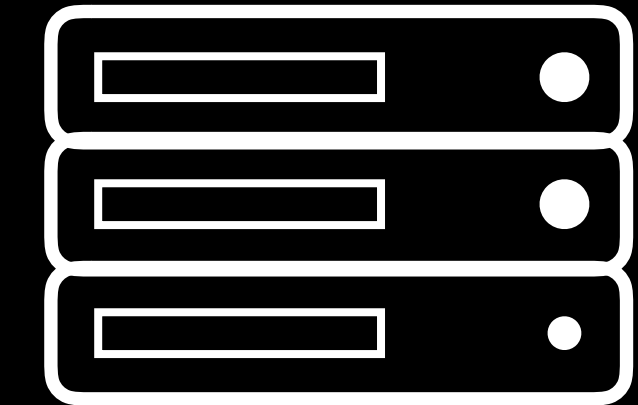
```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

```
git add <filename>
```

```
a = 1  
b = 2  
c = 3  
d = 4
```

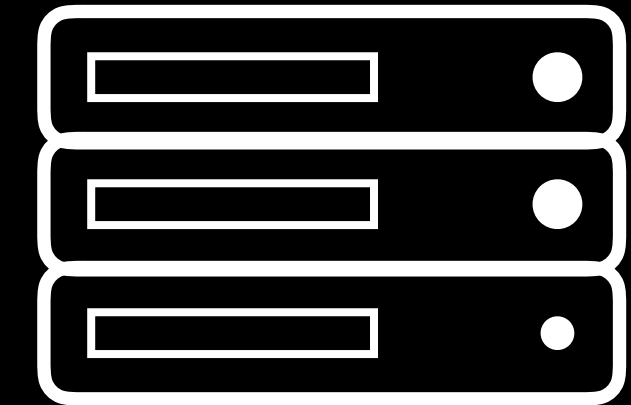


```
git add foo.py
```

```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

```
git add <filename>
```

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
git add foo.py
```

```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

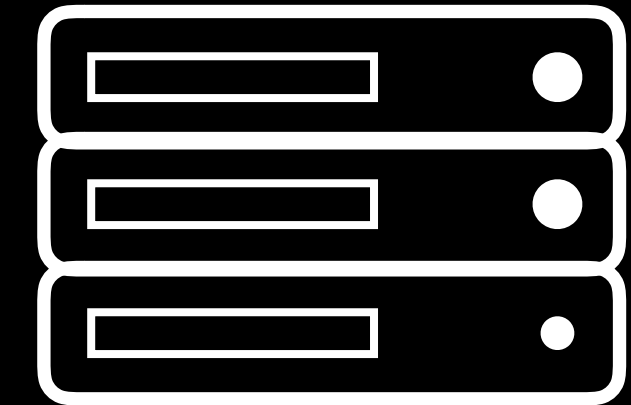
Changes to be committed:

modified: foo.py

git commit

```
git commit -m "message"
```

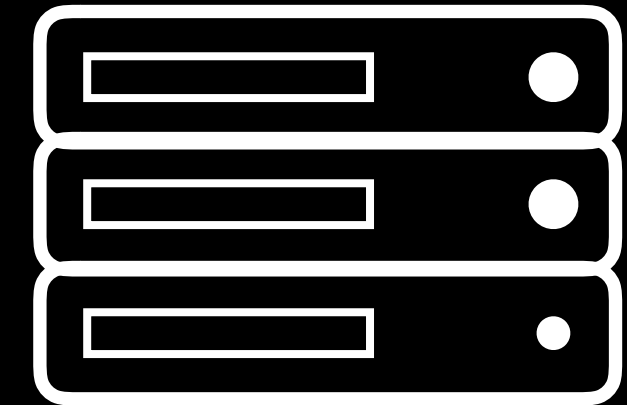
```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

```
git commit -m "message"
```

```
a = 1  
b = 2  
c = 3  
d = 4
```

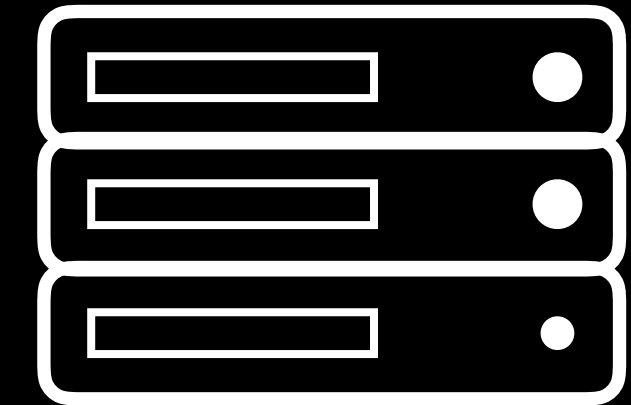


```
git commit -m  
"Add line"
```

```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

```
git commit -m "message"
```

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
git commit -m  
"Add line"
```

```
a = 1  
b = 2  
c = 3  
d = 4
```

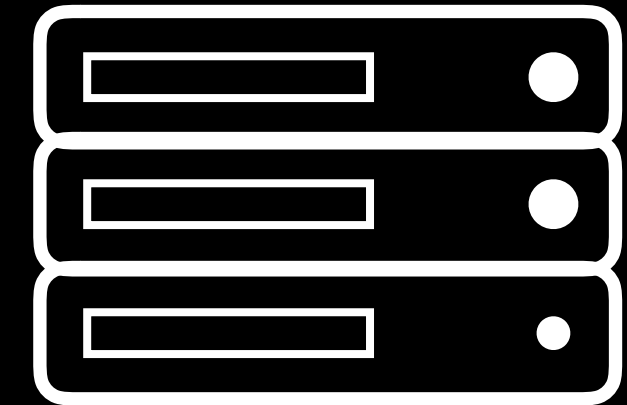
```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

Add line


```
git status
```

git status

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4
```



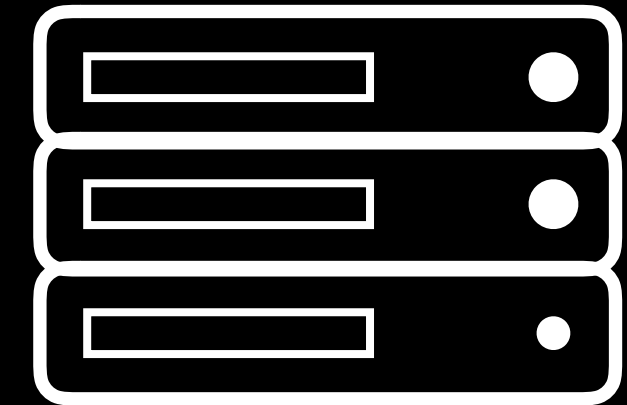
```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

