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1. Exercise 0.1

- 一些基本命令

```
jovyan@05d57a817610: ~$ echo "Hello Linux"
Hello Linux
jovyan@05d57a817610: ~$ bash -version
GNU bash, version 4.4.20(1)-release (x86_64-pc-linux-gnu)
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License GPLv3+: GNU GPL version 3 or later <http://gnu.org/licenses/gpl.html>

This is free software; you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
jovyan@05d57a817610: ~$ ls
1034180228-lab  contents.pdf  guide-book.pdf  learnGit  preface.pdf  test.py  work
jovyan@05d57a817610: ~$
```

2. Exercise 0.2

- 重定向>

```
jovyan@05d57a817610: ~$ echo first
first
jovyan@05d57a817610: ~$ echo second >output.txt
jovyan@05d57a817610: ~$ echo third > output.txt
jovyan@05d57a817610: ~$ echo forth >> output.txt
jovyan@05d57a817610: ~$ cat output.txt
third
forth
jovyan@05d57a817610: ~$
```

3. Exercise 0.3

```

jovyan@05d57a817610: ~/learnGit$ touch README.txt
jovyan@05d57a817610: ~/learnGit$ git status > Untracked.txt
jovyan@05d57a817610: ~/learnGit$ vim README.txt
jovyan@05d57a817610: ~/learnGit$ git add README.txt
jovyan@05d57a817610: ~/learnGit$ git status > Stage.txt
jovyan@05d57a817610: ~/learnGit$ git commit -m "我的学号:1034180228"
[master (root-commit) 947a64f] 我的学号:1034180228
 1 file changed, 1 insertion(+)
 create mode 100644 README.txt
jovyan@05d57a817610: ~/learnGit$ cat Untracked.txt
On branch master

No commits yet

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

        README.txt
        Untracked.txt

nothing added to commit but untracked files present (use "git add" to track)
jovyan@05d57a817610: ~/learnGit$ cat Stage.txt
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

        new file:   README.txt

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

        Stage.txt
        Untracked.txt

jovyan@05d57a817610: ~/learnGit$ vim README.txt
jovyan@05d57a817610: ~/learnGit$ git status > Modified.txt
jovyan@05d57a817610: ~/learnGit$ cat Modified.txt
On branch master

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   README.txt

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

        Modified.txt
        Stage.txt
        Untracked.txt

no changes added to commit (use "git add" and/or "git commit -a")
jovyan@05d57a817610: ~/learnGit$

