

# 系统开发工具基础实验报告

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实验名称: 版本控制 (Git) 实验时间: 2024 年 8 月 23 日

## 1 实验目的

1. 学习 Git 相关版本控制命令知识
2. 学习 Git 基础命令的使用
3. 学习 Git 与仓库的基本使用流程
4. 了解并实现相关常见现实问题的解决方法

## 2 实验内容及结果

### 2.1 课堂练习部分

1. 克隆本课程网站的仓库
  - 将版本历史可视化并进行探索

```
1 git log --all --graph --decorate --oneline
```

```

86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git log --all --graph --decorate --oneline
* af054fa (HEAD -> master, origin/master, origin/HEAD) Merge pull request #172
from pspdada/master
|
| * 9baa48c remove irrelevant text
| * f5df7de fix wrong index
| * ef9a2f7 fix typo
|/
* dd3f3dd Merge pull request #171 from HowieChih/for-better-understanding
|
| * 8e26b4a 更新#课程概览与 shell##一个功能全面又强大的工具关于修改亮度文件的
的翻译
| * 4e2ff43 更新#课程概览与 shell##一个功能全面又强大的工具关于修改亮度文件的
的翻译
|/
* d284d3e Merge pull request #170 from crosscap/typo-fix
|
| * 6e27b4f fix some typo in version-control.md
|/
* f3773ac Merge pull request #169 from xjzh123/patch-1
|
| * 45897e1 修复multiple错译为"乘积"
| * ede827e Merge pull request #168 from DXShelley/master
|/
...skipping...
* af054fa (HEAD -> master, origin/master, origin/HEAD) Merge pull request #172
from pspdada/master
|
| * 9baa48c remove irrelevant text
| * f5df7de fix wrong index
| * ef9a2f7 fix typo
|/

```

- all: 显示所有分支的提交历史
- graph: 以 ASCII 图形的形式展示分支和合并历史
- decorate: 显示引用名称
- oneline: 压缩成一行显示

- 是谁最后修改了 README.md 文件?

```

1 git log -1 --pretty=format: "%h - %an, %ar : %s" -- README.md

```

```

86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git log -1 --pretty=format: "%h - %an, %ar : %s" -- README.md
de98852 - yuzq, 3 months ago : 将readme文件中的url的绝对路径改为相对路径, 不用重
复访问github, 利于分享传播

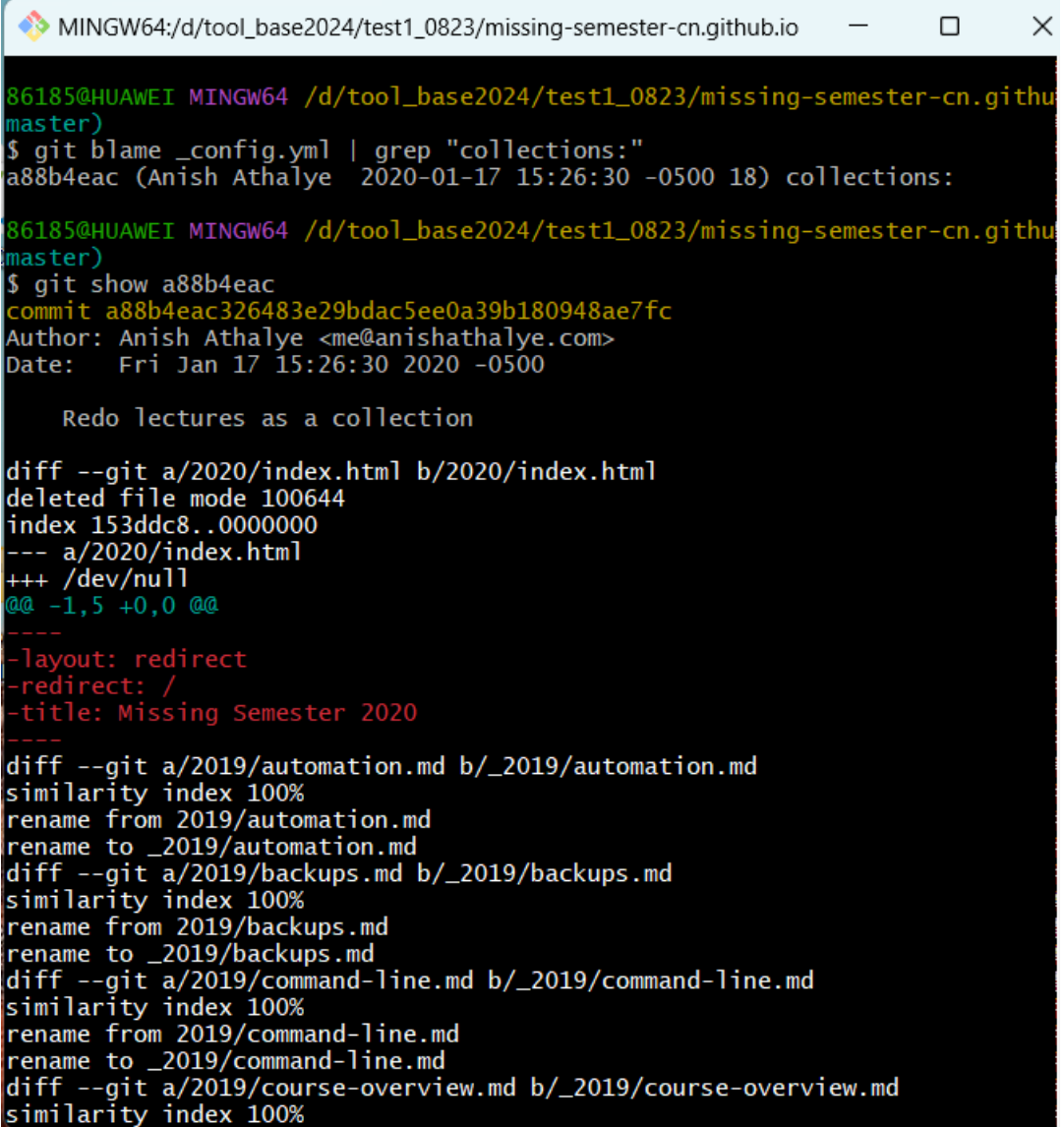
```