Add line



git status

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4
```

```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

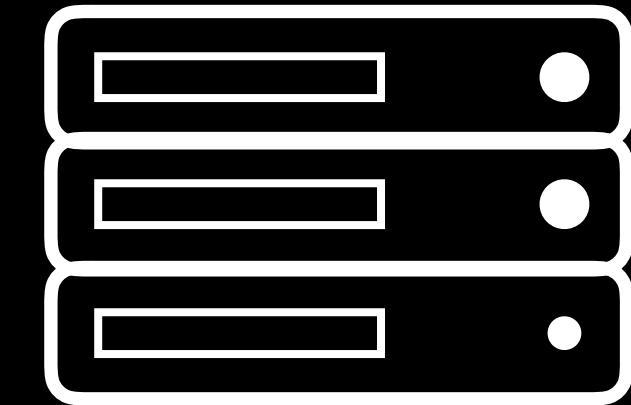
Add line

A simple line-art icon of a laptop. The screen area contains the text 'git status'.

git status

git status

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4
```

```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

Add line



```
git status
```

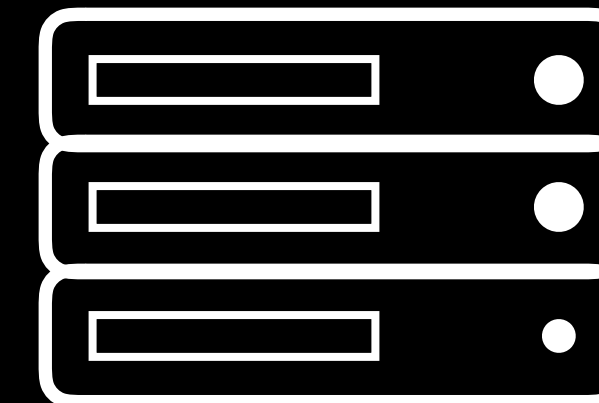
On branch master

Your branch is ahead of 'origin/master' by 1 commit.
(use "git push" to publish your local commits)

```
git push
```

git push

```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4
```

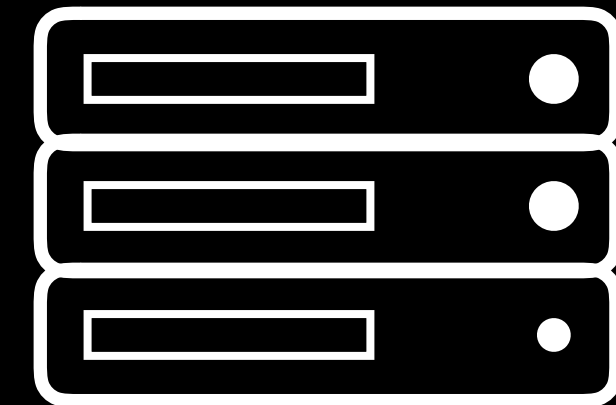


```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

Add line

git push

```
a = 1  
b = 2  
c = 3  
d = 4
```



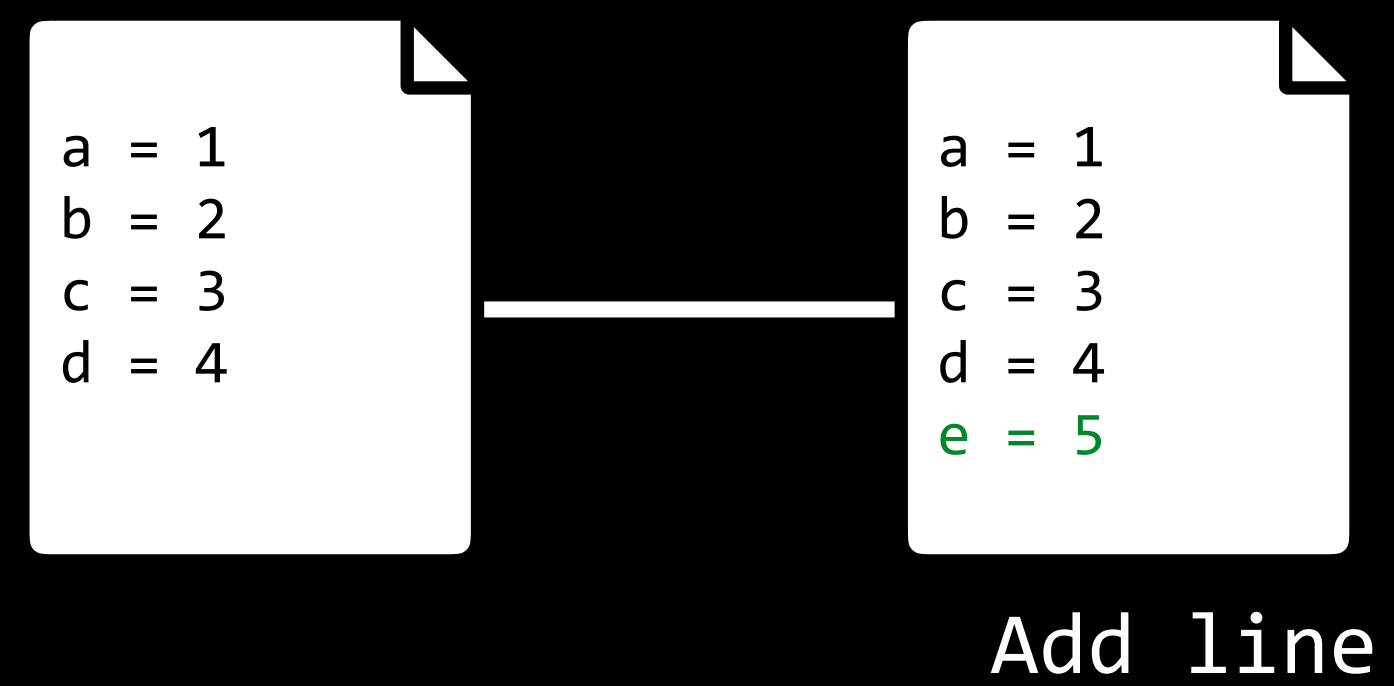
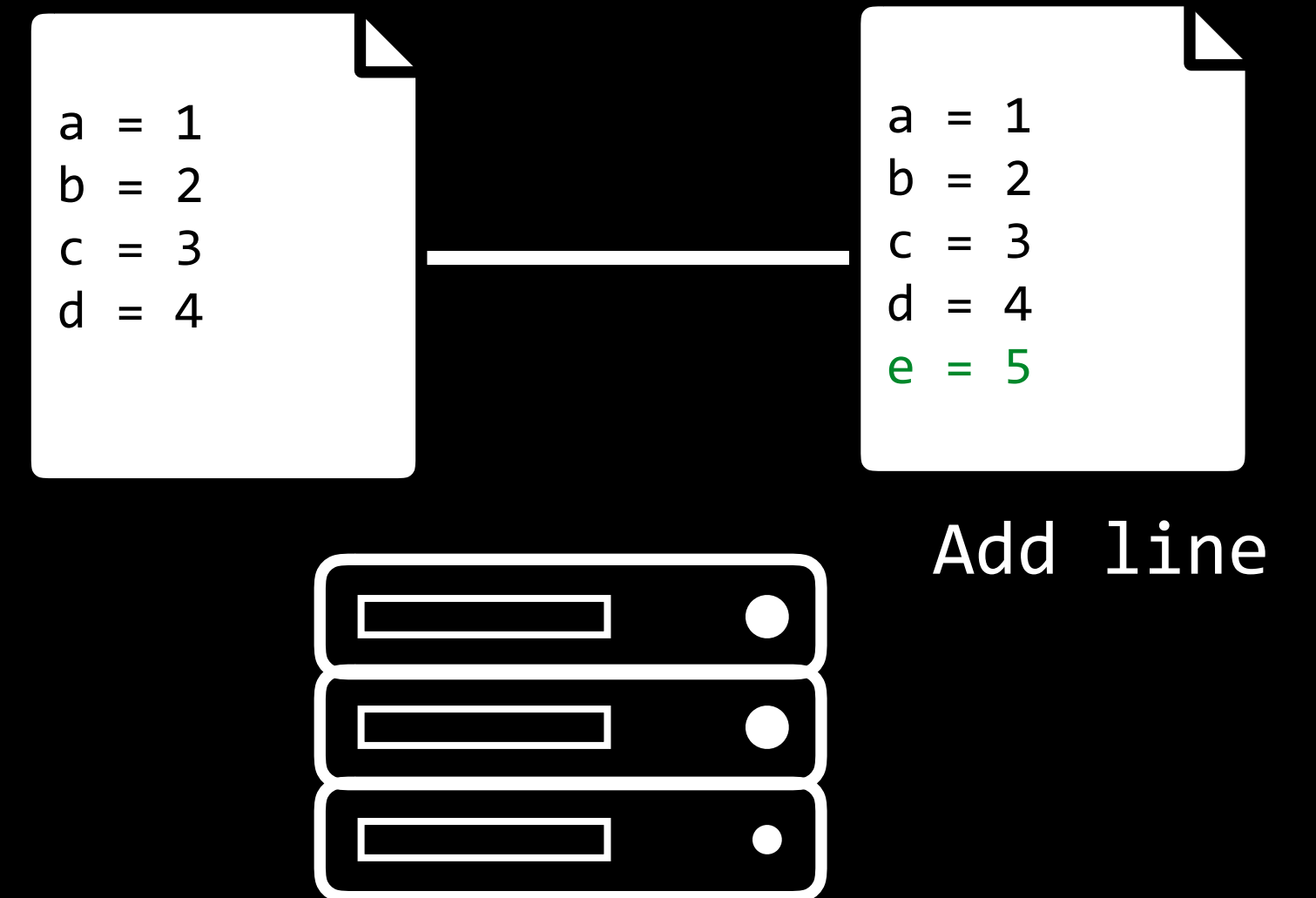
git push

