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Git with Grit

A virtul training series on the fundamentals of Git and Github

7:00 PM – 8:00 PM | (GMT+ 6:00)

16th , 18th , 19th February, 2021

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Git with Grit

A virtual training series on the fundamentals of Git and Github

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Microsoft Learn Student Ambassador
Undergrad Student,
Department of Electrical and Electronic Engineering,
Chittaging University of Engineering and Technology (CUET)

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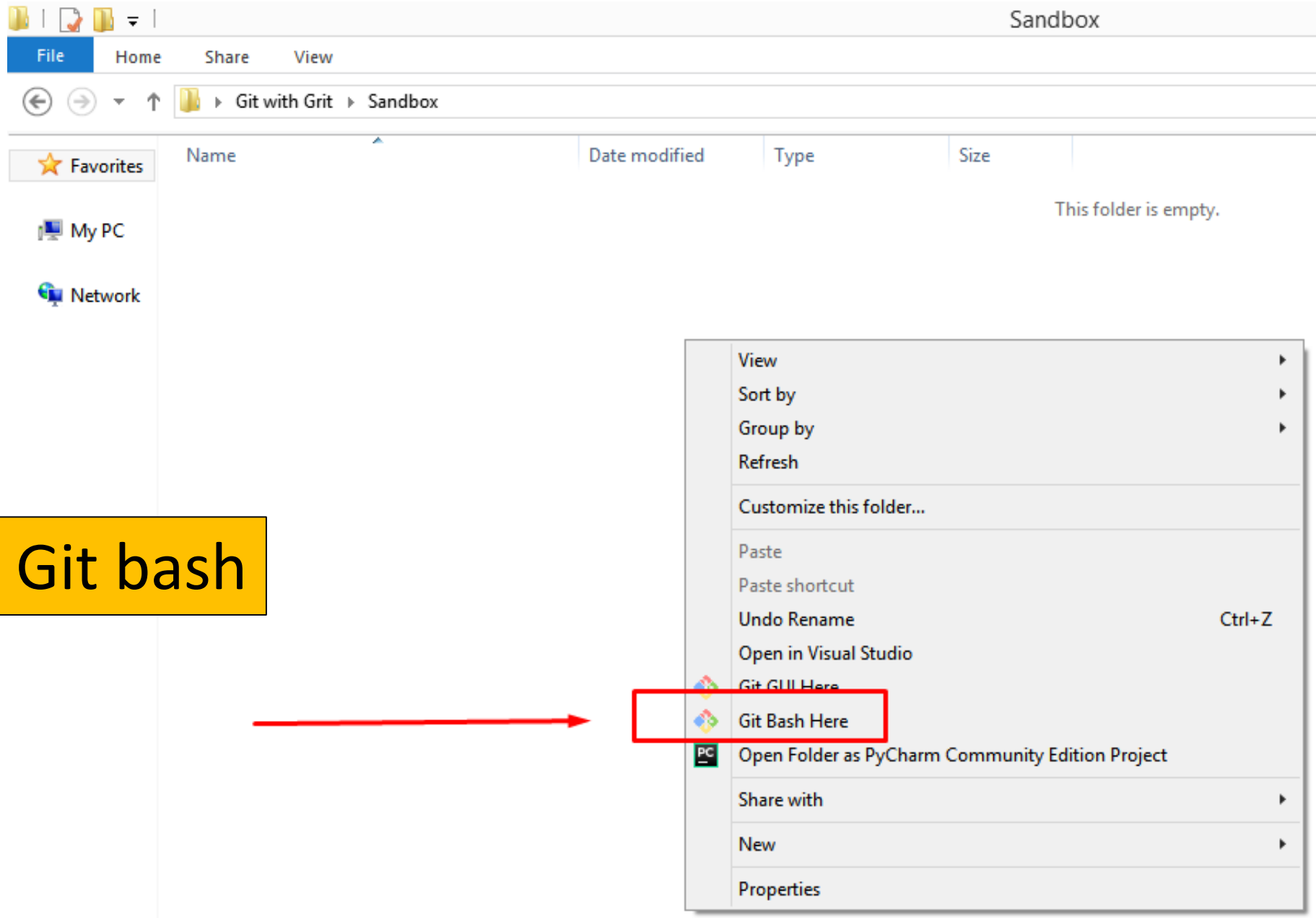
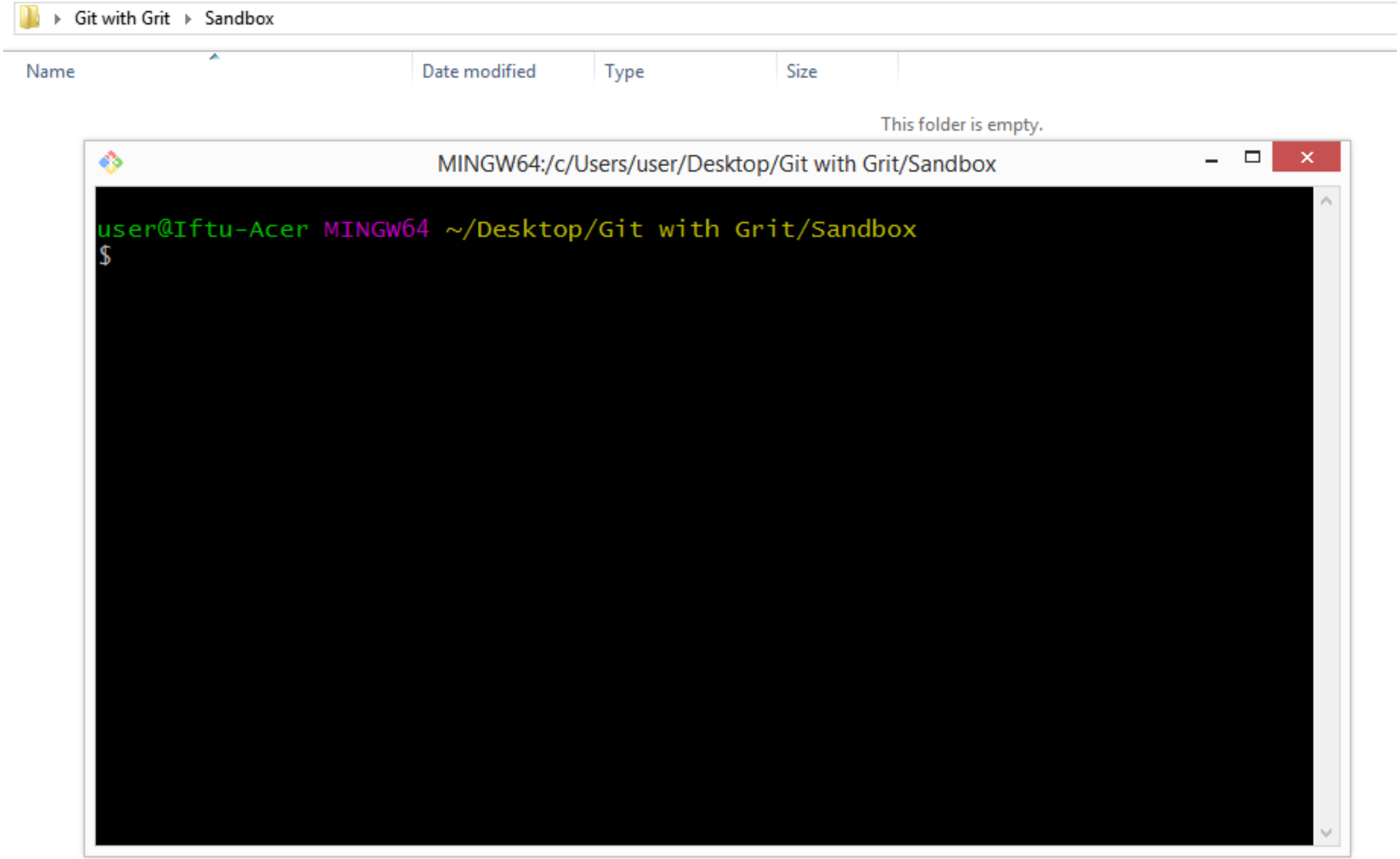
DAY-1

Opening Git bash

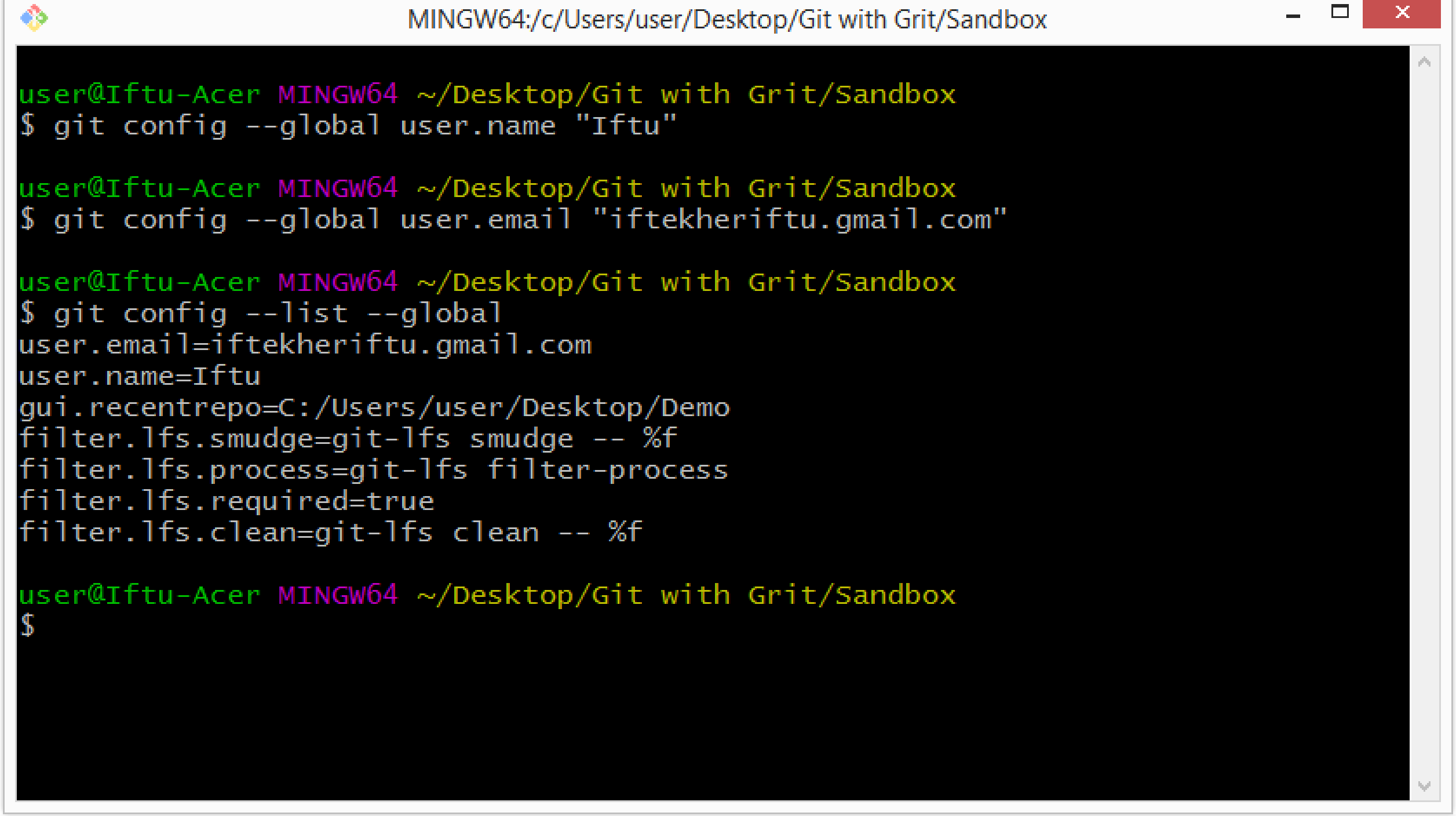



Git with Grit
Sandbox
Name
Date modified
Type
Size
This folder is empty.
MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox
$