设置返回信息格式:

- %h: 提交的缩写哈希值
- %an: 作者的名字
- %ar: 相对时间格式显示的提交日期
- %s: 提交说明

- 最后一次修改 -config.yml 文件中 collections: 行时的提交信息是什么?

```
1 git blame _config.yml | grep "collections:"
2 git show <得到的哈希值>
```



The screenshot shows a terminal window with the following content:

```
MINGW64:/d/tool_base2024/test1_0823/missing-semester-cn.github.io
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github
(master)
$ git blame _config.yml | grep "collections:"
a88b4eac (Anish Athalye 2020-01-17 15:26:30 -0500 18) collections:

86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github
(master)
$ git show a88b4eac
commit a88b4eac326483e29bdac5ee0a39b180948ae7fc
Author: Anish Athalye <me@anishathalye.com>
Date: Fri Jan 17 15:26:30 2020 -0500

    Redo lectures as a collection

diff --git a/2020/index.html b/2020/index.html
deleted file mode 100644
index 153ddc8..0000000
--- a/2020/index.html
+++ /dev/null
@@ -1,5 +0,0 @@
-----
- layout: redirect
- redirect: /
- title: Missing Semester 2020
-----
diff --git a/2019/automation.md b/_2019/automation.md
similarity index 100%
rename from 2019/automation.md
rename to _2019/automation.md
diff --git a/2019/backups.md b/_2019/backups.md
similarity index 100%
rename from 2019/backups.md
rename to _2019/backups.md
diff --git a/2019/command-line.md b/_2019/command-line.md
similarity index 100%
rename from 2019/command-line.md
rename to _2019/command-line.md
diff --git a/2019/course-overview.md b/_2019/course-overview.md
similarity index 100%
```

