

# git 入门

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## 一、下载安装

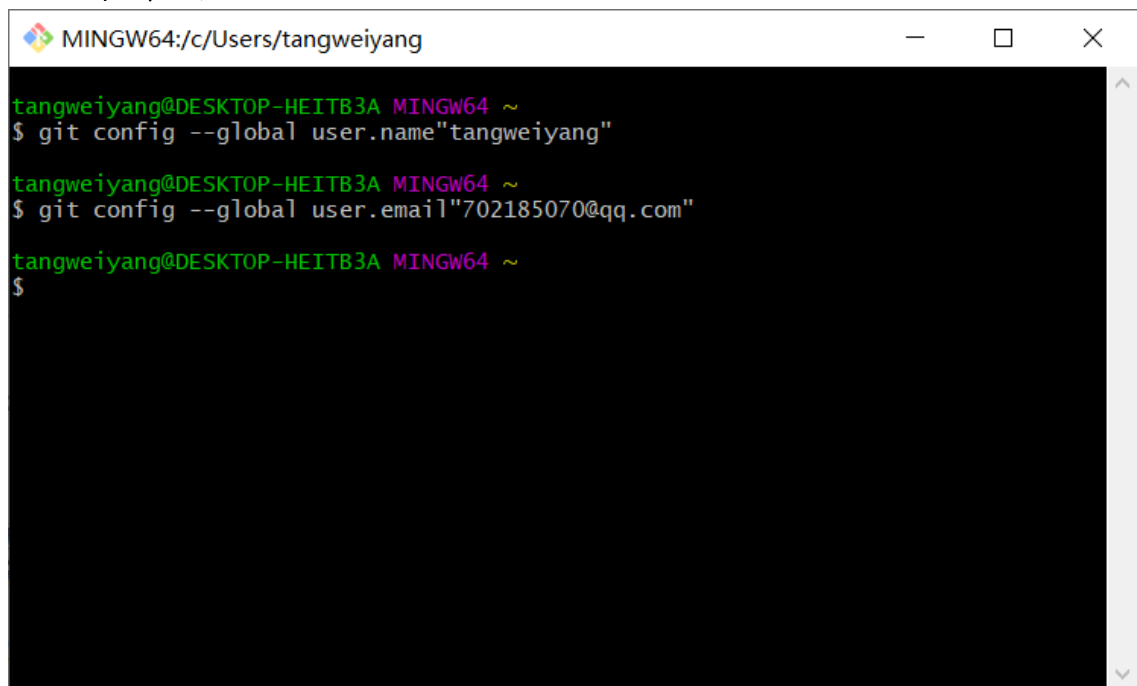
1. git 官网地址 [Git - Downloads](#)

## 二、提交仓库

### 1. 用户配置

```
$ git config --global user.name "Your Name"
$ git config --global user.email "email@example.com"
```

name 与"有空格

A screenshot of a Windows command prompt window titled "MINGW64:/c/Users/tangweiyang". The window shows the following commands and output:

```
tangweiyang@DESKTOP-HEITB3A MINGW64 ~
$ git config --global user.name"tangweiyang"

tangweiyang@DESKTOP-HEITB3A MINGW64 ~
$ git config --global user.email"702185070@qq.com"

tangweiyang@DESKTOP-HEITB3A MINGW64 ~
$
```

### 2. 创建文件夹,查看当前地址,创建仓库

```
$ mkdir learngit
$ cd learngit
$ pwd
/Users/michael/learngit
$ git init
Initialized empty Git repository in /Users/michael/learngit/.git/
```

pwd 查看当前路径

ls -ah 查看当前路径的隐藏文件

```
MINGW64:/d/git
$ git config --global user.name"tangweiyang"

tangweiyang@DESKTOP-HEITB3A MINGW64 ~
$ git config --global user.email"702185070@qq.com"

tangweiyang@DESKTOP-HEITB3A MINGW64 ~
$ cd d:

tangweiyang@DESKTOP-HEITB3A MINGW64 /d
$ cd git

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git
$ mkdir JavaGit

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git
$ pwd
/d/git

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git
$ git init
Initialized empty Git repository in D:/git/.git/

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git (master)
$
```