Configuration

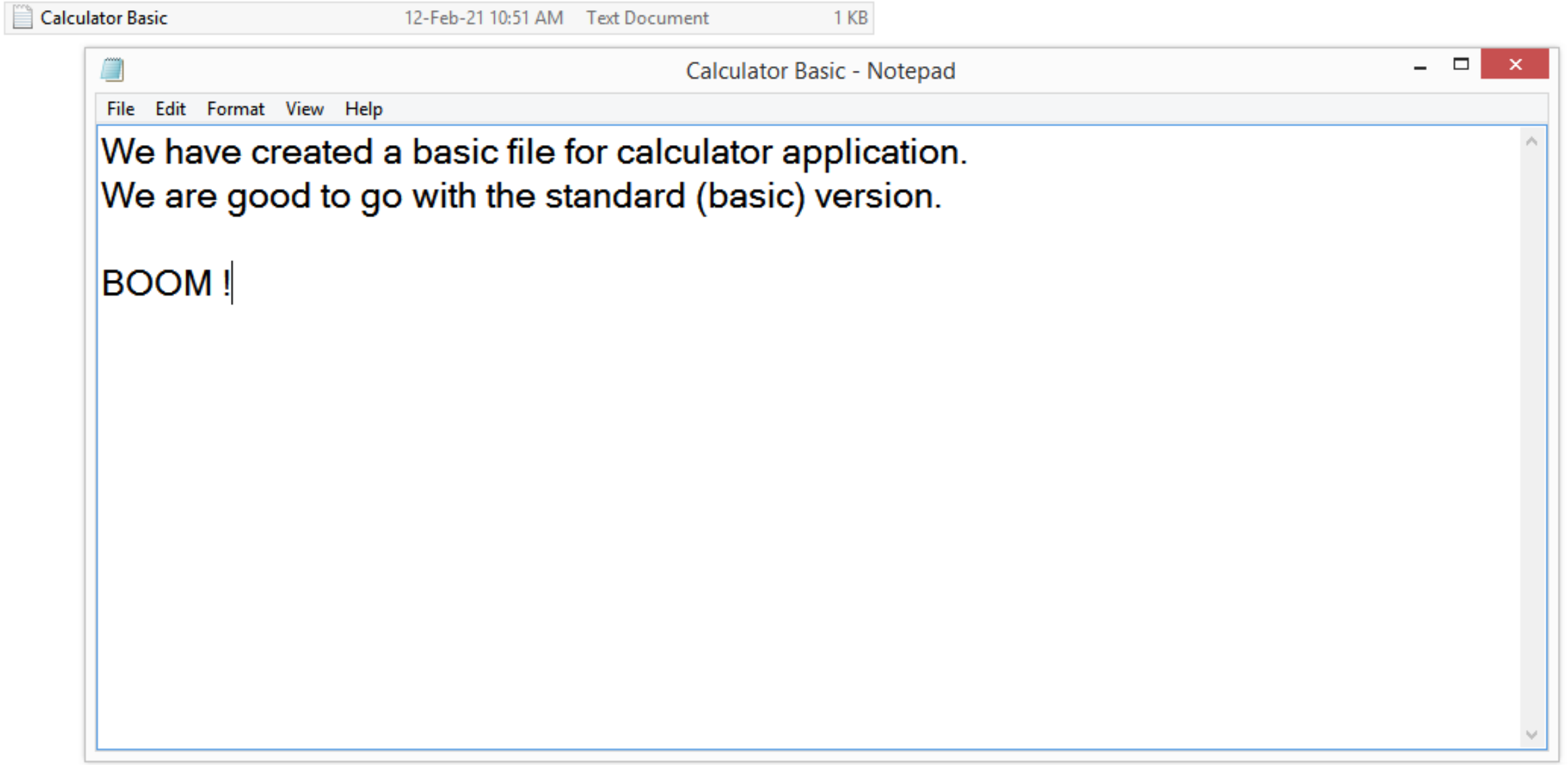
```
git config --global user.name "Your Name”    /Set USER NAME/
git config --global user.email youremail@yourdomain.com
/Set USER EMAIL/
git config --global –-list /See USER configuration/
```

There are few more features one can configure like editor , color.
In this session we are concentrating more into the basic operations


MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox
$ git config --global user.name "Iftu"
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox
$ git config --global user.email "iftekheriftu.gmail.com"
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox
$ git config --list --global
user.email=iftekheriftu.gmail.com
user.name=Iftu
gui.recentrepo=C:/Users/user/Desktop/Demo
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
filter.lfs.clean=git-lfs clean -- %f
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox
$

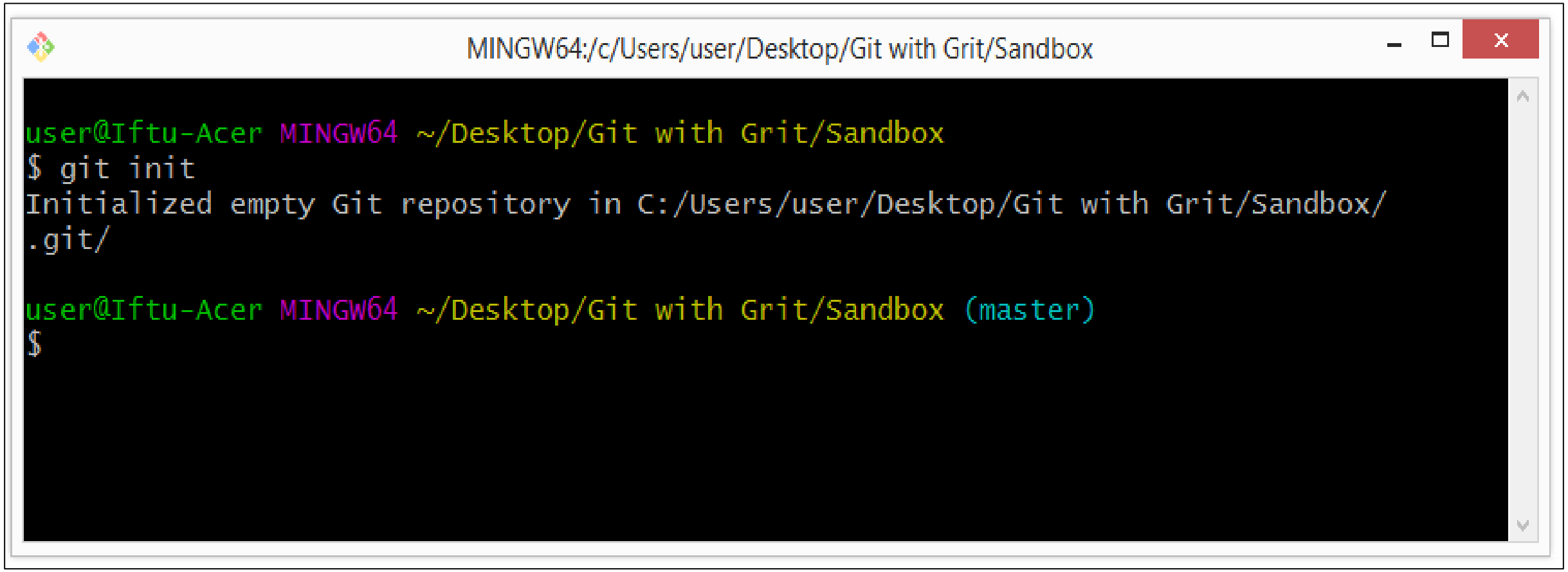
Creating our First file for the project

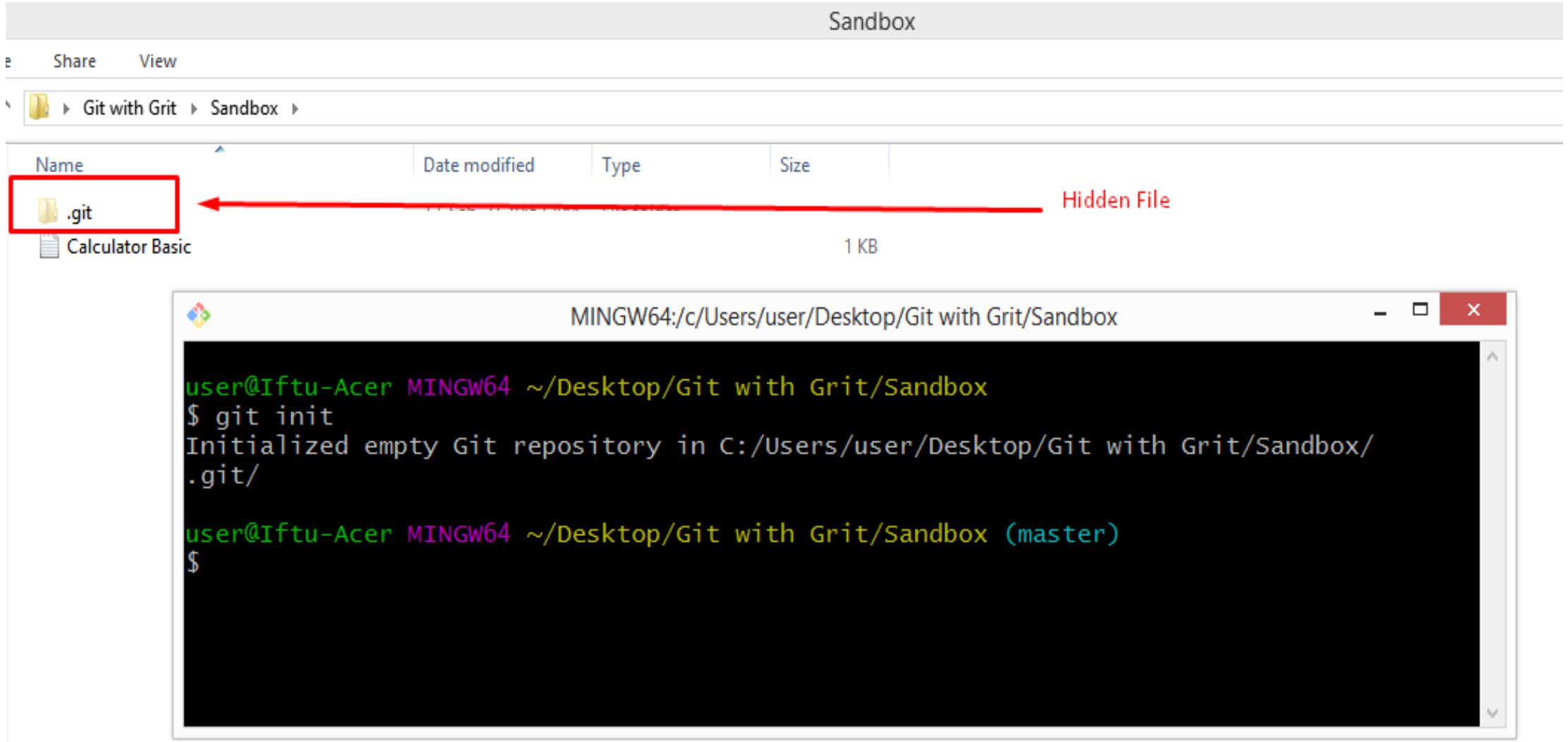
File Name : Calculator Basic



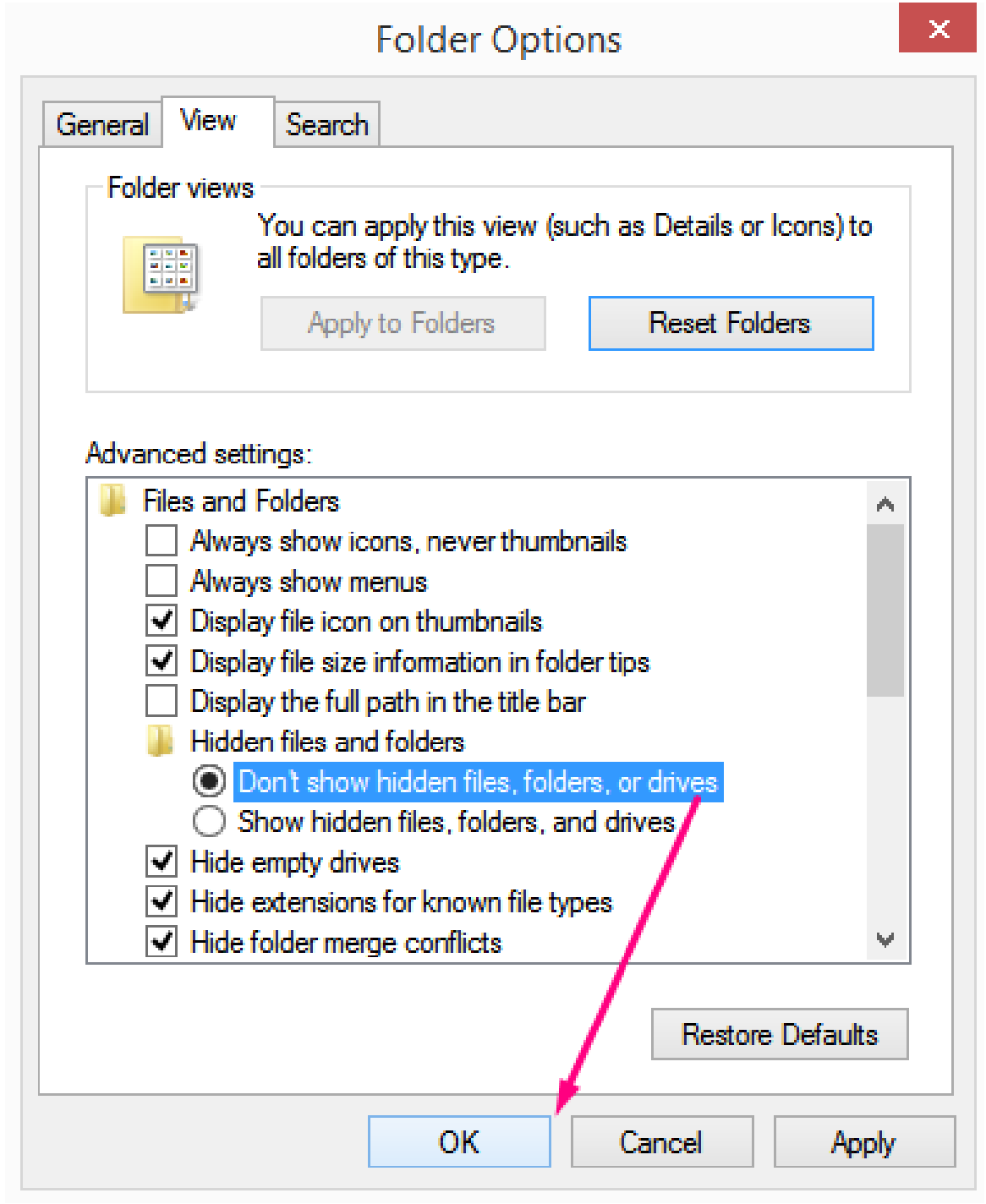
Let's Turn it On : Initialize the Git

```
$ git init
```