可以看到输入第一条指令后，返回哈希值、作者名、日期信息，将得到的哈希值加入第二条指令，展示相关 commit 提交信息

2. 从 GitHub 上克隆某个仓库，修改一些文件。当您使用 `git stash` 会发生什么？当您执行 `git log --all --oneline` 时会显示什么？通过 `git stash pop` 命令来撤销 `git stash` 操作，什么时候会用到这一技巧？

```
1 git stash
2 git log --all --oneline
3 git stash pop
```

```

MINGW64:/d/tool_base2024/test1_0823/missing-semester-cn.github.io
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git stash
Saved working directory and index state WIP on master: af054fa Merge pull request #172 from pspdada/master

86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git log --all --oneline
bc52928 (refs/stash) WIP on master: af054fa Merge pull request #172 from pspdada/master
99fcafd index on master: af054fa Merge pull request #172 from pspdada/master
af054fa (HEAD -> master, origin/master, origin/HEAD) Merge pull request #172 from pspdada/master
9baa48c remove irrelevant text
f5df7de fix wrong index
ef9a2f7 fix typo
dd3f3dd Merge pull request #171 from HowieChih/for-better-understanding
8e26b4a 更新#课程概览与 shell##一个功能全面又强大的工具关于修改亮度文件报错的翻译
4e2ff43 更新#课程概览与 shell##一个功能全面又强大的工具关于修改亮度文件报错的翻译
d284d3e Merge pull request #170 from crosscap/typo-fix
6e27b4f fix some typo in version-control.md
f3773ac Merge pull request #169 from xjzh123/patch-1
ede827e Merge pull request #168 from DXShelley/master
45897e1 修复multiple错译为“乘积”
6221bbc Merge branch 'master' of https://pi-gitserver.kooildns.cn/dxshelley/missing-semester-cn 合并
de98852 将readme文件中的url的绝对路径改为相对路径，不用重复访问github，利于分享传播
3417047 'test'
d78268f Merge pull request #162 from moralok/master
ca4f66d Fix typo for shell-tools.md
56feed9 Fix typo for version-control.md
cb3e63c Merge pull request #160 from pascal-lc/patch-1
33f46e0 Update editors.md
fded518 Merge pull request #159 from liuyd-dev/patch-1
ee7a245 fix typos for editors.md
0451133 Merge pull request #157 from DavidLee528/master
dd4a24b Update metaprogramming.md
b3cd512 Merge pull request #155 from DavidLee528/master
08108cc Update security.md
98c0c8f Merge pull request #153 from Fengyee/master
37020ca Bug fix in command-line.md
497666a Merge pull request #151 from 2090741942/master
1de68eb please ignore
b41a57e 修改了一个换行

```

释放暂存

```

86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git stash pop
On branch master
Your branch is up to date with 'origin/master'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   _2020/qa.md

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (bc5292894be452630d70cd34731f6b873ac6555f)

```

可以看到, git stash 可以保存当前工作目录中所有未提交的更改（包括暂存和未暂存的更改）并恢复工作目录，使其看起来像刚刚从最新提交检出时的状态；而由于 git stash 并未创建新的提交（stash 是存储在 stash stack 中，而不是提交历史的一部分），因此 git log -all -oneline 不会显示 git stash 操作本身的任何信息；

撤销暂存会将栈中的最新 stash 应用到当前工作目录，并将其从 stash 栈中移除

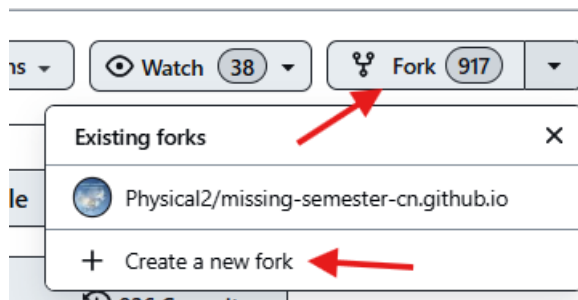
3. 在 /.gitignore-global 中创建全局忽略规则。配置您的全局 gitignore 文件来自动忽略系统或编辑器的临时文件；

```
1 git config --global core.excludesfile ~/.gitignore
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (master)
$ git config --global core.excludesfile ~/.gitignore
```

4. **Fork** 仓库，在 GitHub 上发起拉取请求（Pull Request）GitHub 仓库操作如下

(1) 创建新的 fork 仓库



(2) 接着出现创建 fork 仓库界面

### Create a new fork

A *fork* is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project. [View existing forks.](#)

Required fields are marked with an asterisk (\*).

Owner \* / Repository name \*

Choose an owner / missing-semester-cn.github

By default, forks are named the same as their upstream repository. You can customize the name to distinguish it further.