```

4. Exercise 0.4

- git reset

```
jovyan@05d57a817610: ~/learnGit$ vim README.txt
jovyan@05d57a817610: ~/learnGit$ git add README.txt
jovyan@05d57a817610: ~/learnGit$ git commit -m "1"
[master 6c728ab] 1
1 file changed, 1 insertion(+)
jovyan@05d57a817610: ~/learnGit$ vim README.txt
jovyan@05d57a817610: ~/learnGit$ git add README.txt
jovyan@05d57a817610: ~/learnGit$ git commit -m "2"
[master 99c9c54] 2
1 file changed, 1 insertion(+)
jovyan@05d57a817610: ~/learnGit$ vim README.txt
jovyan@05d57a817610: ~/learnGit$ git add README.txt
jovyan@05d57a817610: ~/learnGit$ git commit -m "3"
[master 97767a0] 3
1 file changed, 1 insertion(+)
jovyan@05d57a817610: ~/learnGit$ git log
commit 97767a00edb07e9ddd5a503e2009b6cf860007f3 (HEAD -> master)
Author: guapi <chenchuanle6@gmail.com>
Date: Wed Mar 11 07:13:50 2020 +0000

    3

commit 99c9c548e6b6c474c8f4175b231998e5c33702c1
Author: guapi <chenchuanle6@gmail.com>
Date: Wed Mar 11 07:13:29 2020 +0000

    2

commit 6c728abb6019f3c86c771369c5e9de9e27eba34e
Author: guapi <chenchuanle6@gmail.com>
Date: Wed Mar 11 07:12:45 2020 +0000

    1

commit 76ba47f9febaf2a2b633144d729c507e84edb8e9
Author: guapi <chenchuanle6@gmail.com>
Date: Wed Mar 11 07:11:49 2020 +0000

    Modify

commit 947a64f8c8613ac5a57390226a5f829c4267aa62
Author: guapi <chenchuanle6@gmail.com>
Date: Wed Mar 11 07:05:15 2020 +0000

    我的学号:1034180228
jovyan@05d57a817610: ~/learnGit$
```

```
jovyan@05d57a817610: ~/learnGit$ git reset --hard HEAD^
HEAD is now at 99c9c54 2
jovyan@05d57a817610: ~/learnGit$ git log --oneline
99c9c54 (HEAD -> master) 2
6c728ab 1
76ba47f Modify
947a64f 我的学号:1034180228
jovyan@05d57a817610: ~/learnGit$ git reset --hard 6c728ab
HEAD is now at 6c728ab 1
jovyan@05d57a817610: ~/learnGit$ git log --oneline
6c728ab (HEAD -> master) 1
76ba47f Modify
947a64f 我的学号:1034180228
jovyan@05d57a817610: ~/learnGit$ git reset --hard 97767a
HEAD is now at 97767a0 3
jovyan@05d57a817610: ~/learnGit$ git log --oneline
97767a0 (HEAD -> master) 3
99c9c54 2
6c728ab 1
76ba47f Modify
947a64f 我的学号:1034180228
jovyan@05d57a817610: ~/learnGit$
```

5. Exercise 0.5

- git branch

```
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git branch -a
* lab0
  remotes/origin/lab0
  remotes/origin/lab0-result
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git branch Test
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git checkout Test
Switched to branch 'Test'
jovyan@05d57a817610: ~/kernel/1034180228-lab$ vim readme.txt
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git add readme.txt
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git commit -m "Exercise 0.5 add readme.txt"
[Test 961bb05] Exercise 0.5 add readme.txt
 1 file changed, 1 insertion(+)
 create mode 100644 readme.txt
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git push origin Test
Counting objects: 5, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 535 bytes | 535.00 KiB/s, done.
Total 5 (delta 0), reused 1 (delta 0)
To 192.168.100.204:1034180228-lab
 * [new branch]      Test -> Test
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git banch -a
git: 'banch' is not a git command. See 'git --help'.

The most similar command is
    branch
jovyan@05d57a817610: ~/kernel/1034180228-lab$ git branch -a
* Test
  lab0
  remotes/origin/Test
  remotes/origin/lab0
  remotes/origin/lab0-result
jovyan@05d57a817610: ~/kernel/1034180228-lab$
```

6. Exercise 0.6

- Makefile

```
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ vim fibo.c
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ vim Makefile
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ make
gcc fibo.c -std=c99 -o fibo
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ ./ fibo
bash: ./: Is a directory
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ ./fibo

10
1, 1, 2, 3, 5, 8, 13, 21, 34, 55
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$
```

```
jovyan@05d57a817610: ~/kernel/1034180228-lab/dst$ cat fibo.c
#include<stdio.h>
#define N 100
int a[N];

/* O( 2^n ) */
int Fibo(int n){
    return n <= 2 ? 1: (Fibo(n - 1) + Fibo(n - 2 ) ) ;
}

/* O(n) */
int fibo(int n){
    a[1] = a[2] = 1;
    for(int i = 3 ; i <= n; ++i) a[i] = a[i - 1] + a[ i - 2];
    return 0;
}

int main(){
    int var;
    scanf("%d", &var);
    fibo(var);
    for(int i = 1; i <= var ; ++i ) {
        printf("%d%c", a[i] , i == var ? '\n' : ' ');
    }
    return 0;
}
```

```
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ cat Makefile
fibo: fibo.c
    gcc fibo.c -std=c99 -o fibo
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$
```