```
a = 1  
b = 2  
c = 3  
d = 4
```

```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

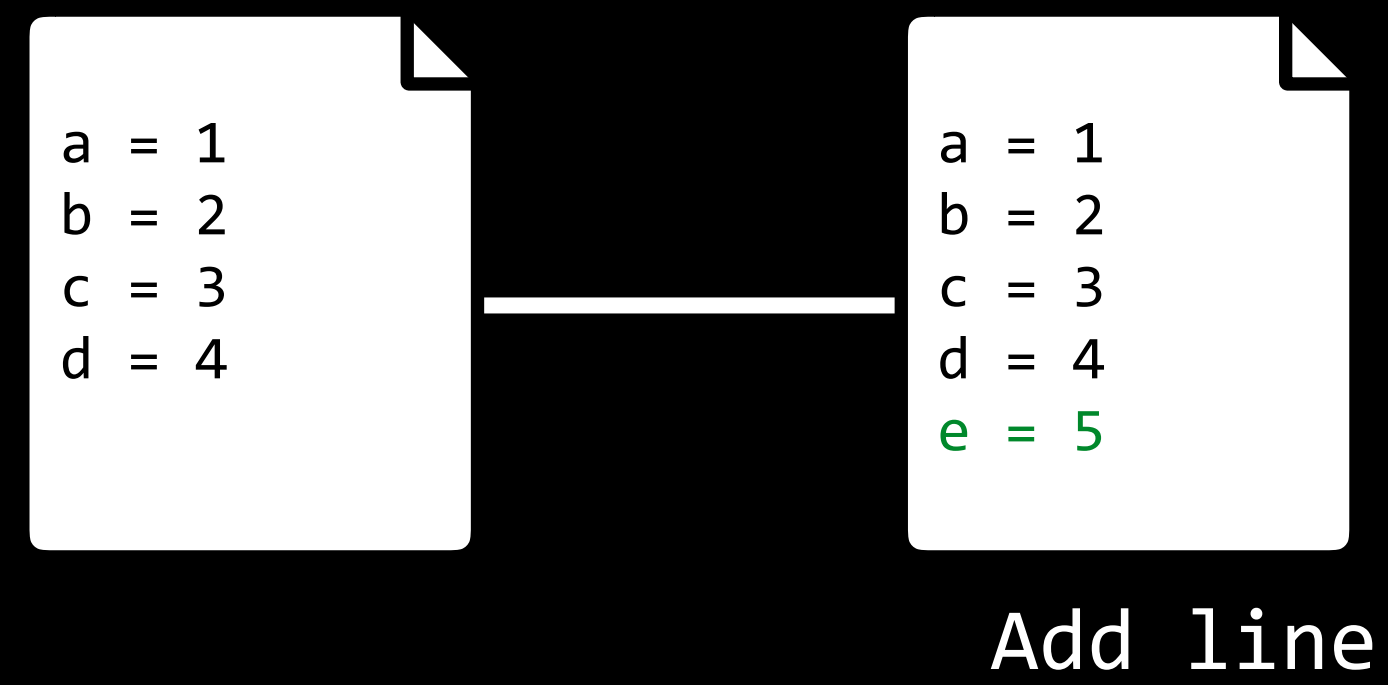
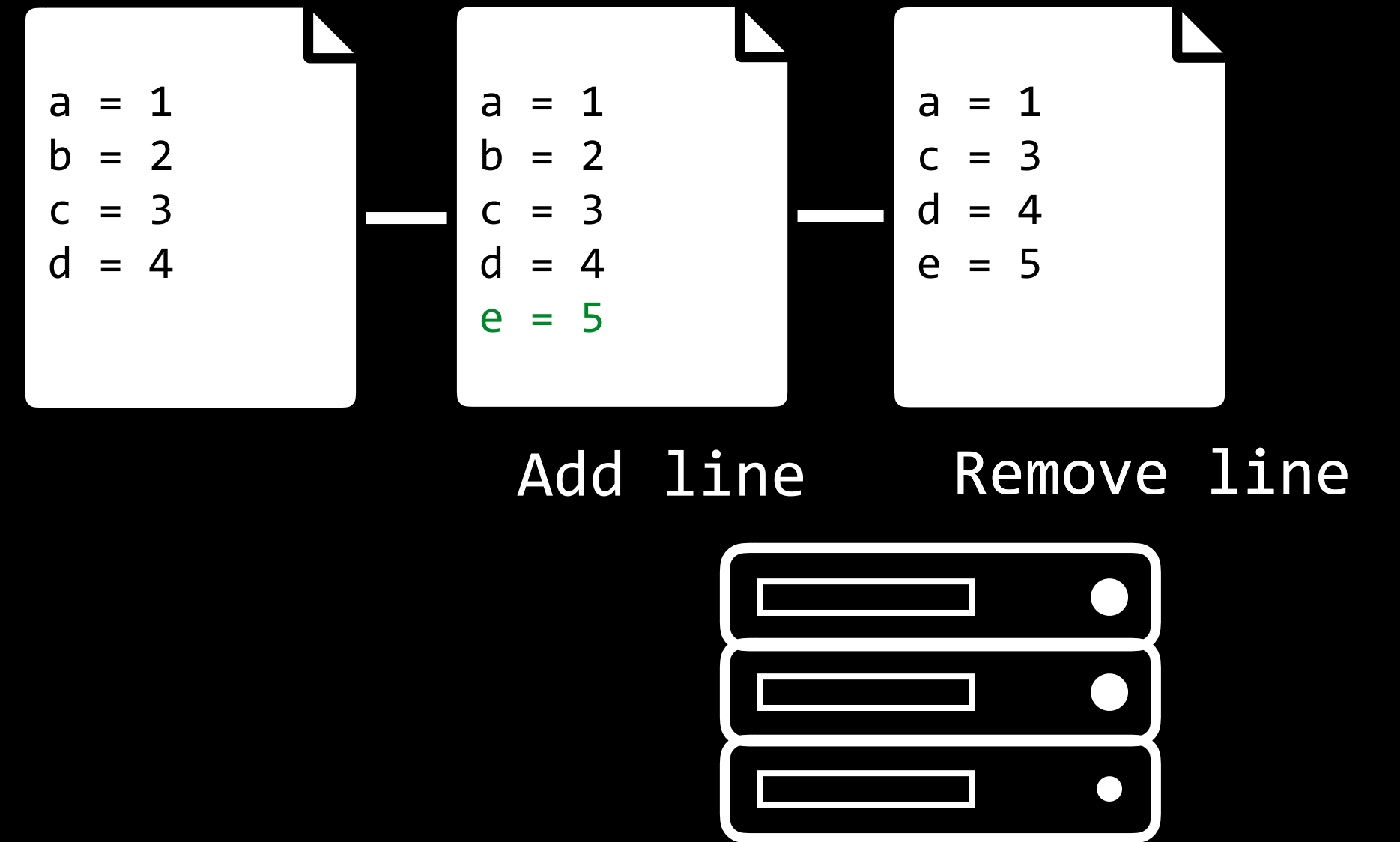
Add line