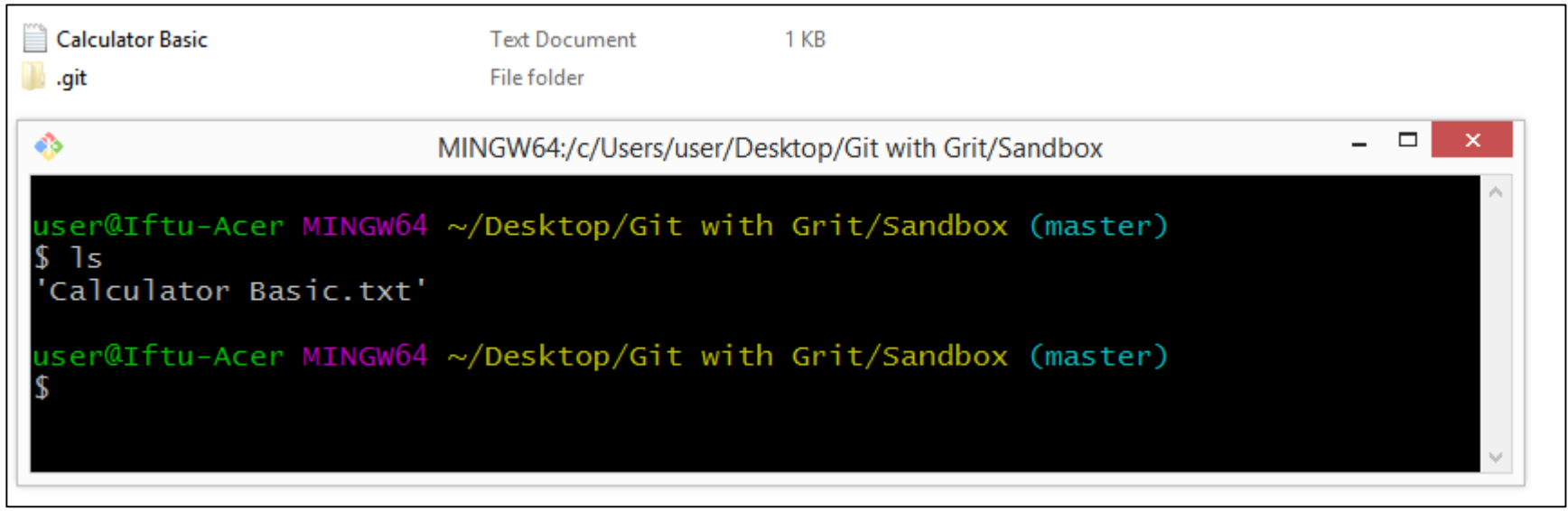



Sandbox
Share
View
Git with Grit
Sandbox
Name
Date modified
Type
Size
.git
Hidden File
Calculator Basic
1 KB
MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox
$ git init
Initialized empty Git repository in C:/Users/user/Desktop/Git with Grit/Sandbox/
.git/
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$

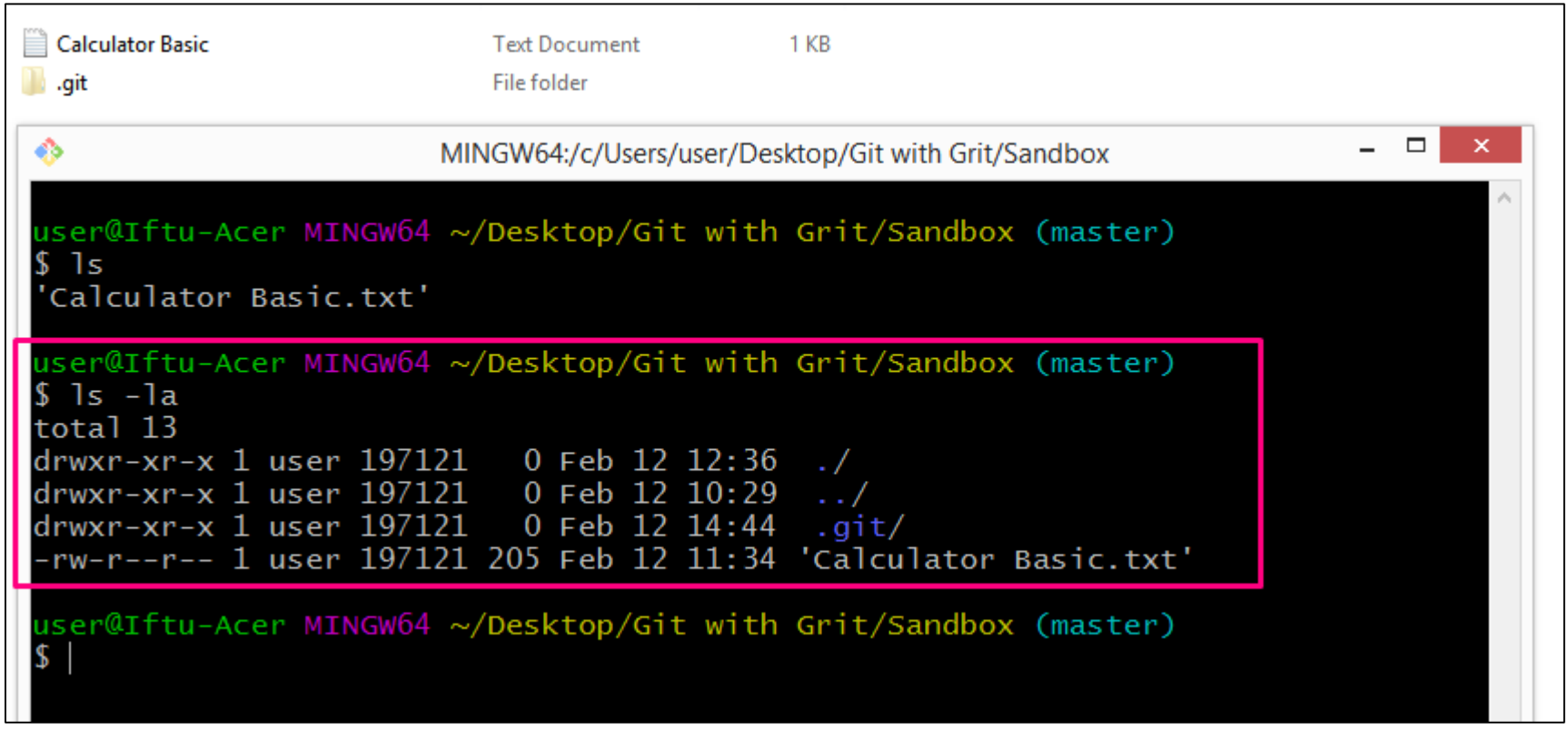
Regulating hidden files in UI level

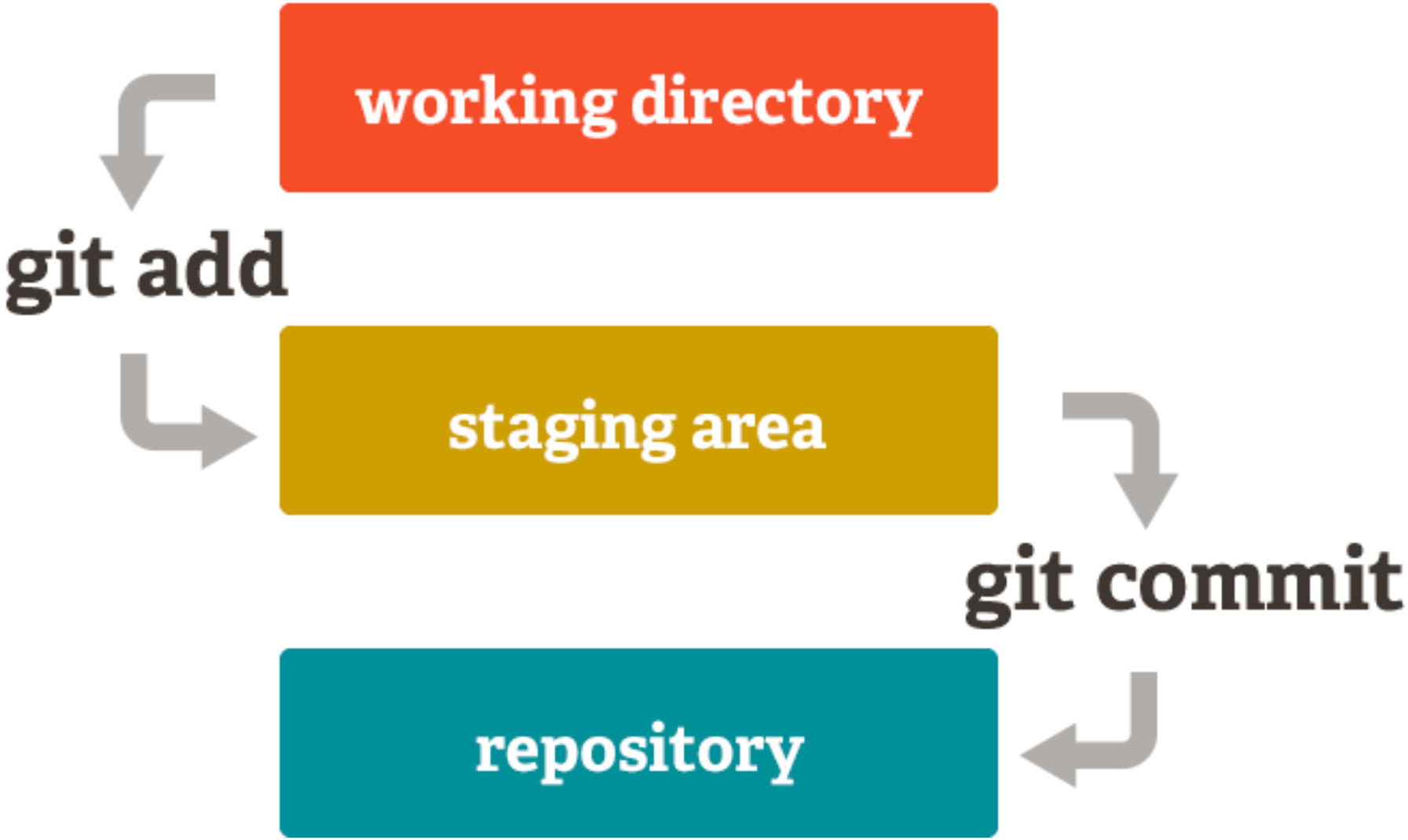


ls


Calculator Basic
Text Document
1 KB
.git
File folder
MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$ ls
'Calculator Basic.txt'
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$

