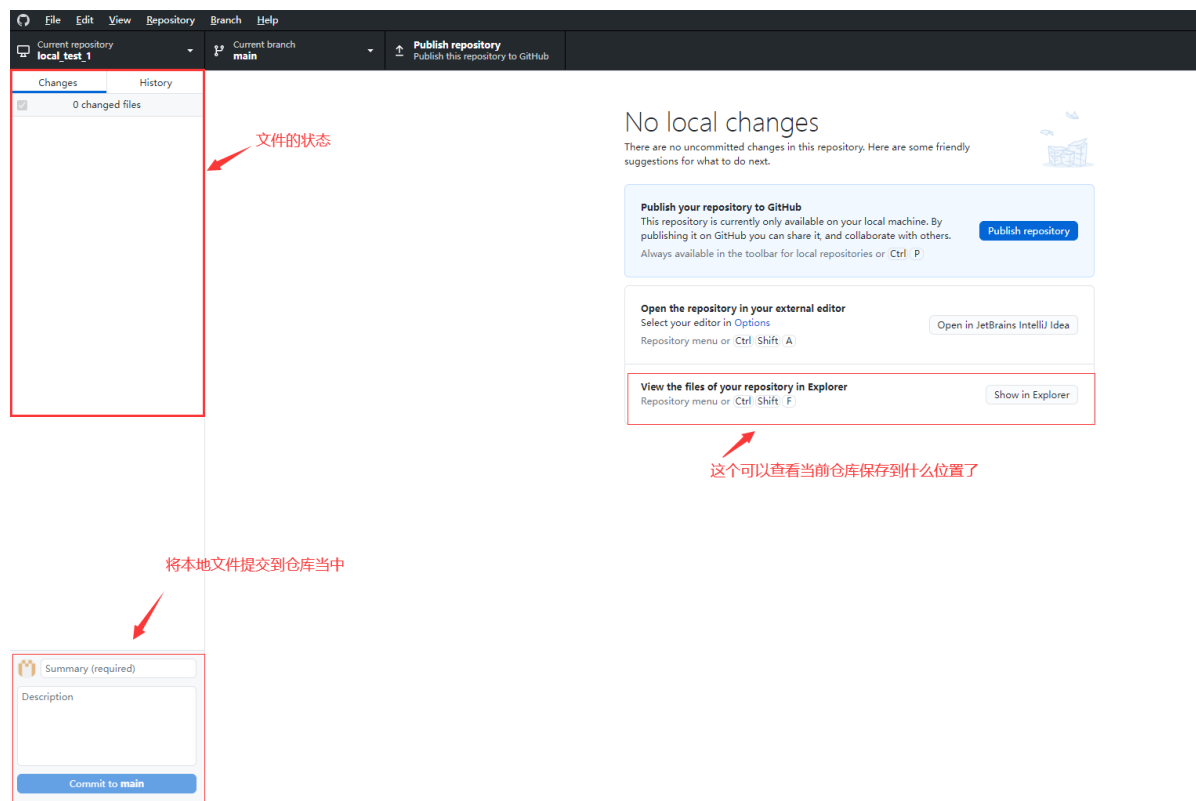


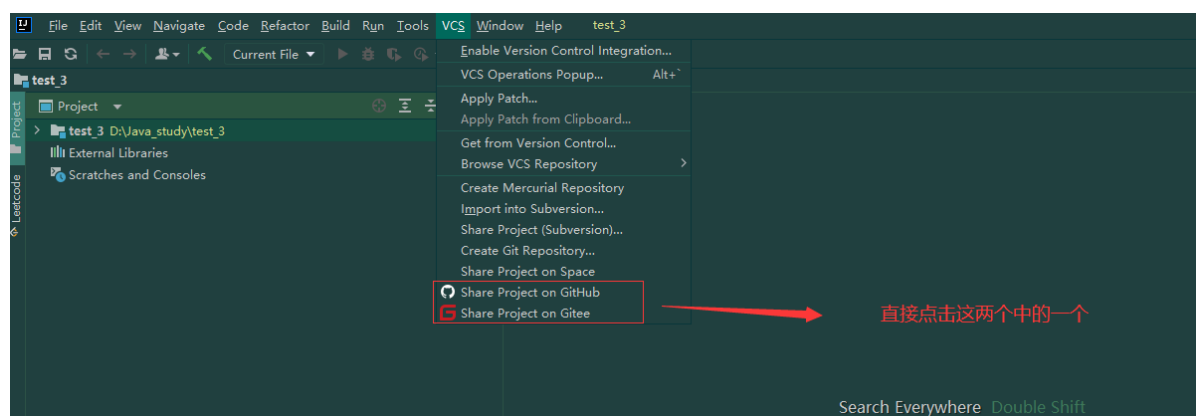
Git 学习和使用教程

Git工具的使用

GitHubDesktop



在Idea上使用Git