git push

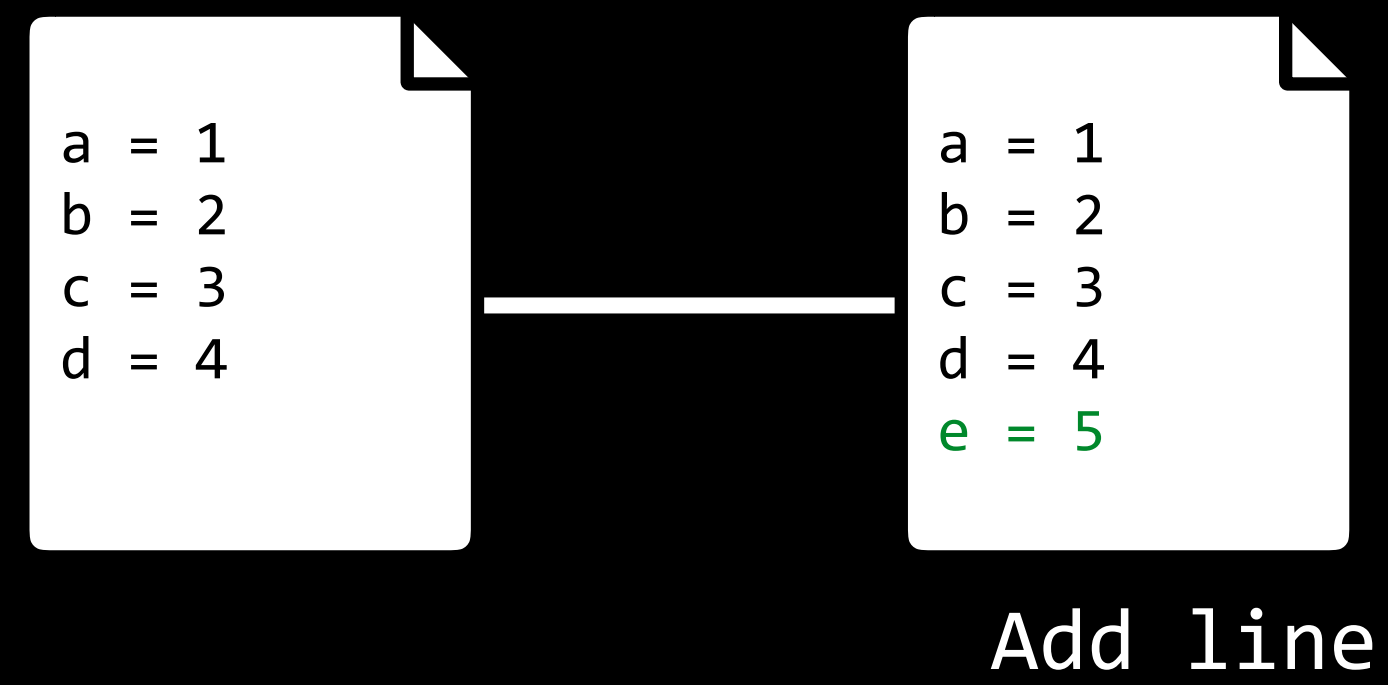
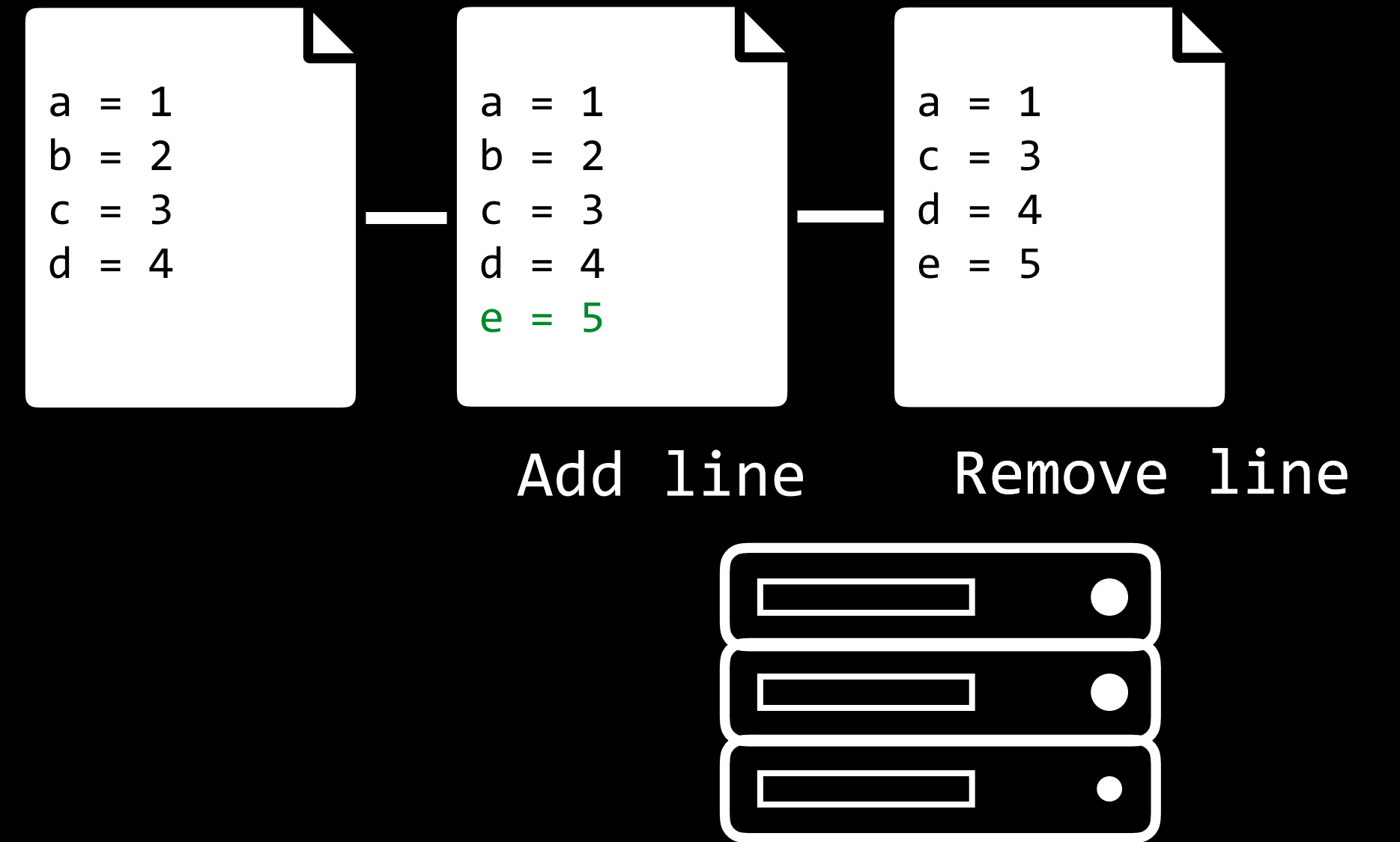



```
git pull
```