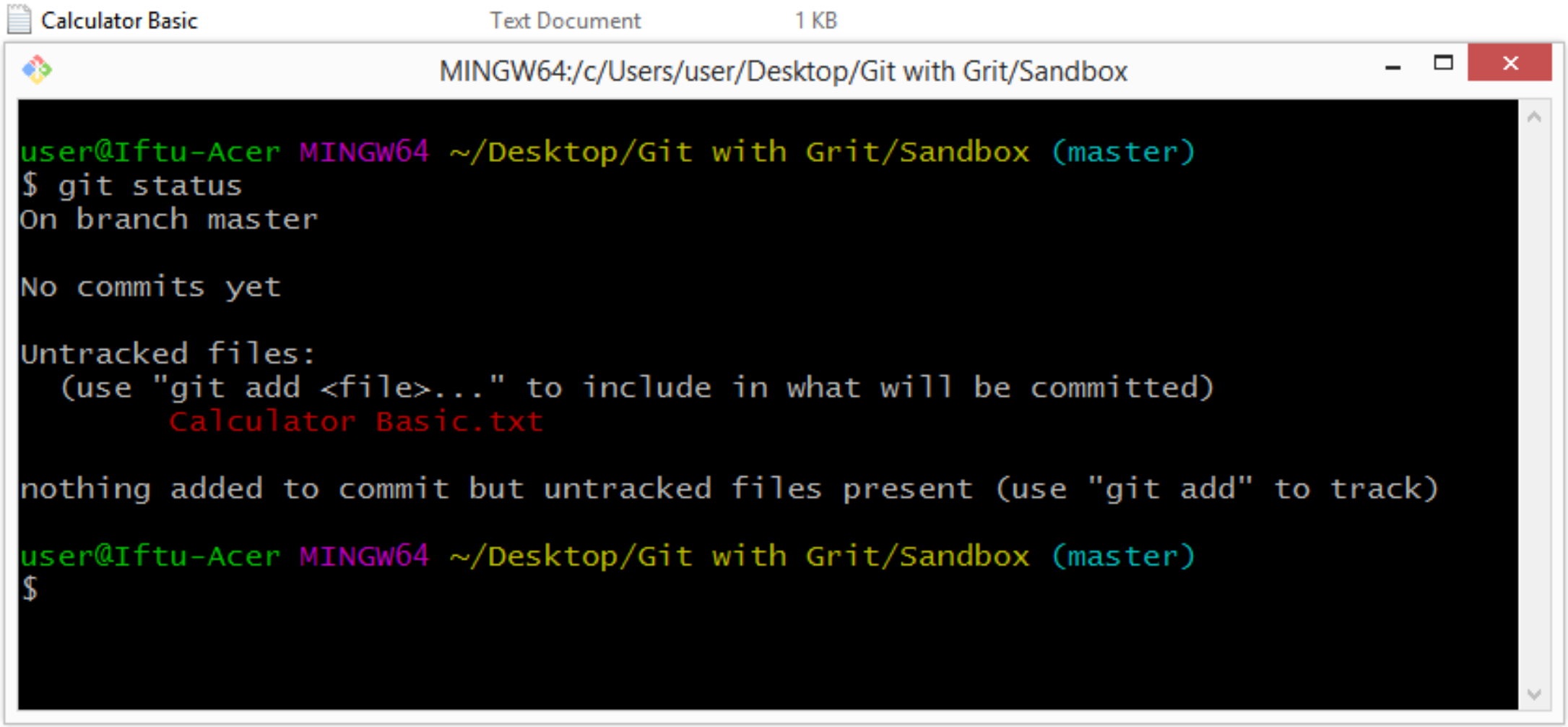
ls -la


Calculator Basic
Text Document
1 KB
.git
File folder
MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$ ls
'Calculator Basic.txt'
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$ ls -la
total 13
drwxr-xr-x 1 user 197121   0 Feb 12 12:36 ./
drwxr-xr-x 1 user 197121   0 Feb 12 10:29 ../
drwxr-xr-x 1 user 197121   0 Feb 12 14:44 .git/
-rw-r--r-- 1 user 197121 205 Feb 12 11:34 'Calculator Basic.txt'
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$

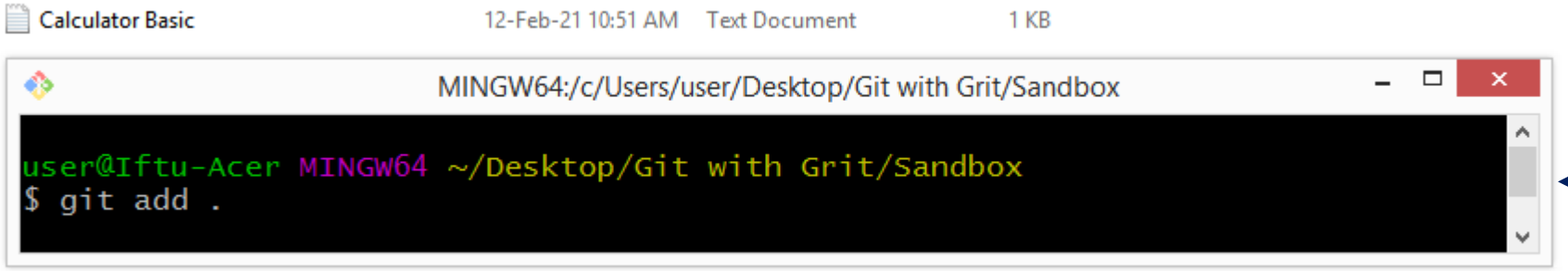


Source : https://medium.com/@lucasmaurer/git-gud-the-working-tree-staging-area-and-local-repo-a1f0f4822018

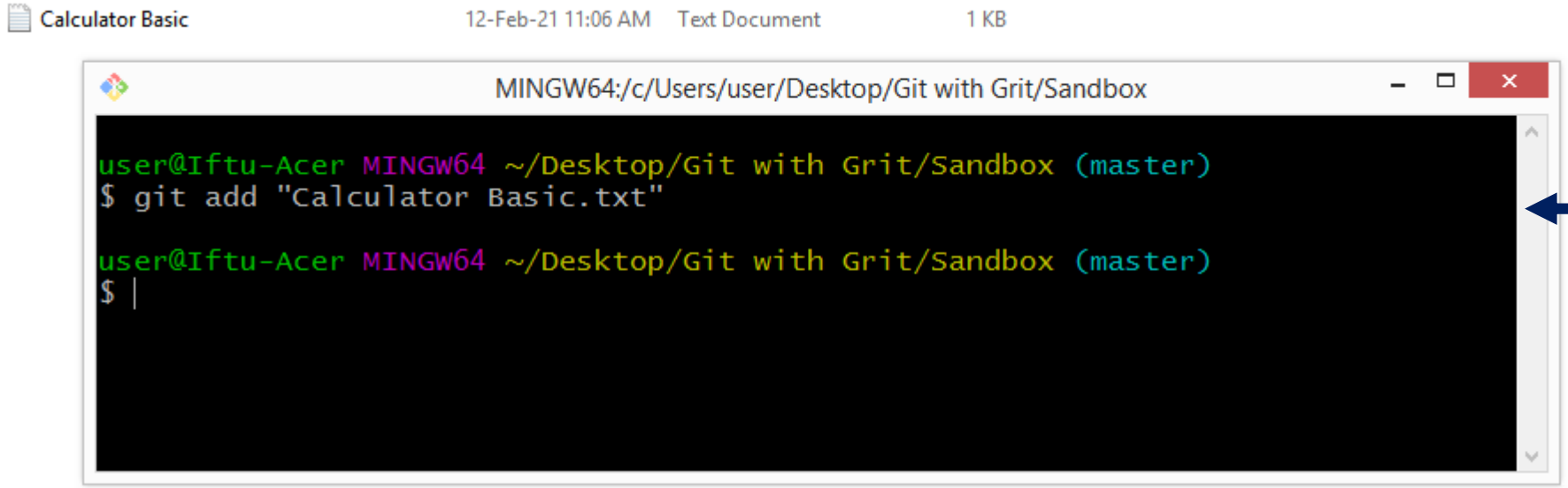
$ git status


Calculator Basic
Text Document
1 KB
MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$ git status
On branch master
No commits yet
Untracked files:
(use "git add <file>..." to include in what will be committed)
Calculator Basic.txt
nothing added to commit but untracked files present (use "git add" to track)
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$

$ git add .



$ git add “File Name.extension”

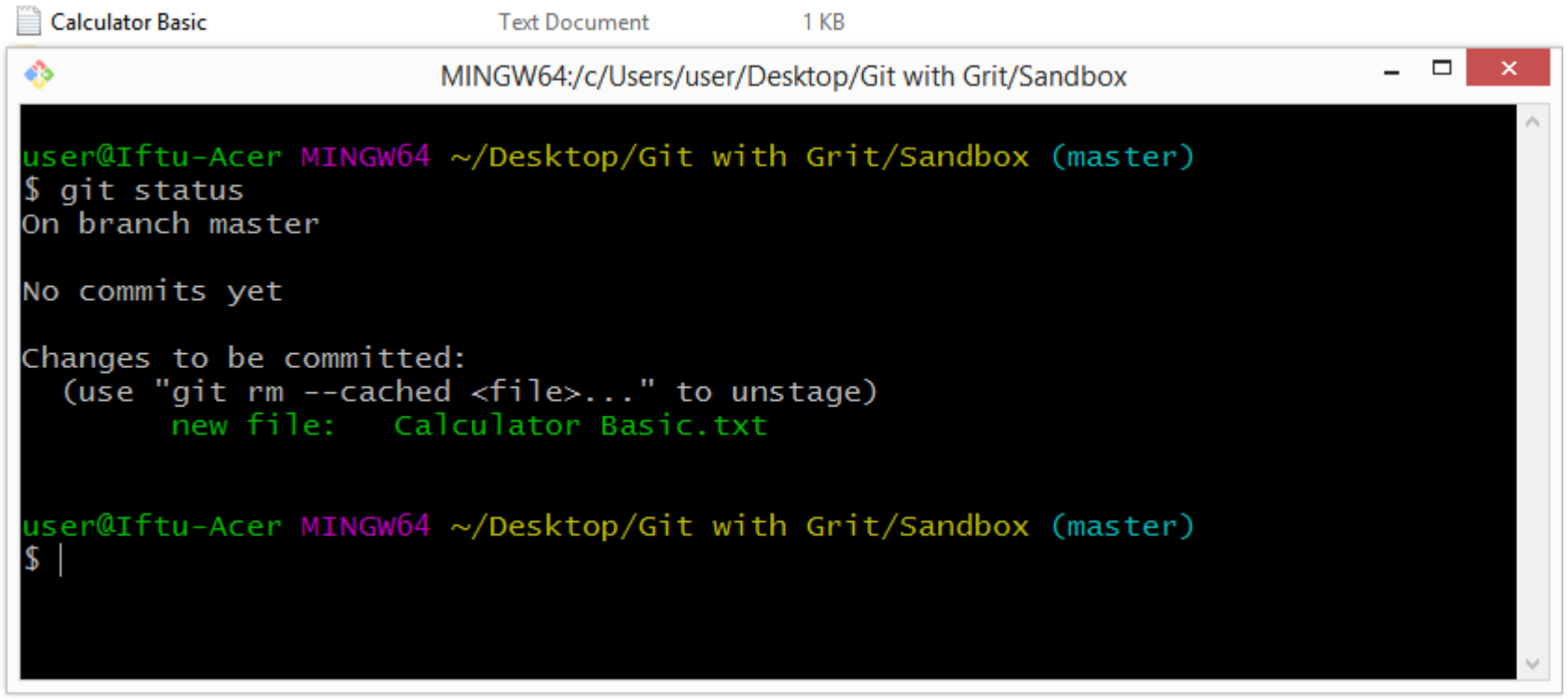


Use one of these 2.