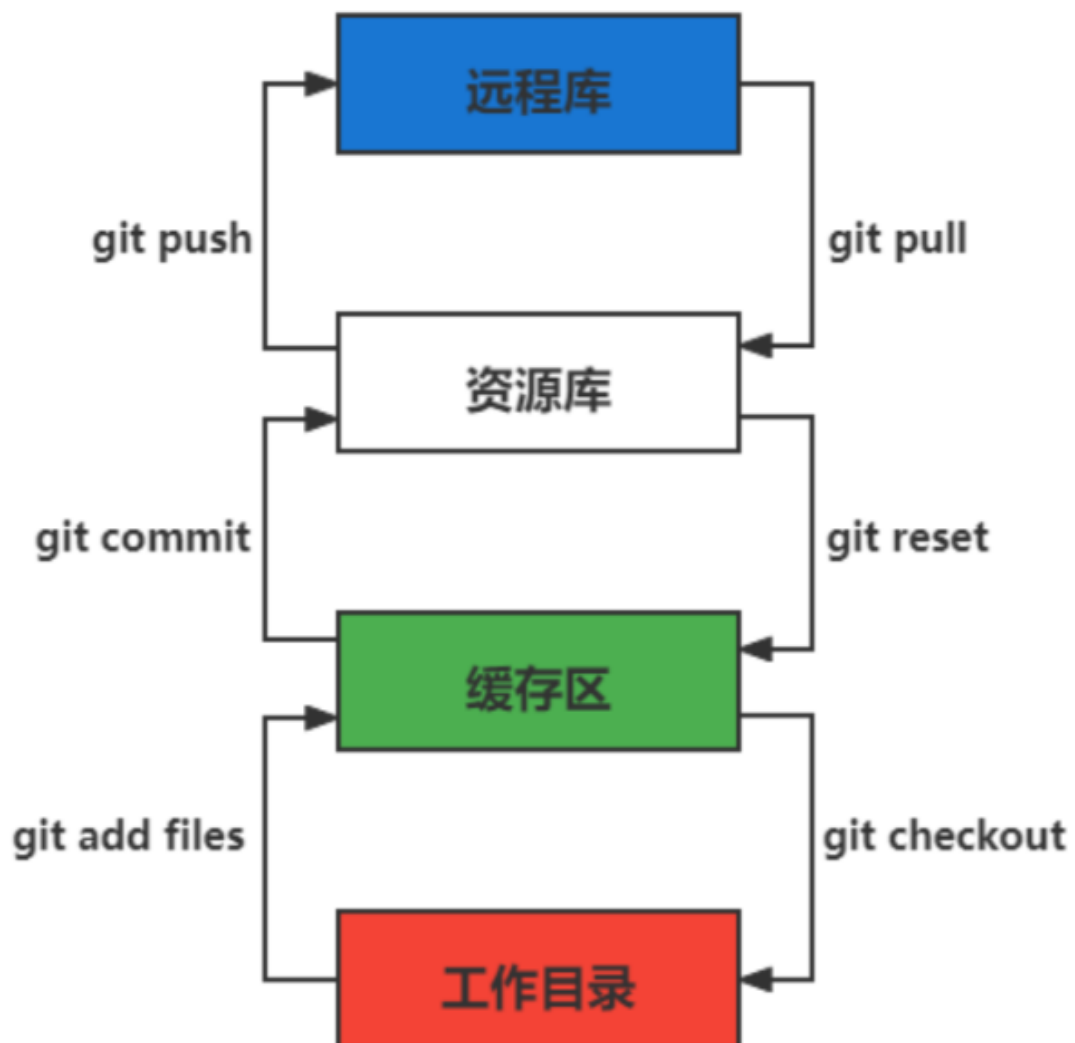


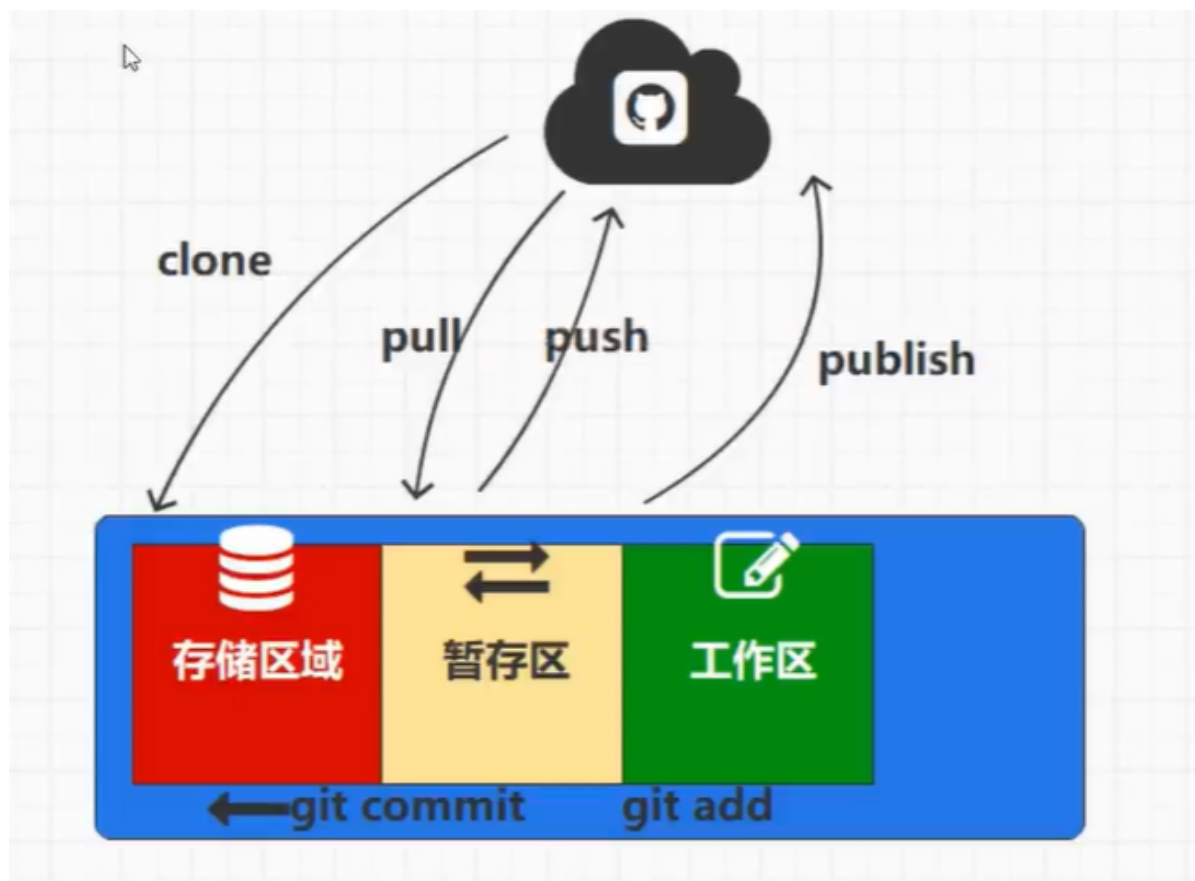
一、Git工作流程

Git有四个区域

- 3个本地区域
 - 工作区 (Workspace)：存放项目代码的地方
 - 暂存区 (Stage)：存放临时的改动，事实上它只是一个文件，保存即将提交的文件列表信息。

- 资源库 (Repository)：安全存放数据的位置，这里面有提交到所有版本的数据。其中 HEAD 指向最新放入仓库的版本。
- 1个远程区域
 - 远程库 (Remote)：托管代码的服务器