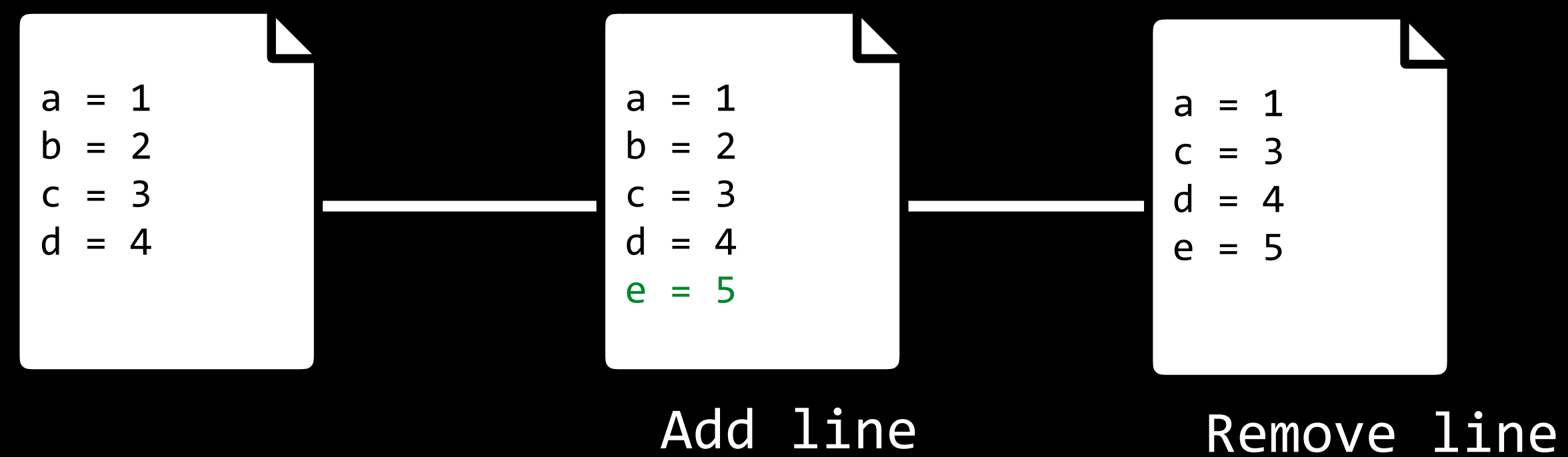
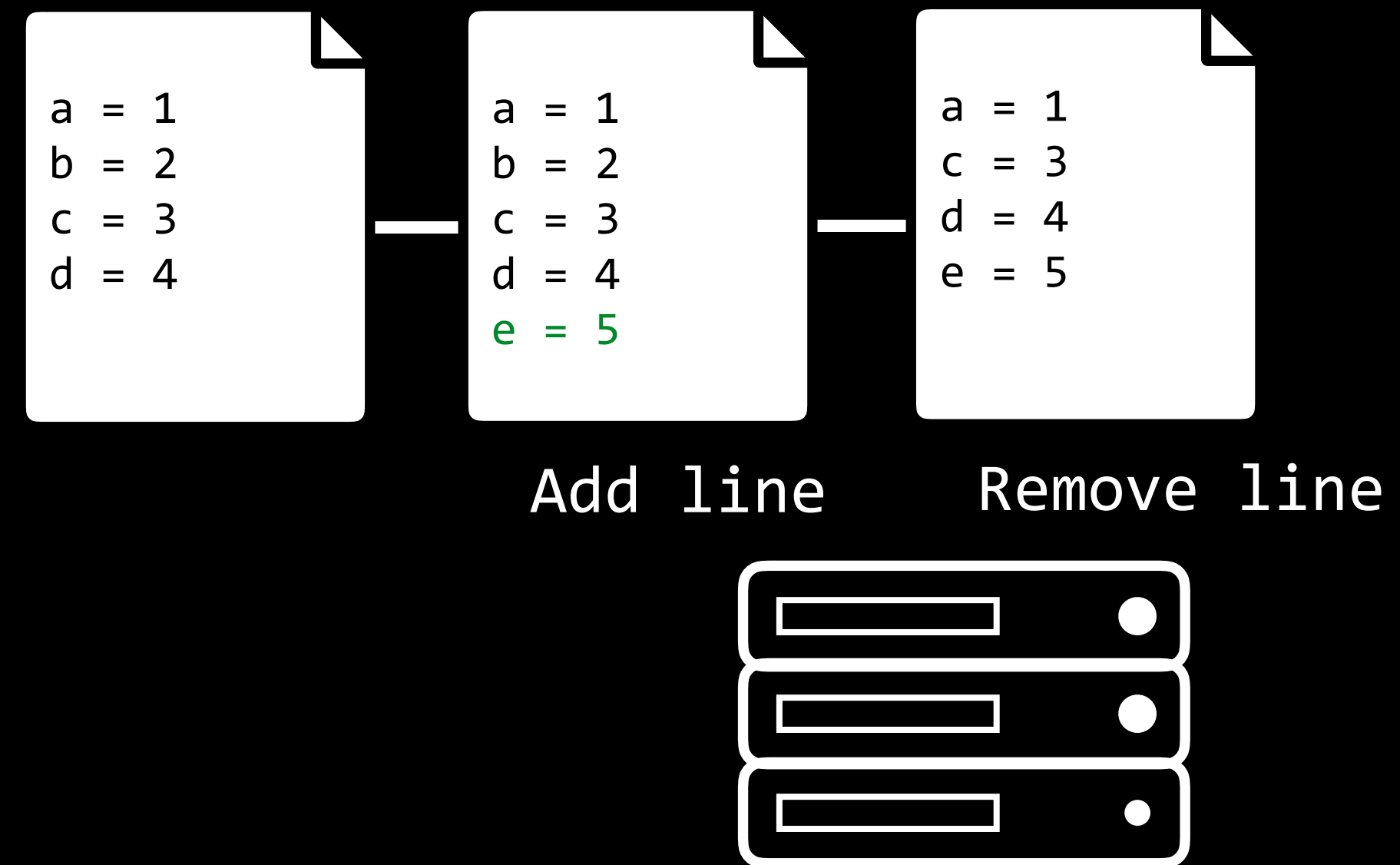
git pull