`add .` sends all the updates to staging area

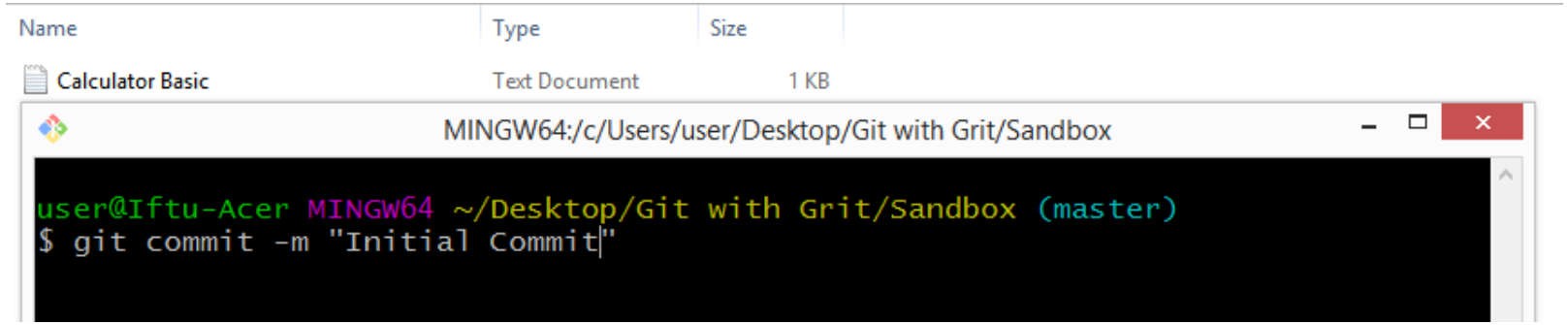
`add “filename.ext”` sends specifically that file to staging

$ git status

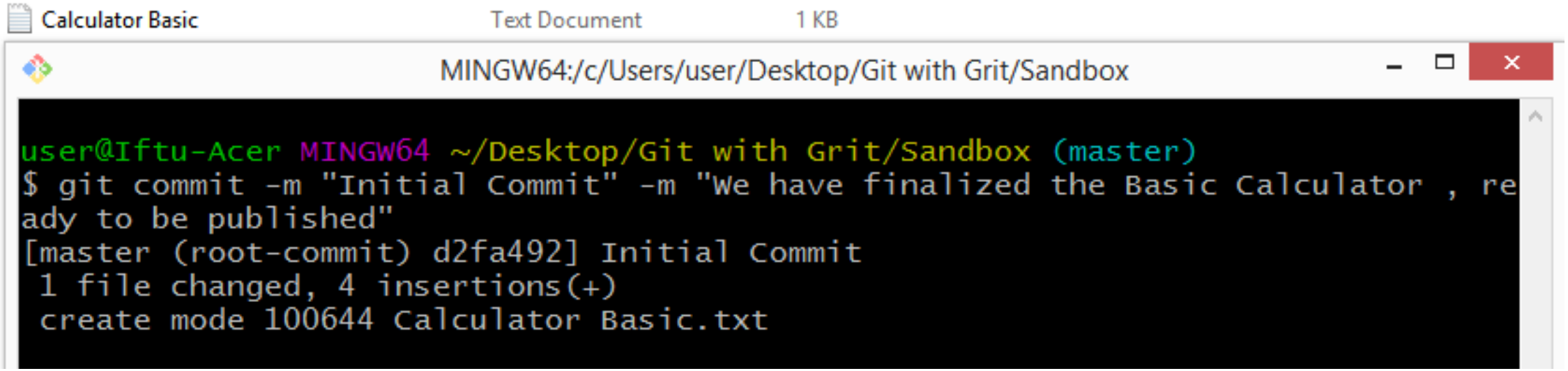


“Changes to be committed” – Oh Sure !

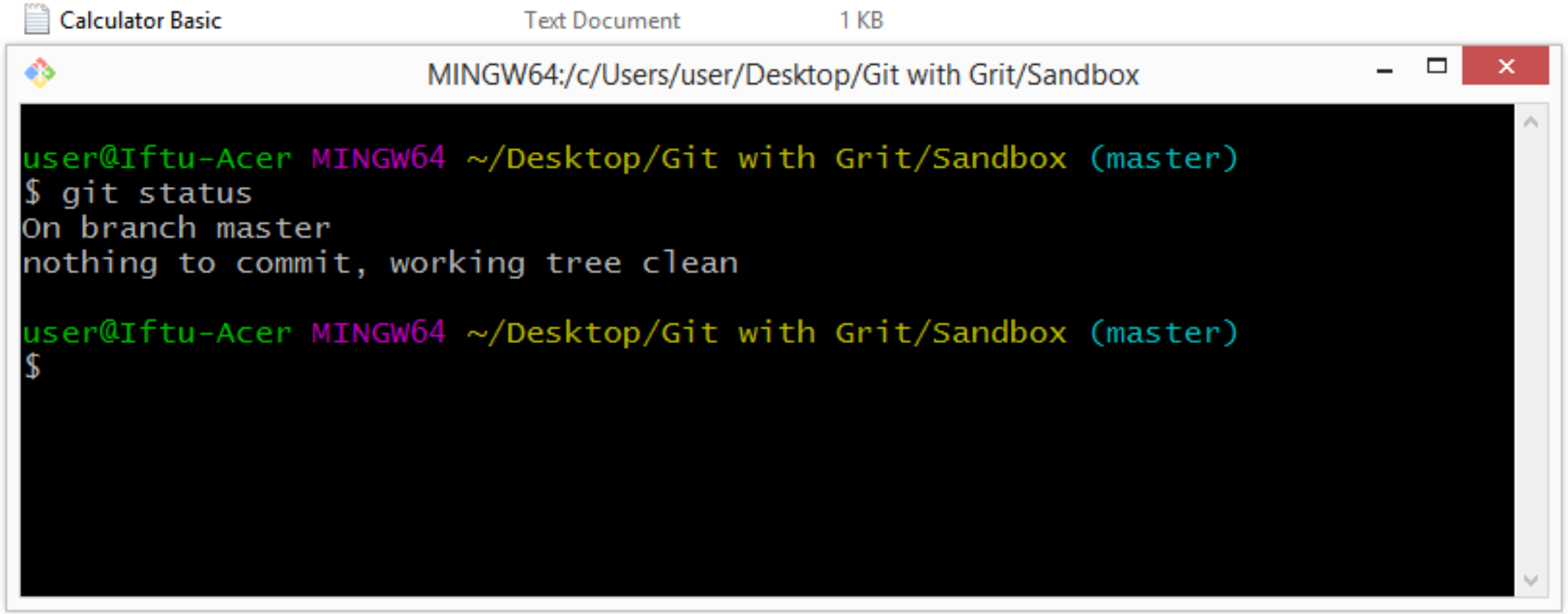
$ git commit -m “Short Commit Message"



$ git commit -m “Short Commit Message“ -m “Detailed Explanation"