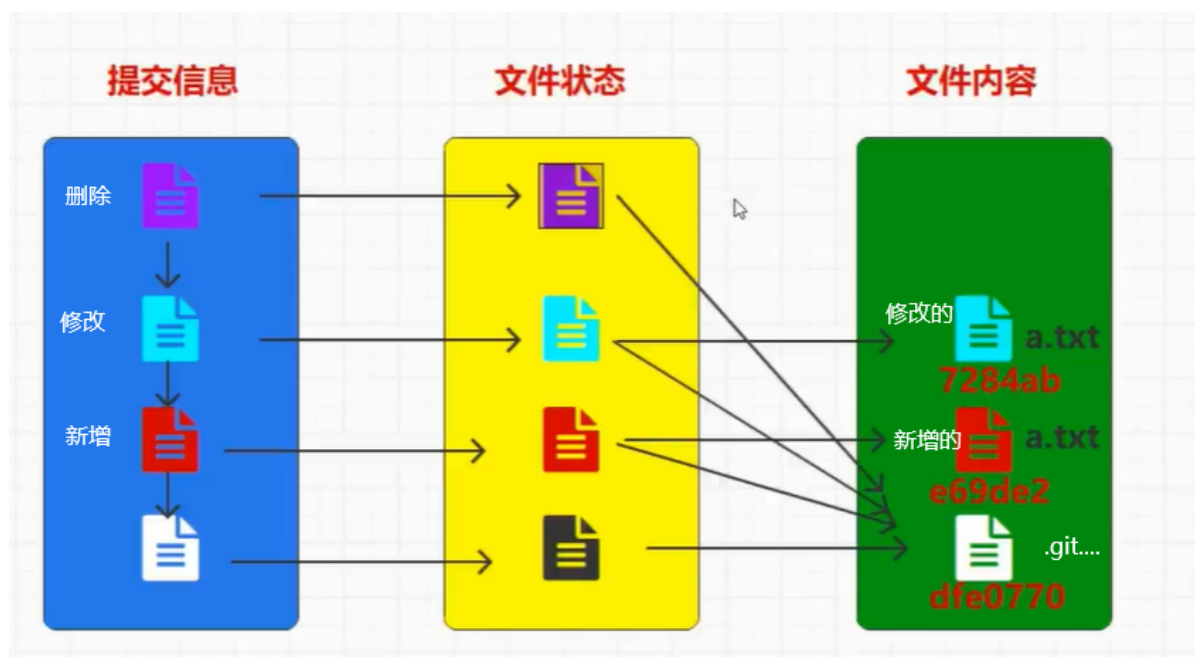


```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local_test_4 (main)
$ git cat-file -p 846745898c02b54ed80cfa4c58fdafc56ca90ecd
tree 2c55199b96284f5decfb50117b7c51869ab598ca
parent a1fd338280b50f43df0508f50dec614b4699816a
author tyd <tang3816697@foxmail.com> 1691841638 +0800
committer tyd <tang3816697@foxmail.com> 1691841638 +0800

Update a.txt

修改了一下
```

当前指针所对应的版本号
 上一次提交的版本号



2.使用文本编辑器内置命令

如果你正在使用文本编辑器（如vi、nano等）编辑文件，并且想要保存并退出该文件，请按照以下步骤操作：

-在vi中，首先按下Esc键，然后输入“:wq”（不包括引号），然后按下回车键即可保存并退出。

-在nano中，首先按下Ctrl键加X键，然后输入Y键以保存更改并退出。

Git一些常用的基础指令

- git -v 查看git的版本

- ```
tang3@DESKTOP-773TJHF MINGW64 /
$ git -v
git version 2.40.0.windows.1
```

- git init 在当前目录下创建仓库

- ```
$ git init  
Initialized empty Git repository in E:/test/local-rep-1/.git/
```

- git clone ... 将远程仓库克隆到本地

- ```
$ git clone https://gitee.com/aitiger/test-gitee-project.git
Cloning into 'test-gitee-project'...
remote: Enumerating objects: 21, done.
remote: Counting objects: 100% (21/21), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 21 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (21/21), done.
```