git pull

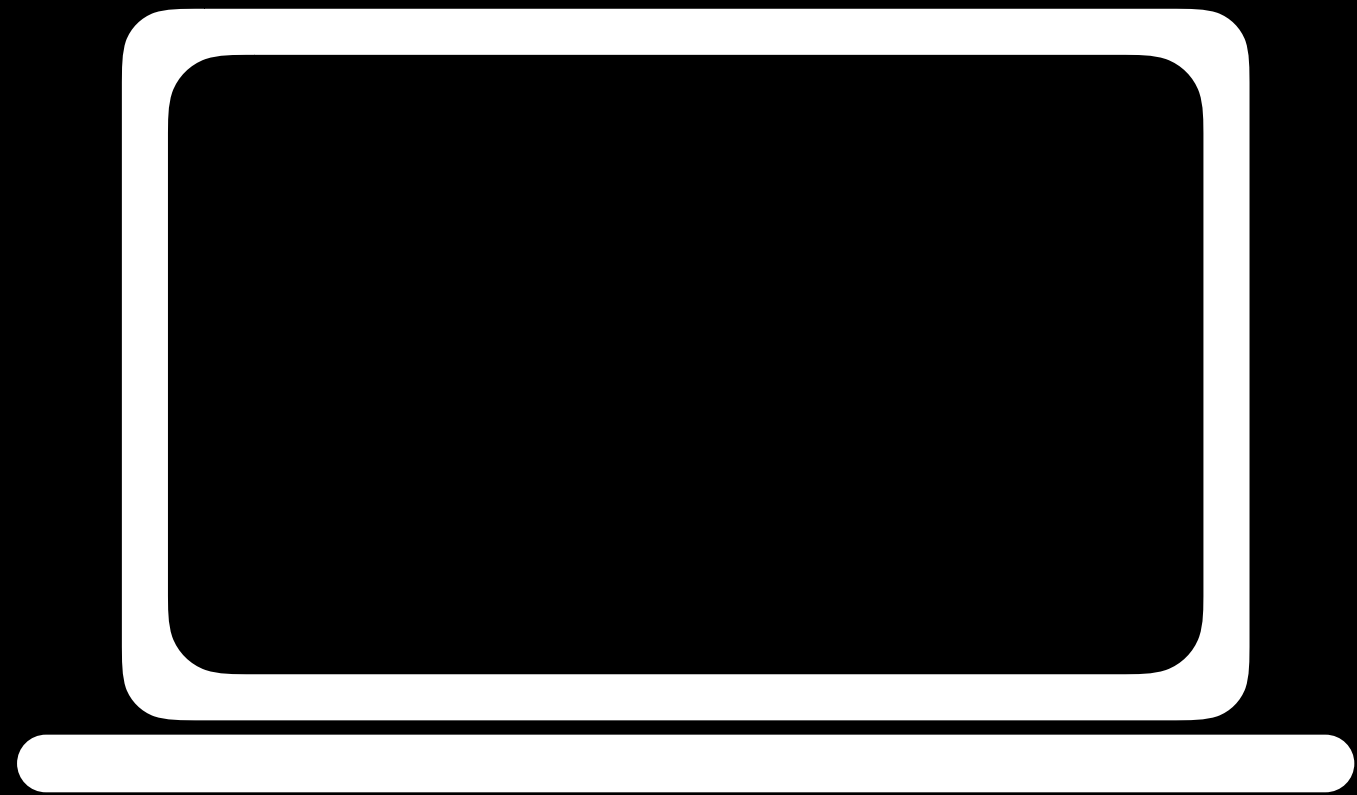


git pull



Merge Conflicts

Merge Conflicts



Merge Conflicts



```
git pull
```

Merge Conflicts



```
git pull
```

```
CONFLICT (content): Merge conflict in foo.py  
Automatic merge failed; fix conflicts and then  
commit the result.
```


Merge Conflicts



```
git pull
```

```
a = 1
<<<<< HEAD
b = 2
=====
b = 0
>>>>> 57656c636f6d6520746f20576562
c = 3
d = 4
e = 5
```

Merge Conflicts




```
git pull
```

your
changes

remote
changes

```
a = 1
<<<<< HEAD
{ b = 2
  =====
  { b = 0
    >>>>> 57656c636f6d6520746f20576562
    c = 3
    d = 4
    e = 5
```

conflicting commit



Merge Conflicts



```
git pull
```

```
a = 1
<<<<< HEAD
b = 2
=====
b = 0
>>>>> 57656c636f6d6520746f20576562
c = 3
d = 4
e = 5
```

Merge Conflicts

A white-outlined icon of a terminal window with a thick border, containing the text 'git pull'.

```
git pull
```

```
a = 1
```

```
b = 2
```

```
c = 3
```