Description (optional)

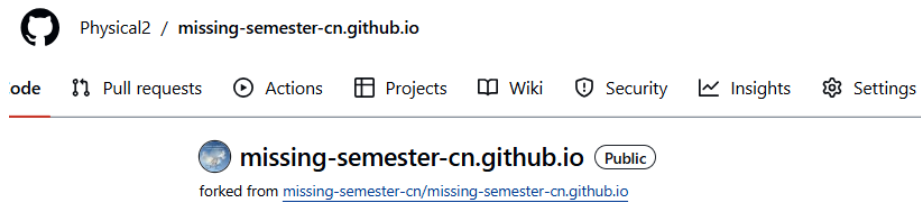
the CS missing semester Chinese version

☒ Copy the master branch only

Contribute back to missing-semester-cn/missing-semester-cn.github.io by adding your own branch. [Learn more.](#)

Create fork

(3) 完成后可以在个人仓库下找到 fork 的仓库



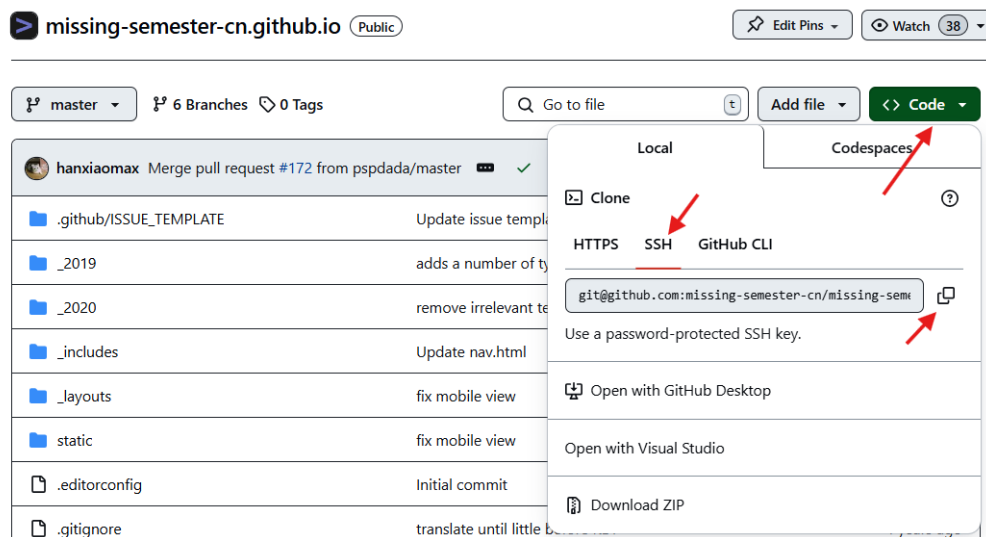
## 2.2 课下练习部分

本次课下练习从以下三个部分进行进一步的探索

### 2.2.1 本地与远程的交互

#### 1. 克隆仓库

```
1 git clone <SSH Key>
```



复制给定仓库如图位置的 SSH Key，进入目标本地文件夹，右键打开 Git Bash 完成仓库克隆

#### 2. 显示当前的仓库状态

```
1 git status
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   _2020/qa.md

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

可以看到目前 master 分支已更新到最新状态，且没有待提交的更改

### 3. 列出远端

```
1 git remote
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
tryLjtr)
$ git remote
origin
```

可以看到远端为默认 origin

### 4. 列出远端以及与每个远程仓库关联的 URL

```
1 git remote -v
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
tryLjtr)
$ git remote -v
origin git@github.com:missing-semester-cn/missing-semester-cn.github.io.git (fe
tch)
origin git@github.com:missing-semester-cn/missing-semester-cn.github.io.git (pu
sh)
```

-v: 表示"verbose"，使 Git 显示与每个远程仓库关联的 URL，并标注出这些 URL 是用于拉取 (fetch) 还是推送 (push)，便于查看所连接的远程仓库

### 5. 添加上游仓库

```
1 git remote add upstream <SSH Key>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io
(master)
$ git remote -v
origin git@github.com:Physical2/missing-semester-cn.github.io.git (fetch)
origin git@github.com:Physical2/missing-semester-cn.github.io.git (push)

86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io
(master)
$ git remote add upstream git@github.com:missing-semester-cn/missing-semester-cn
.github.io.git
```

可以查看到目前远端情况



```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io (master)
$ git remote -v
origin git@github.com:Physical2/missing-semester-cn.github.io.git (fetch)
origin git@github.com:Physical2/missing-semester-cn.github.io.git (push)
upstream git@github.com:missing-semester-cn/missing-semester-cn.github.io.git (fetch)
upstream git@github.com:missing-semester-cn/missing-semester-cn.github.io.git (push)
```

添加上游仓库可以实现利用 Git 命令进行上游仓库的拉取上传和冲突处理等功能

- 更新.git 目录下的远程分支信息，

```
1 git fetch <远端>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io (master)
$ git fetch origin
```

不改变工作目录或当前分支的状态

- 从上游仓库拉取所有的分支和它们的更新，但不自动合并这些更改