- sed 命令

```
jovyan@05d57a817610: ~/kernel/1034180228-lab/src/sh_test$ vim hello_os.sh
jovyan@05d57a817610: ~/kernel/1034180228-lab/src/sh_test$ bash hello_os.sh file hello_os.c
jovyan@05d57a817610: ~/kernel/1034180228-lab/src/sh_test$ cat hello_os.c
#include<stdio.h>
int main(){
    printf("This is Test!\n");
    return 0;
}
jovyan@05d57a817610: ~/kernel/1034180228-lab/src/sh_test$ cat hello_os.sh
#!/bin/bash
sed -n '8p;32p;128p;512p;1024p' $1 > $2
jovyan@05d57a817610: ~/kernel/1034180228-lab/src/sh_test$
```

- cp 复制

```
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ cp fibo.c Makefile /home/jovyan/kernel/1034180228-lab/dst
jovyan@05d57a817610: ~/kernel/1034180228-lab/src$ cd sh_test/
jovyan@05d57a817610: ~/kernel/1034180228-lab/src/sh_test$ cp hello_os.sh /home/jovyan/kernel/1034180228-lab/dst/sh_test
jovyan@05d57a817610: ~/kernel/1034180228-lab/src/sh_test$ cd ../../
jovyan@05d57a817610: ~/kernel/1034180228-lab$ cd dst
jovyan@05d57a817610: ~/kernel/1034180228-lab/dst$ ls
fibo.c Makefile sh_test
jovyan@05d57a817610: ~/kernel/1034180228-lab/dst$ cd sh_test/
jovyan@05d57a817610: ~/kernel/1034180228-lab/dst/sh_test$ ls
hello_os.sh
jovyan@05d57a817610: ~/kernel/1034180228-lab/dst/sh_test$
```

- 运行结果

```

Total 0 (delta 0), reused 0 (delta 0)
remote: *****
remote:
remote:          BUAA OSLAB AUTOTEST SYSTEM
remote:          Copyright (c) BUAA 2015-2019
remote: *****
remote:
remote: [ You are changing the branch: refs/heads/lab0. ]
remote:
remote: Autotest: Begin at Sat Mar 14 15:52:11 CST 2020
remote:
remote: warning: remote HEAD refers to nonexistent ref, unable to checkout.
remote:
remote: Switched to a new branch 'lab0'
remote: Branch lab0 set up to track remote branch lab0 from origin.
remote: lab variable value is lab0
remote: [ You have passed bash testcase 1/2 ]
remote: [ You have passed bash testcase 2/2 ]
remote: [ Makefile found. ]
remote: gcc fibo.c -std=c99 -o fibo
remote: [ fibo found. make passed. ]
remote: [ You have passed fibo testcase 1/3 ]
remote: [ You have passed fibo testcase 2/3 ]
remote: [ You have passed fibo testcase 3/3 ]
remote: [ You got 100 (of 100) this time. Sat Mar 14 15:52:16 CST 2020 ]
remote:
remote:
remote: >>>>> Collecting autotest results >>>>>
remote: Switched to a new branch 'lab0-result'
remote: Branch lab0-result set up to track remote branch lab0-result from origin.
remote: Already up-to-date.
remote: [lab0-result ba53779] Judgement for lab0 at 2020-03-14T15:52:16+0800
remote: 1 file changed, 10 insertions(+)
remote: create mode 100644 log/2020-03-14T15:52:11+0800.log
remote: To git@localhost:1034180228-lab
remote: df557ea..ba53779 lab0-result -> lab0-result
remote: Please find the autotest log in lab0-result branch.
remote:
remote: [ Congratulations! You have passed the current lab. ]
remote: Switched to a new branch 'lab1'
remote: Branch lab1 set up to track remote branch lab1 from origin.
remote: [ lab1 already exists. ]
To 192.168.100.204:1034180228-lab
+ fc679fe...6622dea lab0 -> lab0 (forced update)
+ 685453..813618 lab0 -> lab0 (forced update)
+ 14624182822..14624182822 lab0 -> lab0 (forced update)

```