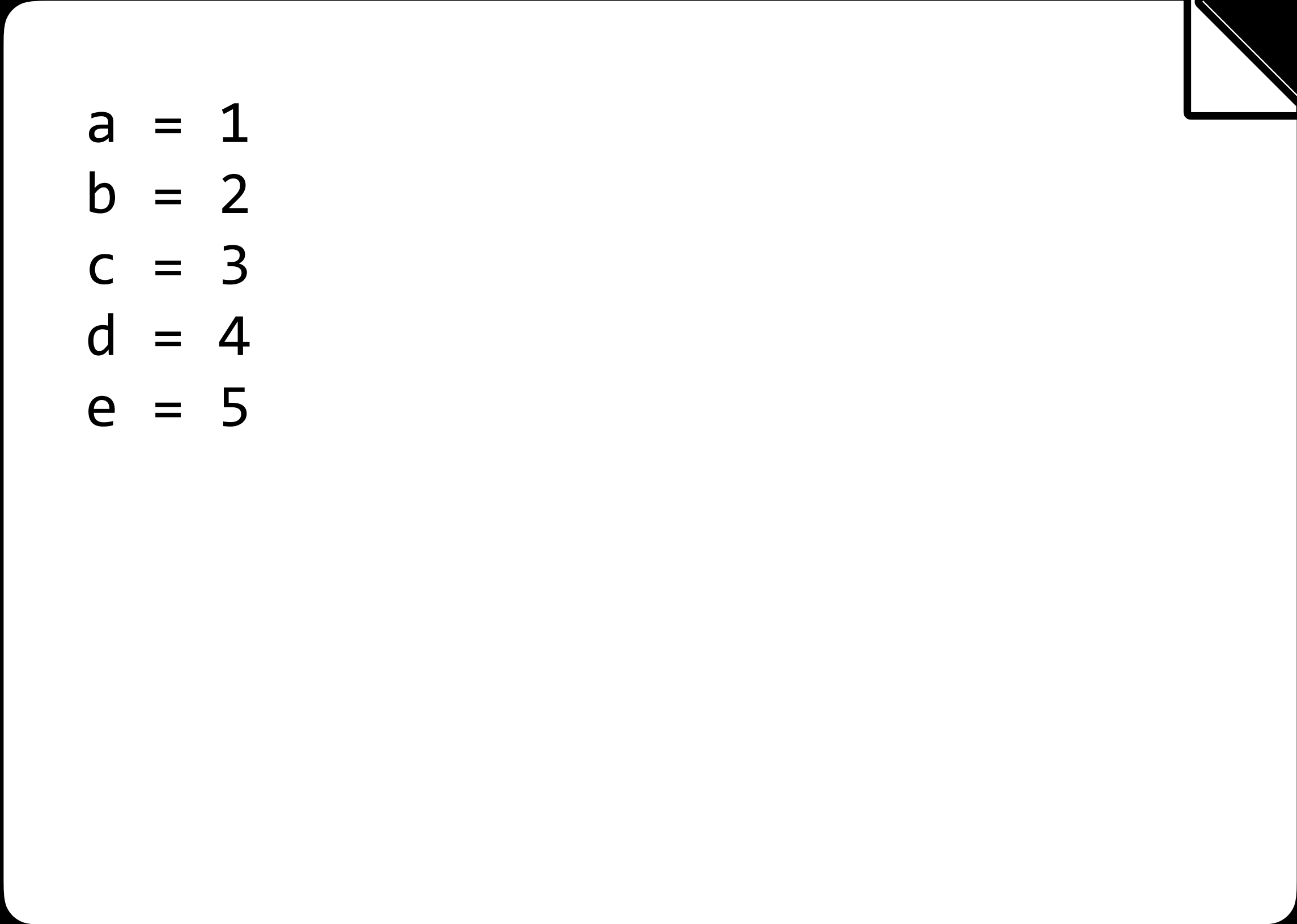
```
d = 4
```

```
e = 5
```

Merge Conflicts



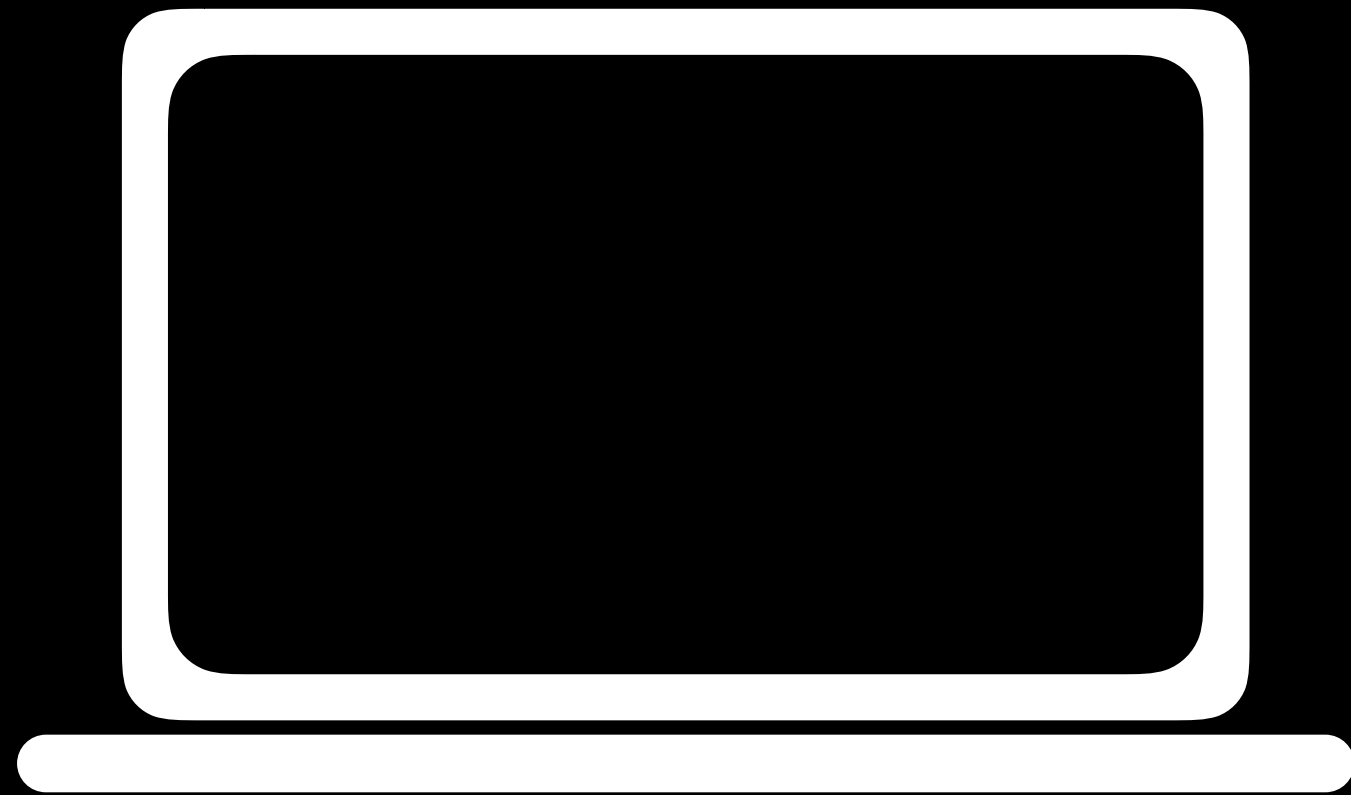
```
git pull
```



```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

git log

git log