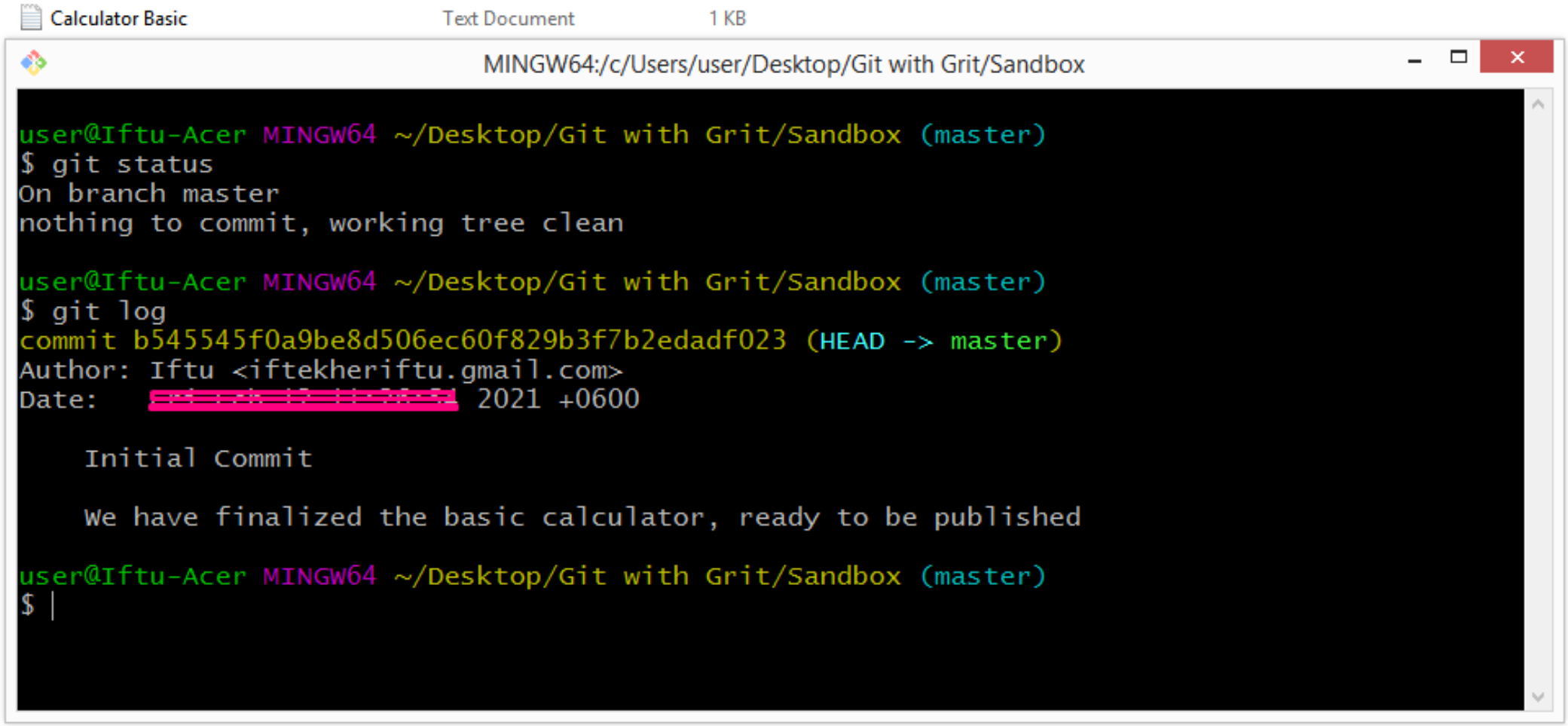
$ git status



Phew ! Commits got in

Let’s See how far we have come : LOG

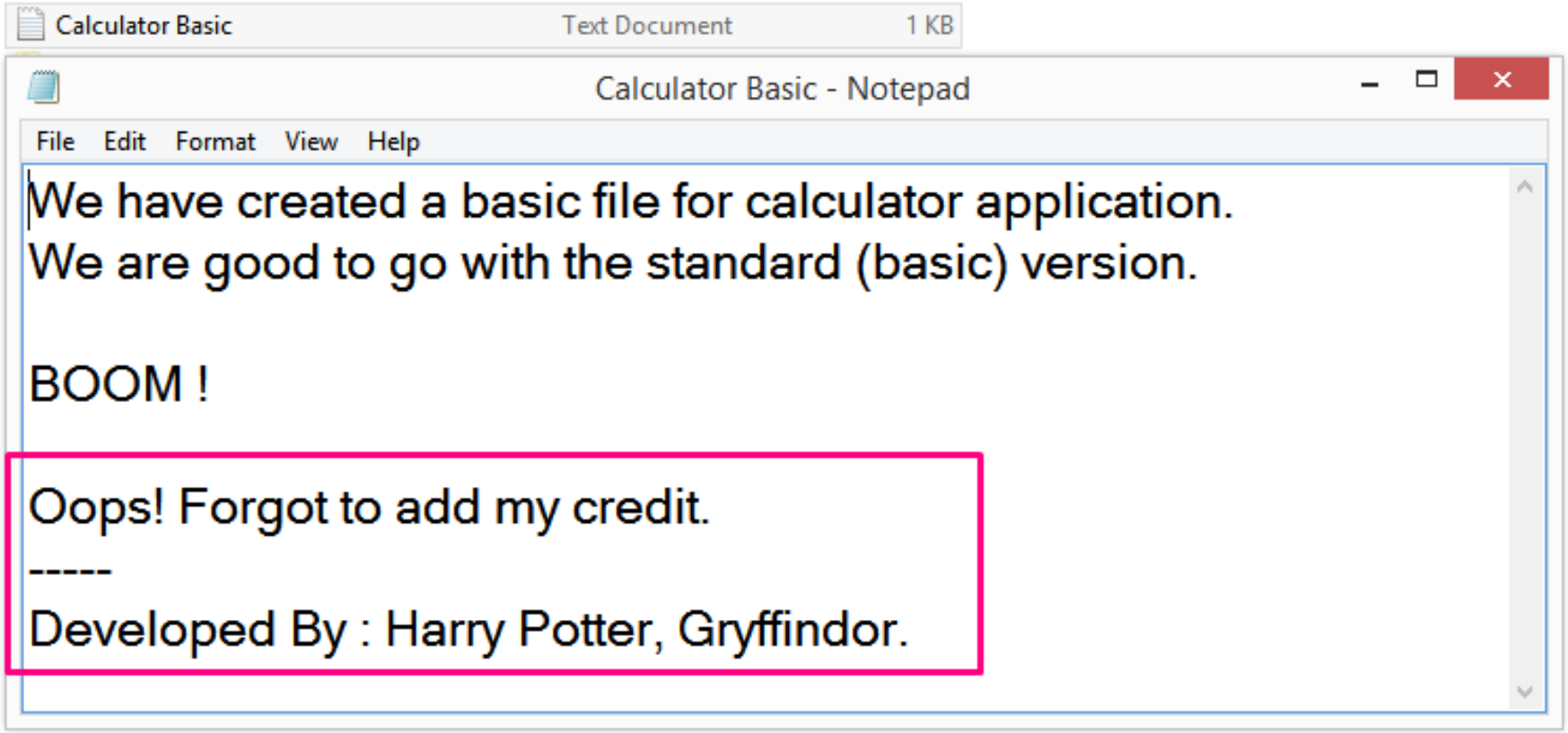
$ git log



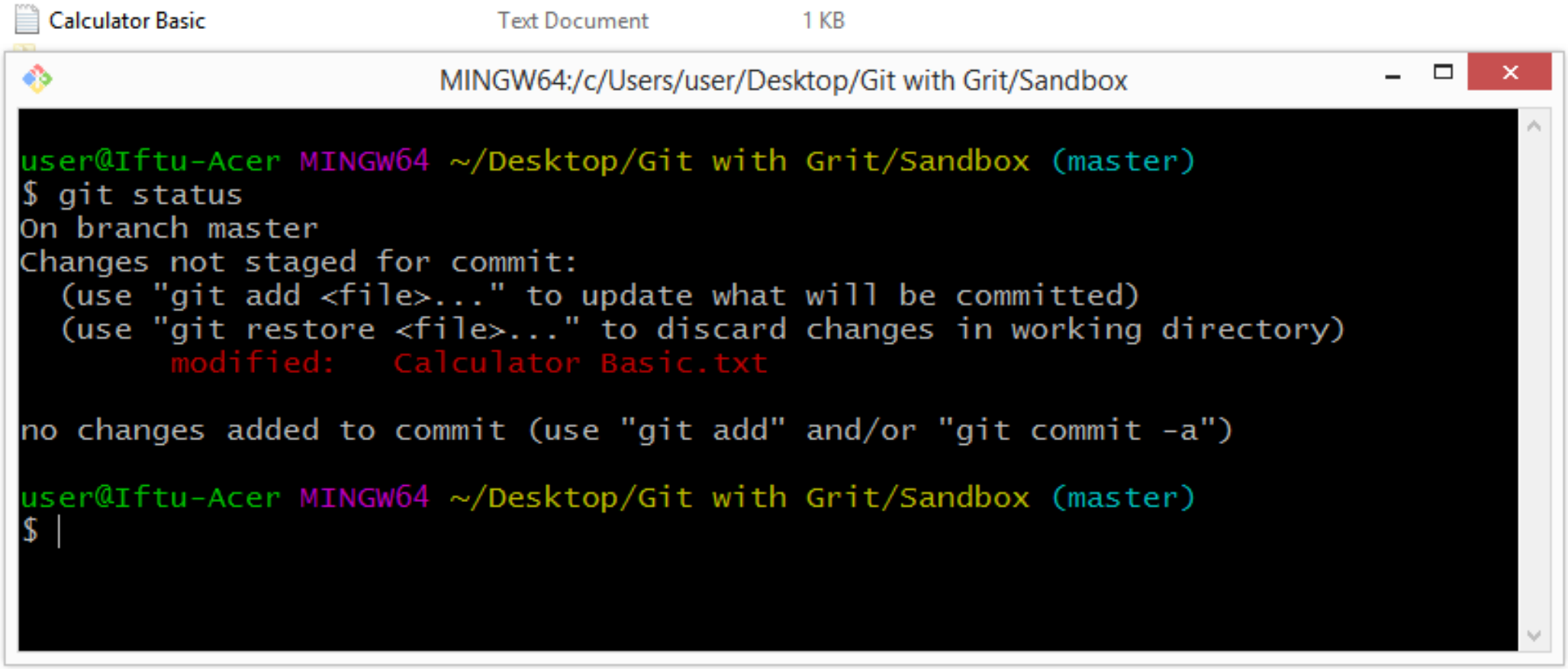
Each Commit has unique Hash

SHA - Secure Hash Algorithm

Time to see if Git can actually TRACK CHANGES

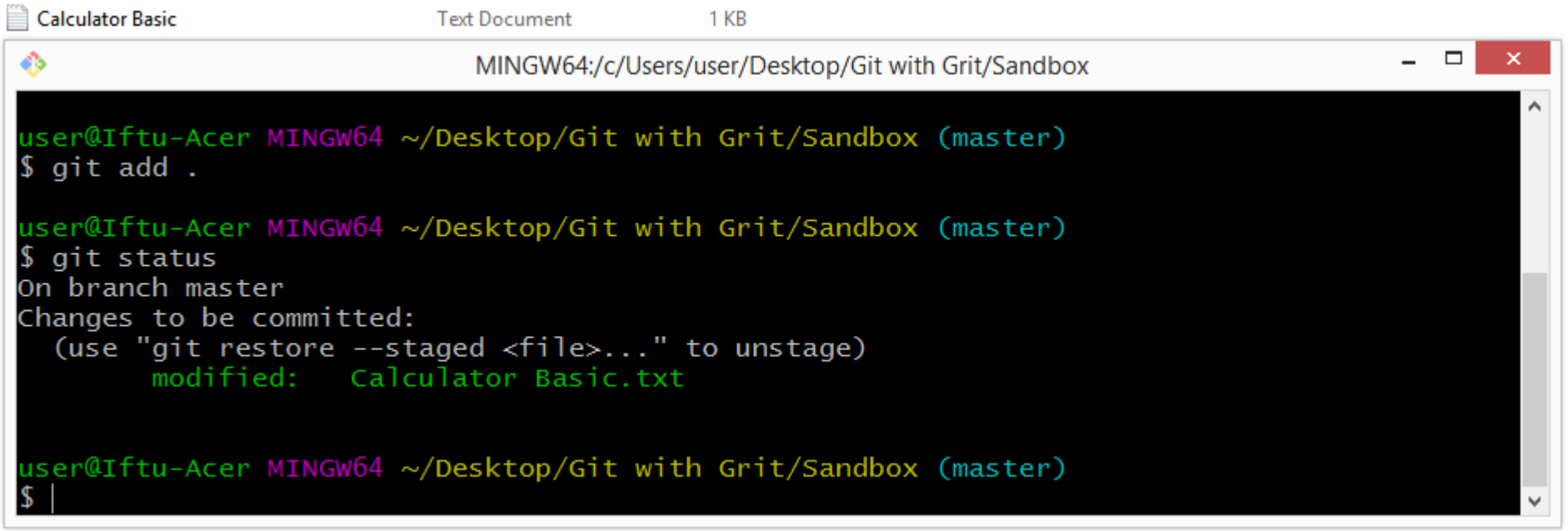


$ git status

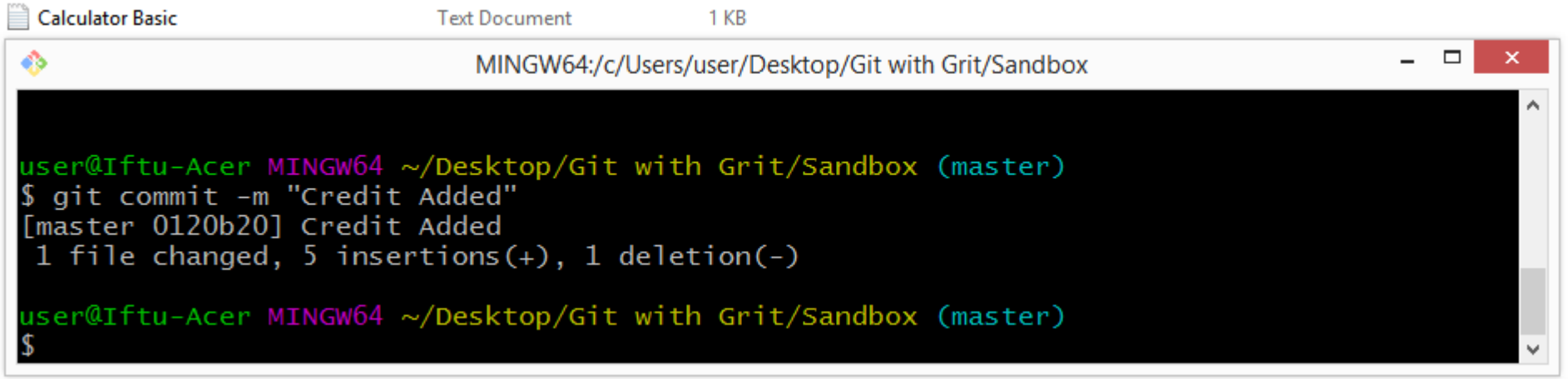


There you go ! Git knows that you modified this file …

$ git add .
$ git status



$ git commit



$ git log

Calculator Basic Text Document 1 KB

MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox

```
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$ git log
commit 0120b20d2272d7babeb05afd7b329cc369a1ebbb (HEAD -> master)
Author: Iftu <iftekheriftu.gmail.com>
Date:   [redacted] +0600

    Credit Added

commit b545545f0a9be8d506ec60f829b3f7b2edadf023
Author: Iftu <iftekheriftu.gmail.com>
Date:   [redacted] 2021 +0600

    Initial Commit

    We have finalized the basic calculator, ready to be published

user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$
```

$ git log --oneline

Calculator Basic Text Document 1 KB

MINGW64:/c/Users/user/Desktop/Git with Grit/Sandbox

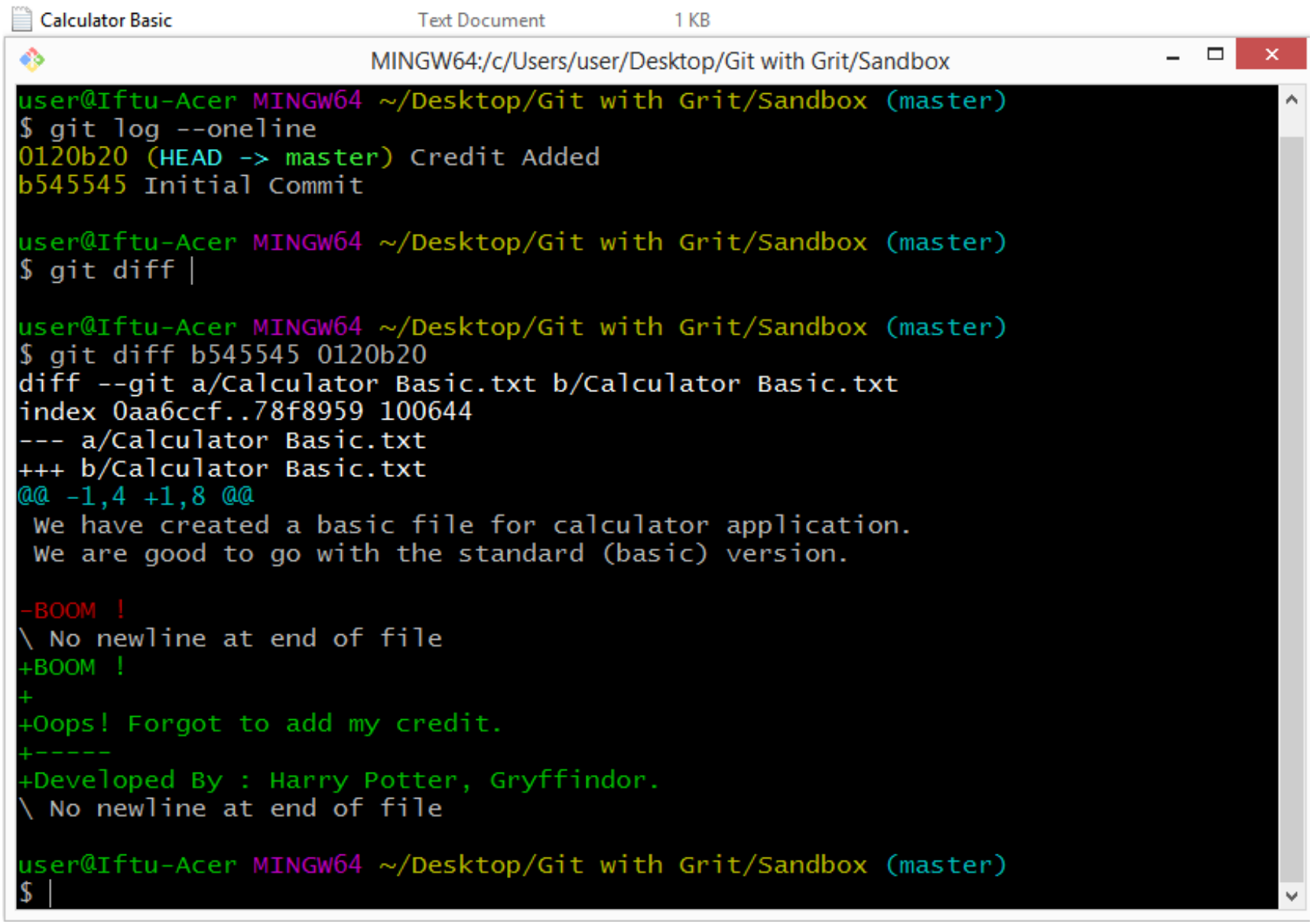
```
user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$ git log --oneline
0120b20 (HEAD -> master) Credit Added
b545545 Initial Commit

user@Iftu-Acer MINGW64 ~/Desktop/Git with Grit/Sandbox (master)
$
```