- 配置邮箱和地址

- git config user.name ....
  - git config user.email ....

- ```
18801@LAPTOP-J9IRK5BM MINGW64 /e/test/remote-git-rep (master)  
$ git config user.name lihaibo  
  
18801@LAPTOP-J9IRK5BM MINGW64 /e/test/remote-git-rep (master)  
$ git config user.email 15811009164@163.com
```

- git status 查看暂存区的状态

- ```
18801@LAPTOP-J9IRK5BM MINGW64 /e/test/local-rep-1 (master)
$ git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)
```

- git add 将工作区的数据，推送到暂存区做比对操作

- ```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-1 (master)  
$ git add a.txt  
  
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-1 (master)  
$ git status  
On branch master  
  
No commits yet  
  
Changes to be committed:  
  (use "git rm --cached <file>..." to unstage)  
    new file:   a.txt
```

- git rm --cached a.txt 将暂存区的文件，移动到工作区去

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-1 (master)
$ git rm --cached a.txt
rm 'a.txt'

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-1 (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    a.txt
```

- git commit -m 将暂存区的文件，移动到存储区

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-1 (master)
$ git commit -m 新增文件
[master (root-commit) fb5c1de] 新增文件
1 file changed, 1 insertion(+)
create mode 100644 a.txt

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-1 (master)
$ git status
On branch master
nothing to commit, working tree clean
```

- git log 查看提交日志

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-1 (master)
$ git log
commit fb5c1de8ee460ca847329f5af80c8947ef44d677 (HEAD -> master)
Author: tyd <tang3816697@foxmail.com>
Date: Sat Aug 12 21:02:30 2023 +0800

    新增文件
```

- git restore 文件误删后，可以通过这个语句来恢复文件

- 若是没有通过 git commit提交前:

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add/rm <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    deleted:    a.txt

no changes added to commit (use "git add" and/or "git commit -a")

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git restore a.txt
```

- 若是用了git commit 提交后，则需要采用 git reset --hard 版本号 来恢复 不过缺点是，把我们的提交过程丢失了

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git add *.txt

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git commit -m 删除文件
[master 3b9f21f] 删除文件
1 file changed, 1 deletion(-)
delete mode 100644 a.txt

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ get log --online
bash: get: command not found

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git log --online
3b9f21f (HEAD -> master) 删除文件
ab25b6d 新增文件

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git reset --hard ab25b6d
```

- 使用 git revert 版本号，相当于创建了一个新的提交

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git log --online
b8785e6 (HEAD -> master) 删除文件
ab25b6d 新增文件

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-2 (master)
$ git revert b8785e6
```

- 创建分支 git branch

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (master)
$ git branch user
```

- 切换分支 git checkout user

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (master)
$ git checkout user
Switched to branch 'user'

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (user)
$
```

- 创建并切换分支 git checkout -b

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (user)
$ git checkout -b order
Switched to a new branch 'order'

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (order)
$
```

- 删除分支 git branch -d user

```
tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (order)
$ git branch -d user
Deleted branch user (was cdb00e4).

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (order)
$ git branch -v
  master cdb00e4 添加文件
* order  cdb00e4 添加文件
```

- git merge 合并操作

```

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (order)
$ git checkout master
Switched to branch 'master'

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (master)
$ git merge order
Auto-merging c.txt
CONFLICT (add/add): Merge conflict in c.txt
Automatic merge failed; fix conflicts and then commit the result.

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (master|MERGING)
$ git add c.txt

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-3 (master|MERGING)
$ git commit -m c333
[master 9ba36ad] c333

```

- 增加标签 git tag 标签名 版本号

```

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-4 (master)
$ git tag uptfile 51f612feae74f76c13590bd49c9b45f7732a404b

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-4 (master)
$ git tag
uptfile

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-4 (master)
$ git log uptfile
fatal: ambiguous argument 'uptfile': unknown revision or path not in the working
tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'

tang3@DESKTOP-773TJHF MINGW64 /e/test/local-rep-4 (master)
$ git log uptfile
commit 51f612feae74f76c13590bd49c9b45f7732a404b (tag: uptfile)
Author: tyd <tang3816697@foxmail.com>
Date: Sat Aug 12 21:40:38 2023 +0800

    aaaaa

```

- 远程仓库 git remote add url
- git push url
- git pull url