```
git log
```



```
git log
```


git log

```
commit 436f6d6d6974204d73672048657265
Author: Brian Yu <brian@cs.harvard.edu>
Date:   Tue Jan 14 14:06:28 2020 -0400
```

Remove a line

```
commit 57656c636f6d6520746f20576562
Author: Brian Yu <brian@cs.harvard.edu>
Date:   Tue Jan 14 14:05:28 2020 -0400
```

Add a line

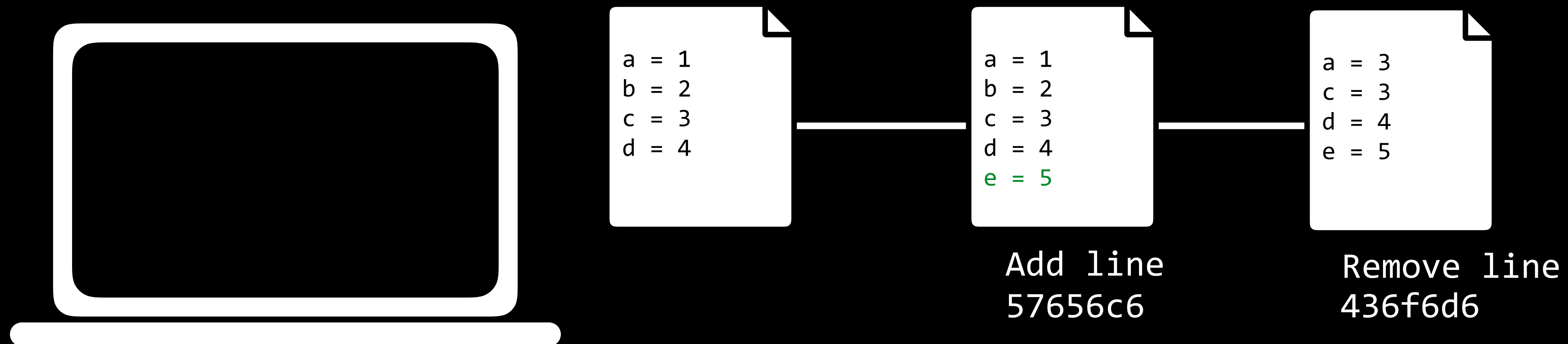


git log

```
git reset
```

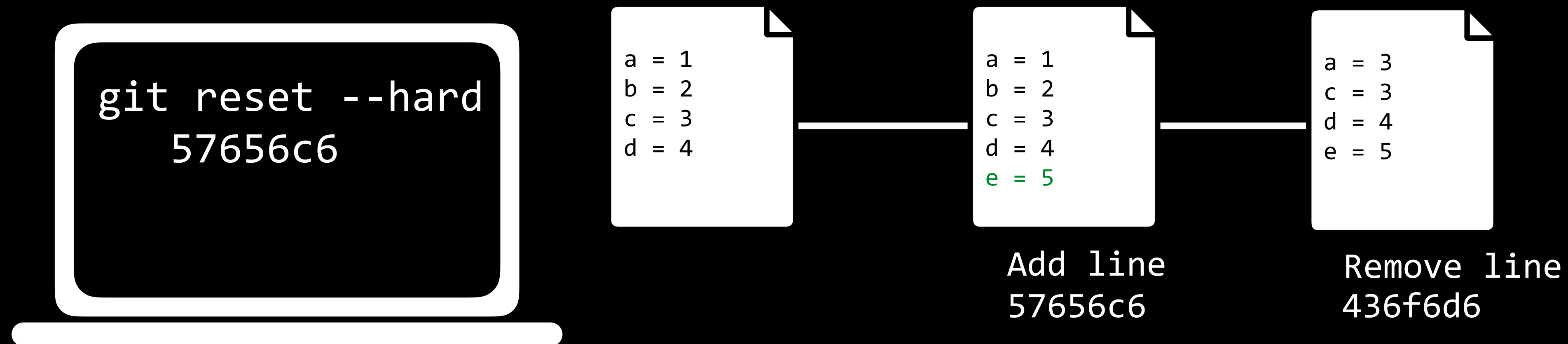
git reset

- `git reset --hard <commit>`
- `git reset --hard origin/master`



git reset

- `git reset --hard <commit>`
- `git reset --hard origin/master`

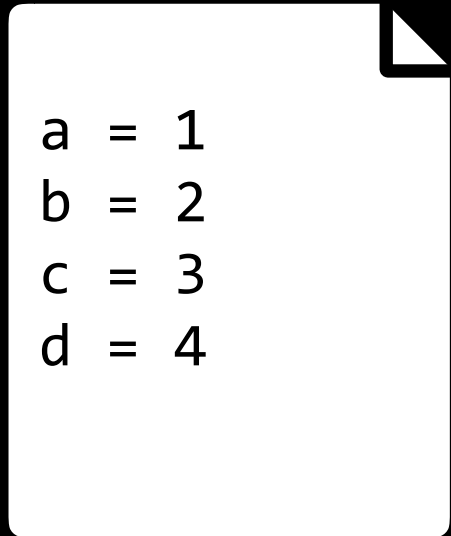


git reset

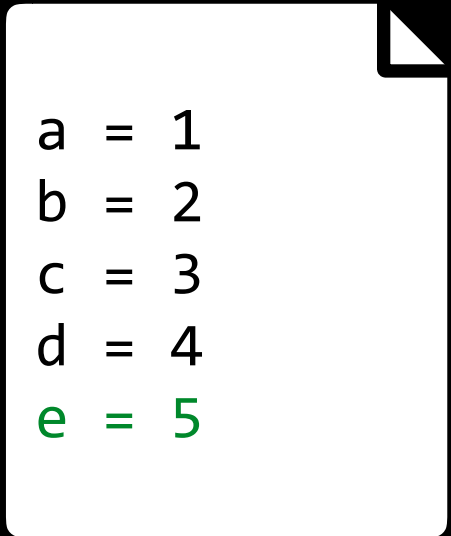
- `git reset --hard <commit>`
- `git reset --hard origin/master`



```
git reset --hard  
57656c6
```



```
a = 1  
b = 2  
c = 3  
d = 4
```



```
a = 1  
b = 2  
c = 3  
d = 4  
e = 5
```

Add line
57656c6

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