Let’s

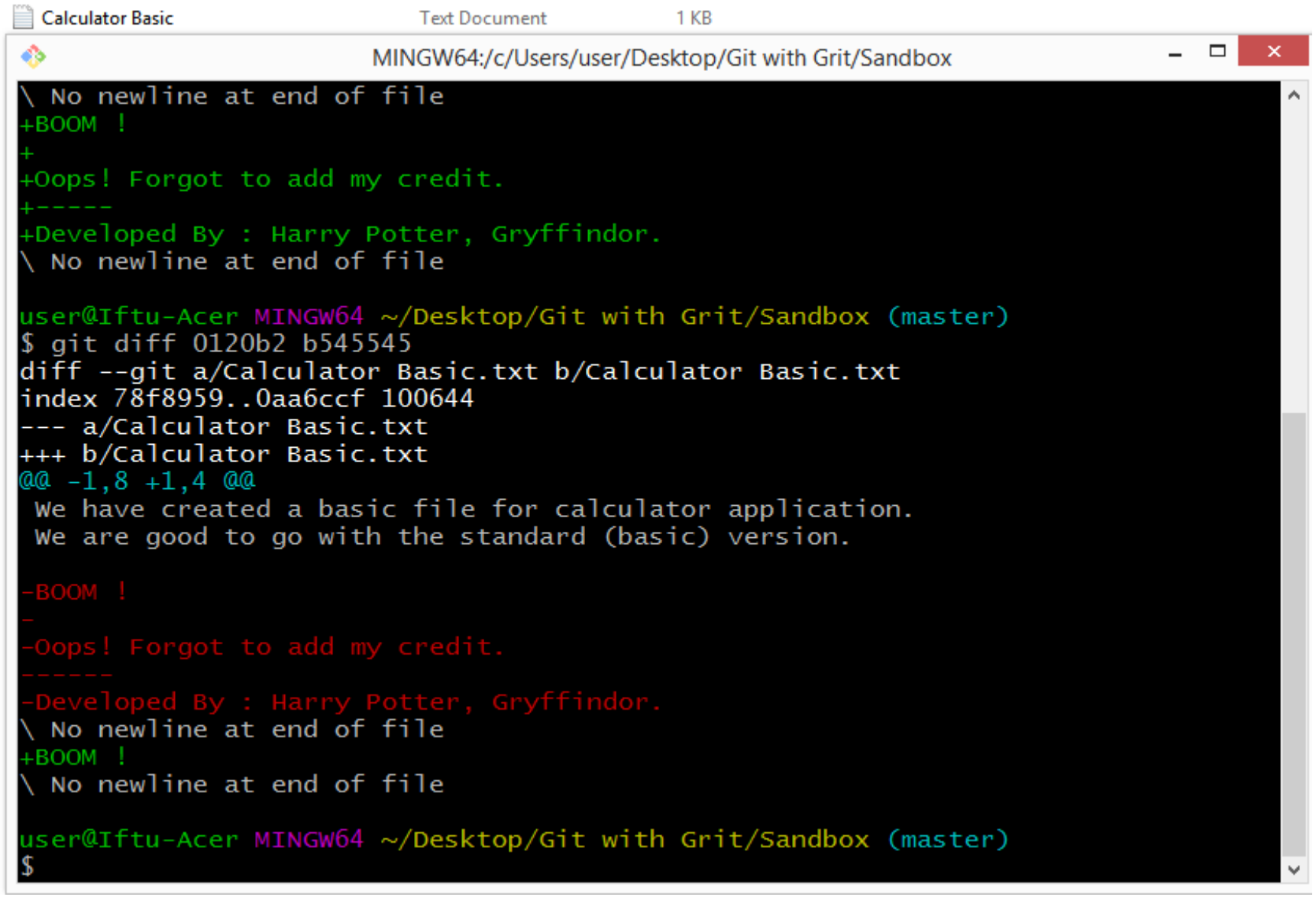
Compare

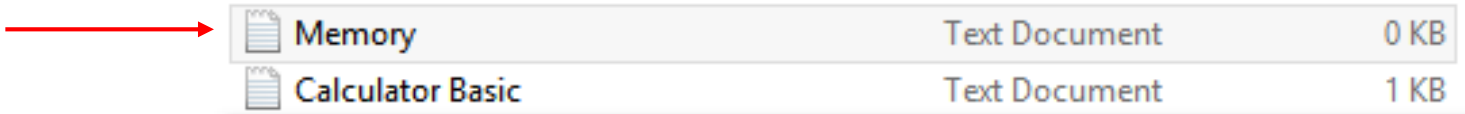
changes

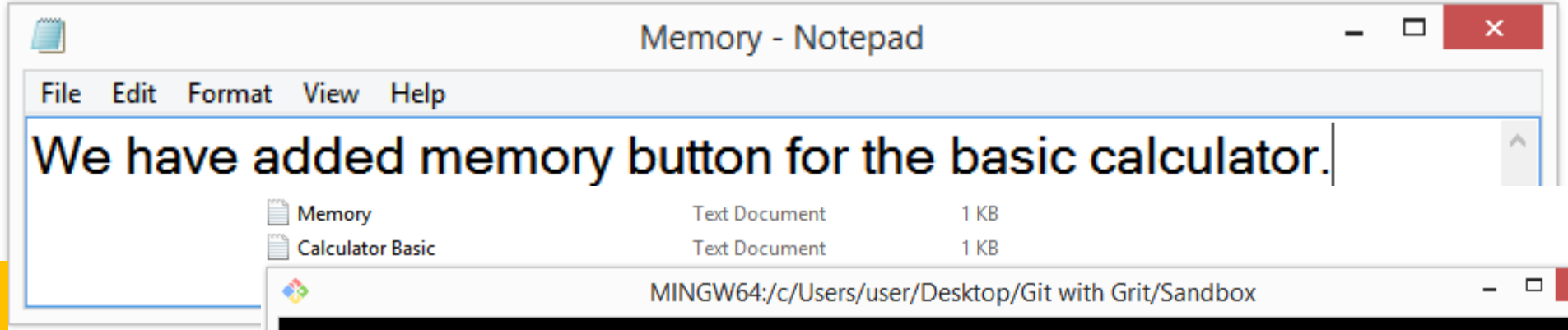
$ git diff b545545 0120b20



$ git diff 0120b20 b545545

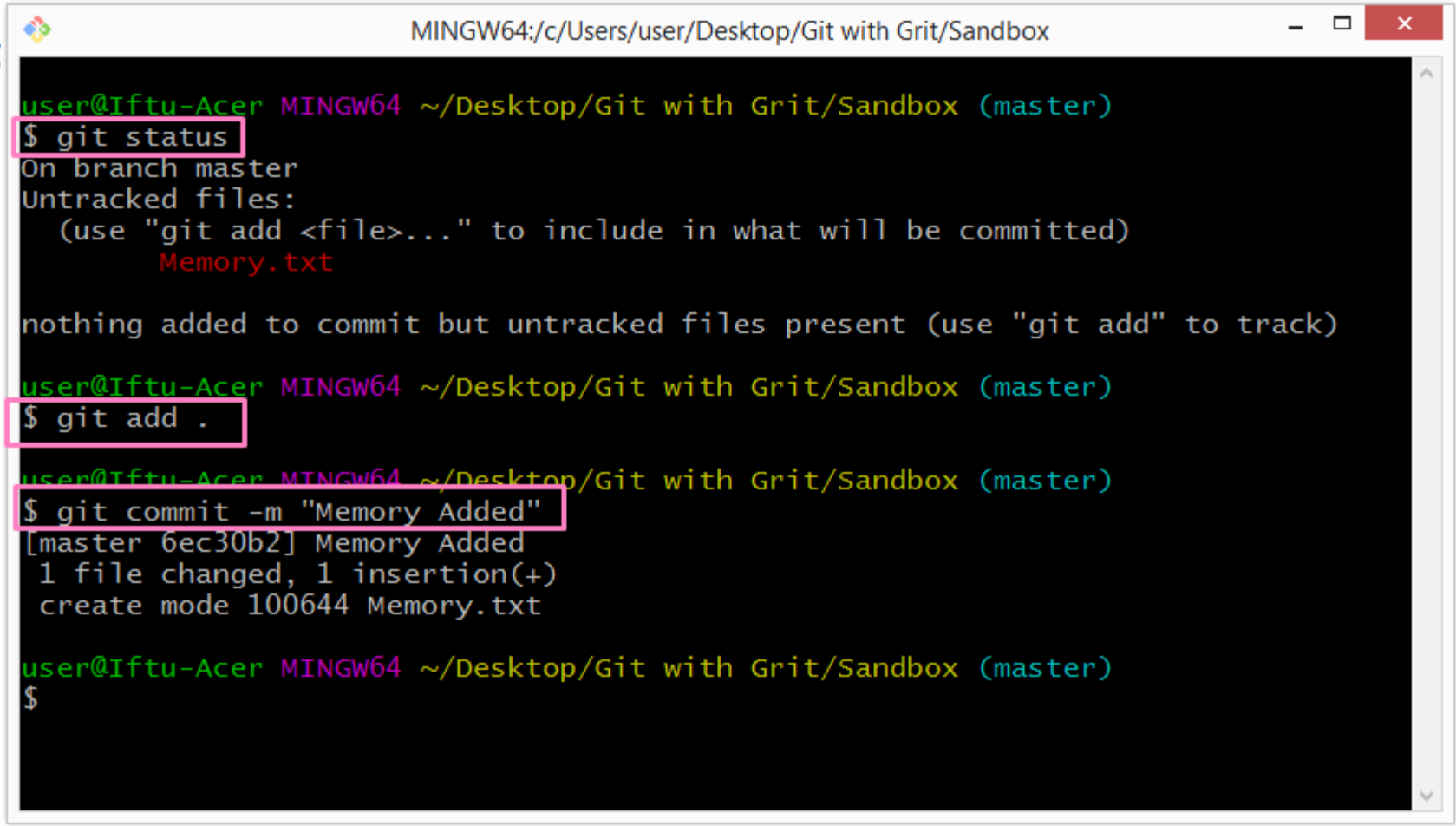






New File Added in the directory

```
$ git add .
$ git status
$ git commit
```

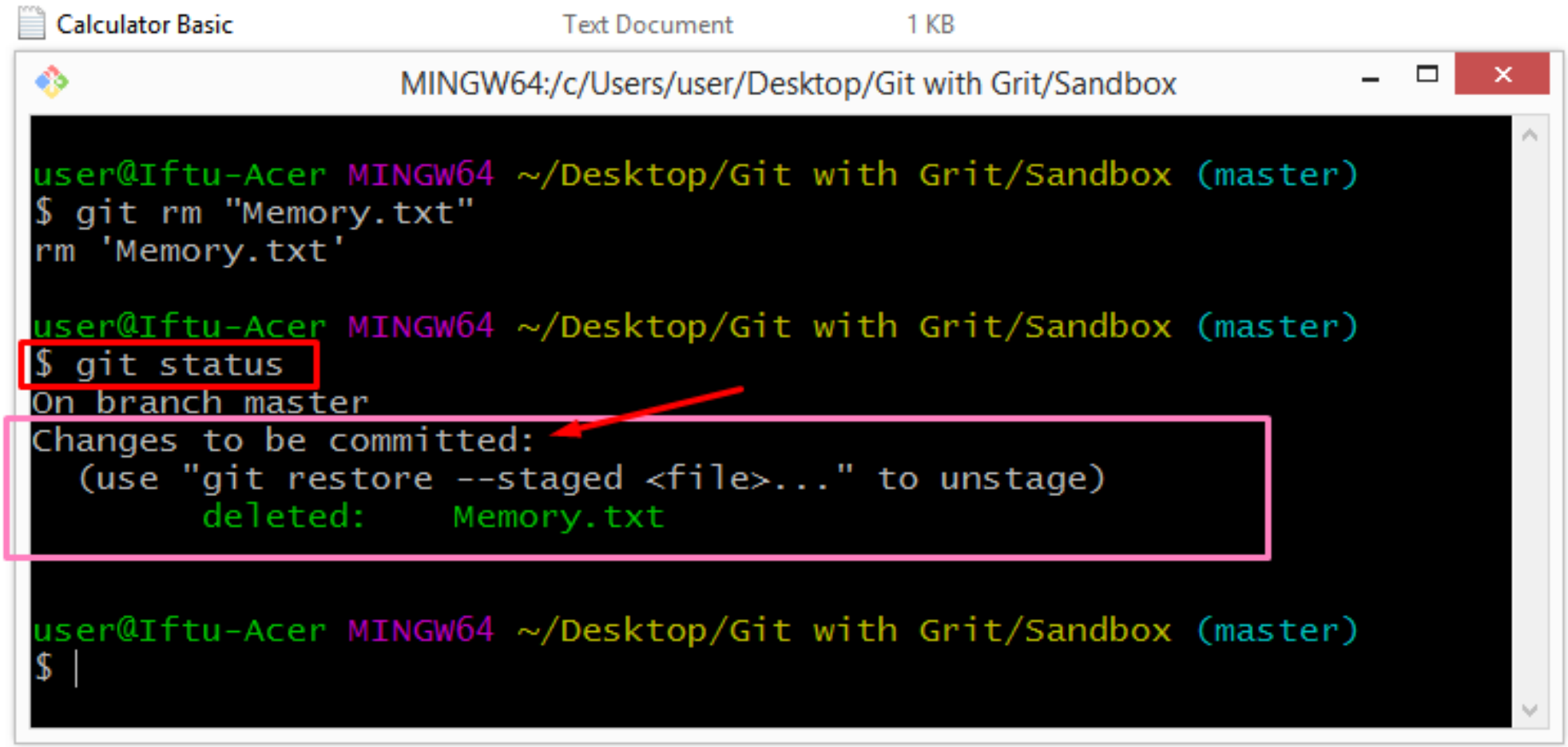


What about Deleting files ?