```
1 git fetch upstream
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io (master)
$ git fetch upstream
remote: Enumerating objects: 33, done.
remote: Counting objects: 100% (30/30), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 17 (delta 11), reused 11 (delta 8), pack-reused 0 (from 0)
Unpacking objects: 100% (17/17), 5.07 KiB | 55.00 KiB/s, done.
From github.com:missing-semester-cn/missing-semester-cn.github.io
* [new branch]      dependabot/bundler/activesupport-6.0.6.1 -> upstream/dependabot/bundler/activesupport-6.0.6.1
* [new branch]      dependabot/bundler/addressable-2.8.1 -> upstream/dependabot/bundler/addressable-2.8.1
* [new branch]      dependabot/bundler/nokogiri-1.14.3 -> upstream/dependabot/bundler/nokogiri-1.14.3
* [new branch]      dependabot/bundler/tzinfo-1.2.10 -> upstream/dependabot/bundler/tzinfo-1.2.10
* [new branch]      master -> upstream/master
* [new branch]      review -> upstream/review
```

- 将另一个分支或已获取的远程更改合并到当前分支

```
1 git merge <远端>/<本地要更改的目标分支>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (master)
$ git merge origin/master
Already up to date.
```

- 自动获取并合并远程更改

```
1 git pull --rebase <远端> <本地要更改的目标分支>
```



```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io (master)
$ git pull --rebase origin master
From github.com:Physical2/missing-semester-cn.github.io
 * branch          master       -> FETCH_HEAD
Already up to date.
```

--rebase: 生成的提交历史线性化，使得 git log 输出更清晰，更容易理解；  
可以发现 git pull 相当于 git fetch 和 git merge 的结合

#### 10. 添加文件到暂存区

```
1 git add <filename>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io (master)
$ git add .
```

. 为提交全部文件

#### 11. 编辑提交的内容或注释

```
1 git commit -m "注释"
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io (master)
$ git commit -m "0823"
[master ecbecdd] 0823
1 file changed, 1 insertion(+), 1 deletion(-)
```

返回改动文件统计情况

#### 12. 将本地仓库的更改（提交）推送到远程仓库的对应分支

```
1 git push
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io (master)
$ git push
Everything up-to-date
```

当无更改时返回如图，若存在文件内容改动的 push（一般情况），返回结果如下图

#### 13. 当首次推送或需要将本地分支与远程分支建立跟踪关系

```
1 git push -u <远端> <本地要推送的分支>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_1_0823/missing-semester-cn.github.io
(master)
$ git push -u origin master
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 16 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 347 bytes | 347.00 KiB/s, done.
Total 4 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To github.com:Physical2/missing-semester-cn.github.io.git
   af054fa..ecbecdd master -> master
branch 'master' set up to track 'origin/master'.
```

-u: -set-upstream 简写，一般用于首次推送新分支或简化后续的推送和拉取操作

## 2.2.2 分支管理 – branch

### 1. 显示分支

```
1 git branch
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git branch
* master
```

可以看到当前分支为默认 master 分支

### 2. 创建分支

```
1 git branch <name>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git branch tryLjt
```

该命令仅创建 tryLjt 分支，不会直接转换到新分支下

### 3. 切换分支

```
1 git checkout <name>
```

可以看到当前已经切换到 tryLjt 分支下

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git checkout tryLjt
Switched to branch 'tryLjt'
M   _2020/qa.md
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
tryLjt)
```

### 4. 创建分支并切换到该分支

```
1 git checkout -b <name>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (tryLjt)
$ git checkout -b tryLjtr
Switched to a new branch 'tryLjtr'

86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (tryLjtr)
```

该命令为 checkout 和 branch 结合，使用更便捷

5. 将一系列提交变基到一个新的基线上

```
1 git rebase <变基的目标分支>
```

```
86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (tryLjt)
$ git rebase tryLjtr
Current branch tryLjt is up to date.
```