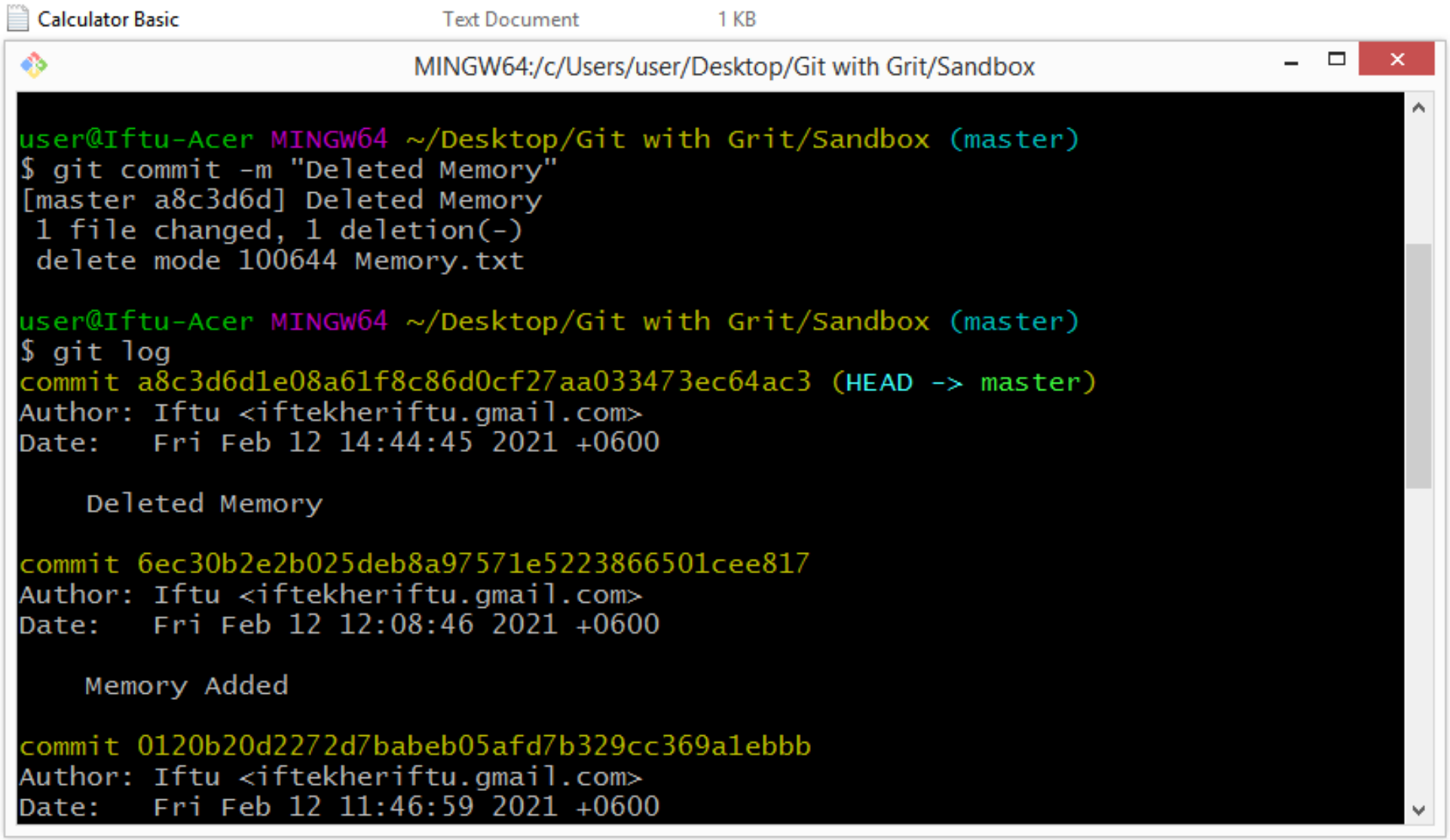
```
$ git rm "Memory.txt"
```

The deletion snap needs to be Commited as well

```
$ git status
```



Add and Commit

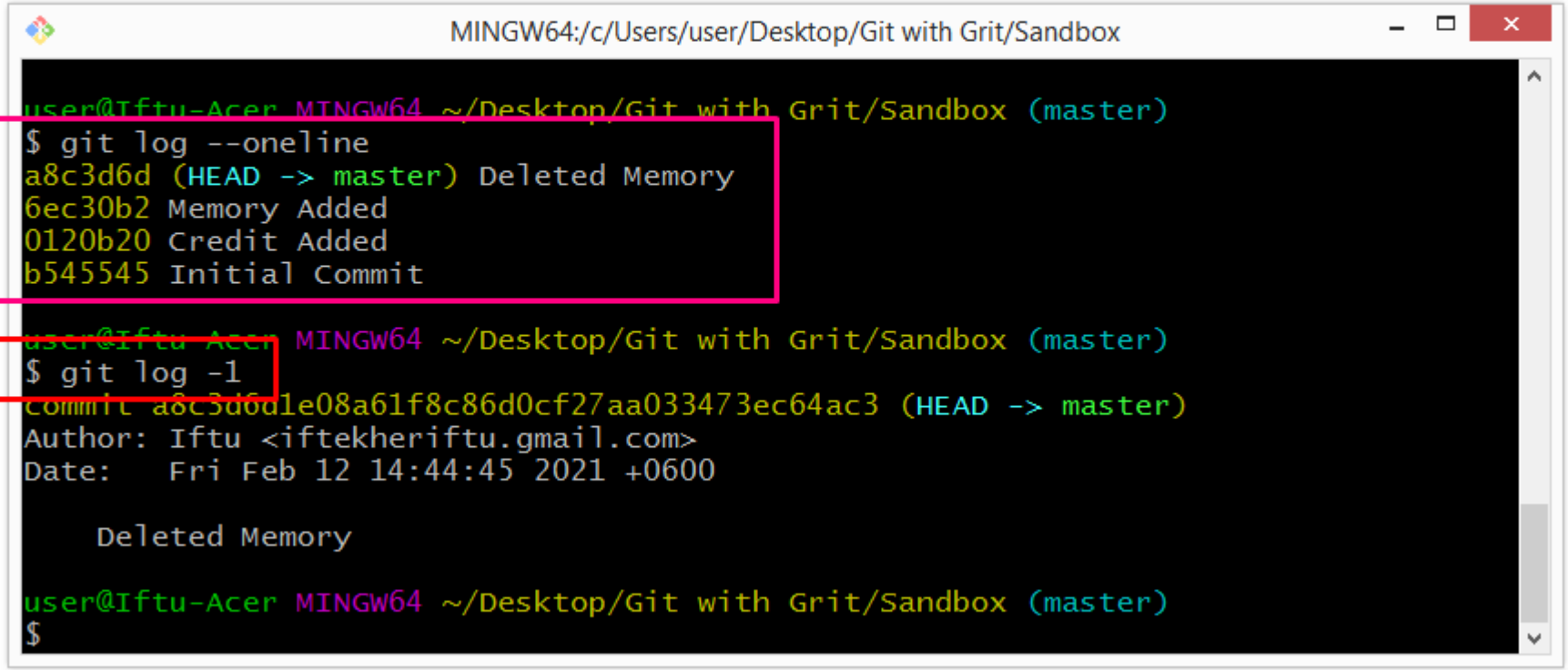


What if we want to view only the last few Commits history from log ?

```
$ git log -n
```

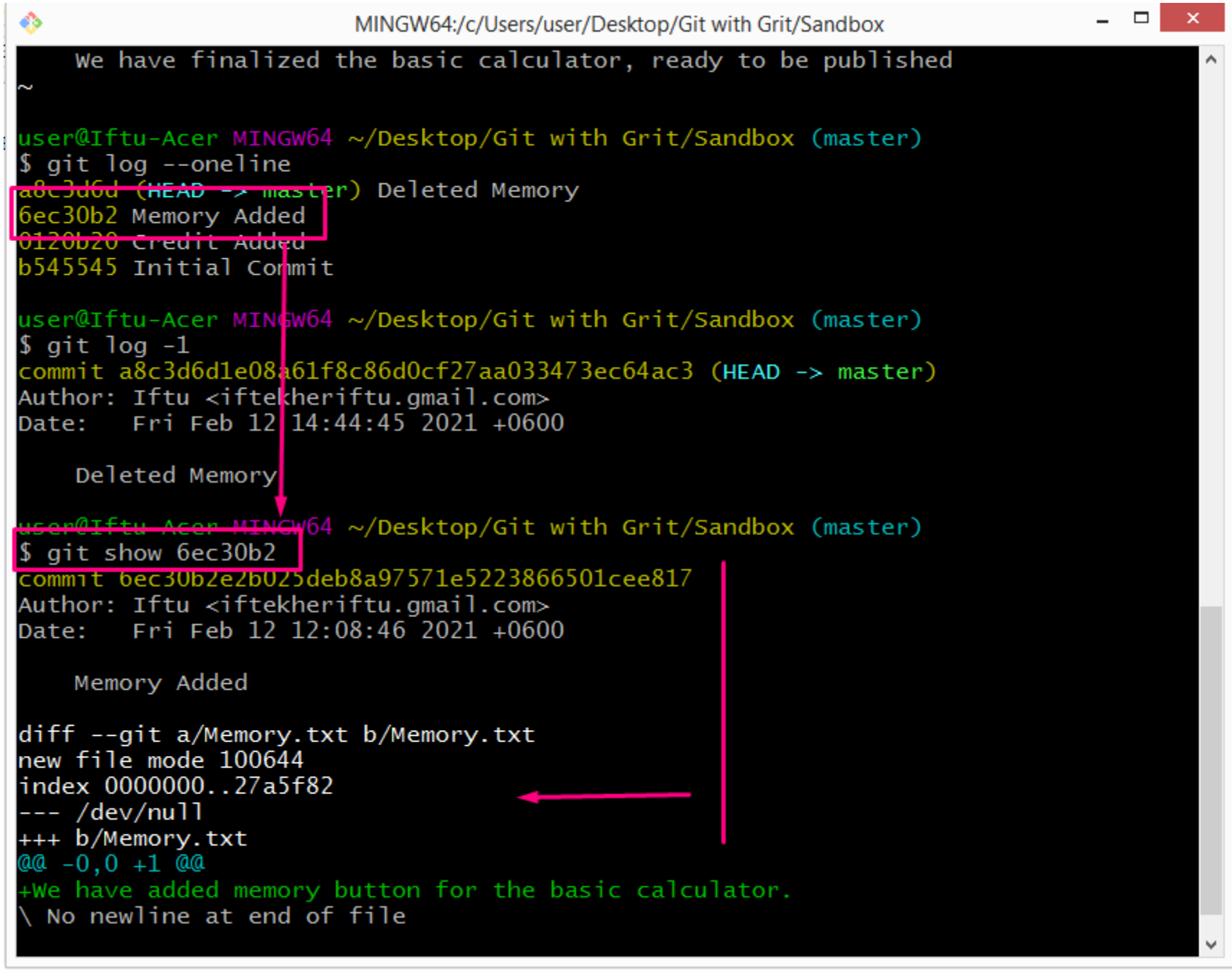
git log -1 //shows the last commit
git log -2 //shows the last 2 commits

```
$ git log -1
```



Getting the details of a Commit

$ git show



Gracias