可以看到已经将 tryLjt 分支变基到 tryLjtr 分支

### 2.2.3 日志查看 – log

1. 显示日志

```
1 git log
```

```
commit af054fa1aea2f2599e4474d96b63f73dd9bd145f (HEAD -> master, origin/master,
origin/HEAD)
Merge: dd3f3dd 9baa48c
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date:   Fri Aug 16 06:54:16 2024 +0800

    Merge pull request #172 from pspdada/master

    Thank you so much

commit 9baa48c778012164179e4e60725418941f41743b
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 02:07:36 2024 +0800

    remove irrelevant text

commit f5df7de89dc7712483665cc6fe8a787aafbef9bf
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 01:46:12 2024 +0800

    fix wrong index

commit ef9a2f75409ff7746c03f6233066e3d2c634cd12
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 01:32:44 2024 +0800

    fix typo

commit dd3f3dd37ce88bb78f802a425e652a65d2ce70d5
Merge: d284d3e 8e26b4a
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date:   Thu Aug 1 17:58:28 2024 +0800

    Merge pull request #171 from HowieChih/for-better-understanding
:
```

## 2. 将每个提交显示为一行

```
1 git log --oneline
```

```

af054fa (HEAD -> master, origin/master, origin/HEAD) Merge pull request #172 from
m pspdada/master
9baa48c remove irrelevant text
f5df7de fix wrong index
ef9a2f7 fix typo
dd3f3dd Merge pull request #171 from HowieChih/for-better-understanding
8e26b4a 更新#课程概览与 shell##一个功能全面又强大的工具关于修改亮度文件报错的翻
译
4e2ff43 更新#课程概览与 shell##一个功能全面又强大的工具关于修改亮度文件报错的翻
译
d284d3e Merge pull request #170 from crosscap/typo-fix
6e27b4f fix some typo in version-control.md
f3773ac Merge pull request #169 from xjzh123/patch-1
ede827e Merge pull request #168 from DXShelley/master
45897e1 修复multiple错译为“乘积”
6221bbc Merge branch 'master' of https://pi-gitserver.kooldns.cn/dxshelley/missi
ng-semester-cn 合并
de98852 将readme文件中的url的绝对路径改为相对路径，不用重复访问github，利于分享
传播
3417047 'test'
d78268f Merge pull request #162 from moralok/master
ca4f66d Fix typo for shell-tools.md
56feed9 Fix typo for version-control.md
cb3e63c Merge pull request #160 from pascal-lc/patch-1
33f46e0 Update editors.md
fded518 Merge pull request #159 from liuyd-dev/patch-1
ee7a245 fix typos for editors.md
0451133 Merge pull request #157 from DavidLee528/master
dd4a24b Update metaprogramming.md
b3cd512 Merge pull request #155 from DavidLee528/master
08108cc Update security.md
98c0c8f Merge pull request #153 from Fengyee/master
37020ca Bug fix in command-line.md
497666a Merge pull request #151 from 2090741942/master
:

```

该命令只显示提交的缩写哈希值和提交信息

### 3. 以 ASCII 图形的形式显示提交历史，展示分支和合并的结构

```
1 git log --graph
```



```

commit af054fa1aea2f2599e4474d96b63f73dd9bd145f (HEAD -> master, origin/master,
origin/HEAD)
Merge: dd3f3dd 9baa48c
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date:   Fri Aug 16 06:54:16 2024 +0800

    Merge pull request #172 from pspdada/master

    Thank you so much

commit 9baa48c778012164179e4e60725418941f41743b
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 02:07:36 2024 +0800

    remove irrelevant text

commit f5df7de89dc7712483665cc6fe8a787aafbef9bf
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 01:46:12 2024 +0800

    fix wrong index

commit ef9a2f75409ff7746c03f6233066e3d2c634cd12
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 01:32:44 2024 +0800

    fix typo

commit dd3f3dd37ce88bb78f802a425e652a65d2ce70d5
Merge: d284d3e 8e26b4a
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date:   Thu Aug 1 17:58:28 2024 +0800

    Merge pull request #171 from HowieChih/for-better-understanding
:

```

## 5. 仅显示指定作者的提交

```
1 git log --author="作者名"
```



```

commit af054fa1aea2f2599e4474d96b63f73dd9bd145f (HEAD -> master, origin/master,
origin/HEAD)
Merge: dd3f3dd 9baa48c
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date: Fri Aug 16 06:54:16 2024 +0800

    Merge pull request #172 from pspdada/master

    Thank you so much

commit dd3f3dd37ce88bb78f802a425e652a65d2ce70d5
Merge: d284d3e 8e26b4a
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date: Thu Aug 1 17:58:28 2024 +0800

    Merge pull request #171 from HowieChih/for-better-understanding

    翻译优化: For better understanding

commit d284d3e43bc43b81979e9ffd7a9b69d64450f707
Merge: f3773ac 6e27b4f
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date: Sun Jul 21 12:56:12 2024 +0800

    Merge pull request #170 from crosscap/typo-fix

    fix some typo in version-control.md

commit f3773ace89b43016ae0078a5a7e2fcedae84c8d9
Merge: ede827e 45897e1
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date: Wed Jun 26 09:16:50 2024 +0800

    Merge pull request #169 from xjzh123/patch-1

:

```

可以看到通过该命令可以精确查找作者名为”Lingfeng-Ai” 的相关提交

#### 6. 限制显示在特定时间范围内的提交

```

1 git log --since="起始日期" --blueuntil="截止日期"
2 git log --since="2 weeks ago" --blueuntil="yesterday"

```

```

86185@HUAWEI MINGW64 /d/tool_base2024/test1_0823/missing-semester-cn.github.io (
master)
$ git log --since="2 weeks ago" --until="yesterday"
commit af054fa1aea2f2599e4474d96b63f73dd9bd145f (HEAD -> master, origin/master,
origin/HEAD)
Merge: dd3f3dd 9baa48c
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date: Fri Aug 16 06:54:16 2024 +0800

    Merge pull request #172 from pspdada/master

    Thank you so much

```

这里分别设定起止参数，以查看从两周前到昨天的提交日志

#### 7. 显示每个提交中修改的文件和插入/删除的行数统计信息

```

1 git log --stat

```

```

commit af054fa1aea2f2599e4474d96b63f73dd9bd145f (HEAD -> master, origin/master,
origin/HEAD)
Merge: dd3f3dd 9baa48c
Author: Lingfeng_Ai <hanxiaomax@gmail.com>
Date:   Fri Aug 16 06:54:16 2024 +0800

    Merge pull request #172 from pspdada/master

    Thank you so much

commit 9baa48c778012164179e4e60725418941f41743b
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 02:07:36 2024 +0800

    remove irrelevant text

    _2020/editors.md      | 12 ++++-----
    _2020/shell-tools.md | 29 ++-----
    2 files changed, 6 insertions(+), 35 deletions(-)

commit f5df7de89dc7712483665cc6fe8a787aafbef9bf
Author: psp_dada <1824427006@qq.com>
Date:   Thu Aug 15 01:46:12 2024 +0800

    fix wrong index

    _2020/command-line.md | 10 +++++-----
    _2020/course-shell.md | 20 ++++++++-----
    _2020/editors.md      | 20 ++++++++-----
    _2020/metaprogramming.md | 12 ++++++-----
    _2020/security.md      | 18 ++++++++-----
    5 files changed, 41 insertions(+), 39 deletions(-)

commit ef9a2f75409ff7746c03f6233066e3d2c634cd12
:
```

可以查看历史提交的相关修改内容

## 8. -pretty 自定义提交日志的格式输出

```
1 git log --pretty=oneline
```

```

af054fa1aea2f2599e4474d96b63f73dd9bd145f (HEAD -> master, origin/master, origin/
HEAD) Merge pull request #172 from pspdada/master
9baa48c778012164179e4e60725418941f41743b remove irrelevant text
f5df7de89dc7712483665cc6fe8a787aafbef9bf fix wrong index
ef9a2f75409ff7746c03f6233066e3d2c634cd12 fix typo
dd3f3dd37ce88bb78f802a425e652a65d2ce70d5 Merge pull request #171 from HowieChih/
for-better-understanding
8e26b4a0242ddaa6e239d314edbca8cb61e27cd3 更新#课程概览与 shell##一个功能全面又强
大的工具关于修改亮度文件报错的翻译
4e2ff4369c0c6aca74bdfd6ab12a0b397f6a9b11 更新#课程概览与 shell##一个功能全面又强
大的工具关于修改亮度文件报错的翻译
d284d3e43bc43b81979e9ffd7a9b69d64450f707 Merge pull request #170 from crosscap/t
ypo-fix
6e27b4f2191e2f633be8a67bd7f5f10f058f4b16 fix some typo in version-control.md
f3773ace89b43016ae0078a5a7e2fcedae84c8d9 Merge pull request #169 from xjzh123/pa
tch-1
ede827e9150e5d0b54f13bec61461d295093c308 Merge pull request #168 from DXShelley/
master
45897e1b54165ab0bab98e5afab500268483f514 修复multiple错译为“乘积”
6221bbca3429fac64fc4545748833a3a4e1cef3e Merge branch 'master' of https://pi-git
server.kooldns.cn/dxshelley/missing-semester-cn 合并
de98852ef0604cf918bab7f39c63a53932c845d8 将readme文件中的url的绝对路径改为相对路
径，不用重复访问github，利于分享传播
34170477da0e25ac8450f8993e0266a9936f9690 'test'
d78268f9c1da891eca186b74bb0a76a4e8138053 Merge pull request #162 from moralok/ma
ster
ca4f66d192cb6918a693a07a4c80e6ab3128284d Fix typo for shell-tools.md
56feed9d37f1fc45384415bcef63254fac83756f Fix typo for version-control.md
cb3e63c27340187dec87f02a2647a883793e5870 Merge pull request #160 from pascal-lc/
patch-1
33f46e0fd6013e1317d55c781c4a22bbcbd31209 Update editors.md
fded518b3e9de2462eb5e7ea358d6a59b9533854 Merge pull request #159 from liuyd-dev/
patch-1
ee7a245b5b0cbca0609acd9a4f4eba606b67c244 fix typos for editors.md
:

```

自定义格式可以更直观地得到理想返回形式

#### 9. -pretty=format 占位符

```
1 git log --pretty=format:"%h - %an, %ar : %s"
```

```
$ git log --pretty=format:"%h - %an, %ar : %s"
af054fa - Lingfeng_Ai, 13 days ago : Merge pull request #172 from pspdada/master
9baa48c - psp_dada, 2 weeks ago : remove irrelevant text
f5df7de - psp_dada, 2 weeks ago : fix wrong index
ef9a2f7 - psp_dada, 2 weeks ago : fix typo
dd3f3dd - Lingfeng_Ai, 4 weeks ago : Merge pull request #171 from HowieChih/for-
better-understanding
8e26b4a - Howie Chih, 4 weeks ago : 更新#课程概览与 shell##一个功能全面又强大的
工具关于修改亮度文件报错的翻译
4e2ff43 - Howie Chih, 4 weeks ago : 更新#课程概览与 shell##一个功能全面又强大的
工具关于修改亮度文件报错的翻译
d284d3e - Lingfeng_Ai, 6 weeks ago : Merge pull request #170 from crosscap/typo-
fix
6e27b4f - crosscap, 3 months ago : fix some typo in version-control.md
f3773ac - Lingfeng_Ai, 9 weeks ago : Merge pull request #169 from xjzh123/patch-
1
ede827e - Lingfeng_Ai, 9 weeks ago : Merge pull request #168 from DXShelley/mast
er
45897e1 - xjzh123, 3 months ago : 修复multiple错译为“乘积”
6221bbc - yuzq, 3 months ago : Merge branch 'master' of https://pi-gitserver.koo
ldns.cn/dxshelley/missing-semester-cn 合并
de98852 - yuzq, 3 months ago : 将readme文件中的url的绝对路径改为相对路径，不用重
复访问github，利于分享传播
3417047 - yuzq, 3 months ago : 'test'
d78268f - Lingfeng_Ai, 6 months ago : Merge pull request #162 from moralok/maste
r
ca4f66d - moralok, 6 months ago : Fix typo for shell-tools.md
56feed9 - moralok, 6 months ago : Fix typo for version-control.md
cb3e63c - Lingfeng_Ai, 10 months ago : Merge pull request #160 from pascal-lc/pa
tch-1
33f46e0 - pascal-lc, 10 months ago : Update editors.md
```

通过查阅资料，有常用可加后缀

- %H: 提交的完整哈希值
- %h: 提交的缩写哈希值
- %T: 树对象的完整哈希值
- %t: 树对象的缩写哈希值
- %an: 作者的名字
- %ad: 作者修订日期（可以通过‘-date’修改格式）
- %ae: 作者的电子邮件
- %ar: 相对时间格式显示的提交日期
- %s: 提交说明

### 3 实验总结与体会

通过学习 Git 基础知识，了解了基本的仓库管理和版本控制流程，熟悉了 Git Bash 和 GitHub 相关操作流程，其中，对 git log 查看日志有了更深刻的理解与认识，可以通过不同格式限制更直观地得到历史提交记录的详细情况，认识到 Git 版本控制工具的便

捷之处。

同时在课下也学习并实践了 GitHub 仓库管理权限设定与团队项目合作 PR 流的流程，意识到 Git 对多成员线上合作和项目进程管理具有非常重要的作用

附课程仓库地址：<https://github.com/Physical2/systemToolsBase>（点击跳转）