### 3. git 版本控制的注意事项:

- git 只能跟踪文本文件的改动,可以很具体告诉你哪里改动了,二进制文件只能看出文件大小的改变了,但具体哪里改变了不知道
- windows 千万别用记事本编辑,因为记事本惟每个文件开头添加了 0xefbbbf (十六进制) 的字符,可能会带来很多不必要的麻烦

### 4. git 文件上传到仓库 respository

```
git add readme.txt
git commit -m "我是文件解释"
```

```
MINGW64:/d/git/javagit
$ git add readme.txt
fatal: pathspec 'readme.txt' did not match any files

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git (master)
$ cd javagit

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git add readme.txt

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git commit -m "Java高级课设版本_01"

*** Please tell me who you are.

Run

    git config --global user.email "you@example.com"
    git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'tangweiyang@DESKTOP-HEITB3A.(no
ne)')
```

错误:please tell me who are you

原因:由于个人信息未配置好

```
$ git config --global user.name "Your Name"
$ git config --global user.email email@example.com
```

name 与"有空格  
成功结果:

```
MINGW64:/d/git/javagit

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ ^C

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git config --global user.email "tangweiyang"

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git config --global user.name "tangweiyang"

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git config --global user.email "702185070@qq.com"

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git config --global user.name "tangweiyang"

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git commit -m "Java高级课设01"
[master (root-commit) c78f95c] Java高级课设01
1 file changed, 2 insertions(+)
create mode 100644 JavaGit/readme.txt

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

### 三、时光机穿梭

#### 1. 改动文件后查看文件的改动情况

```
git status

MINGW64:/d/git/javagit
$ git config --global user.email "702185070@qq.com"

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git config --global user.name "tangweiyang"

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git commit -m "Java高级课设01"
[master (root-commit) c78f95c] Java高级课设01
1 file changed, 2 insertions(+)
create mode 100644 JavaGit/readme.txt

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git status
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

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

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

## 2. 查看具体改动哪些内容

```
git diff

MINGW64:/d/git/javagit
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

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

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git diff
diff --git a/JavaGit/readme.txt b/JavaGit/readme.txt
index cf8faa3..c62deee 100644
--- a/JavaGit/readme.txt
+++ b/JavaGit/readme.txt
@@ -1,2 +1,3 @@
 hello,git
-I am proud of you
\ No newline at end of file
+I am proud of you
+vesion 1.0
\ No newline at end of file

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

```
MINGW64:/d/git/javagit

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

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git diff
diff --git a/JavaGit/readme.txt b/JavaGit/readme.txt
index cf8faa3..c62deee 100644
--- a/JavaGit/readme.txt
+++ b/JavaGit/readme.txt
@@ -1,2 +1,3 @@
 hello,git
-I am proud of you
 \ No newline at end of file
+I am proud of you
+version 1.0
 \ No newline at end of file

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git add readme.txt

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git commit -m "Java高级开发课程设计02"
[master 1412223] Java高级开发课程设计02
1 file changed, 2 insertions(+), 1 deletion(-)

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git status
On branch master
nothing to commit, working tree clean

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

#### 4. 查看提交日志

```
git log

MINGW64:/d/git/javagit

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

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git add readme.txt

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git commit -m "Java高级开发课程设计03"
[master ad9a3f0] Java高级开发课程设计03
1 file changed, 1 insertion(+), 1 deletion(-)

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git log
commit ad9a3f0d5a2046d93a4e2df1a84d55ebced5b56c (HEAD -> master)
Author: tangweiyang <702185070@qq.com>
Date: Fri Dec 28 20:04:36 2018 +0800

    Java高级开发课程设计03

commit 14122232d023f60bdd3515b2c690767b2ae1f104
Author: tangweiyang <702185070@qq.com>
Date: Fri Dec 28 19:58:02 2018 +0800

    Java高级开发课程设计02

commit c78f95cbdbdbcb86d952291bc279263d52849b53
Author: tangweiyang <702185070@qq.com>
Date: Fri Dec 28 19:37:25 2018 +0800

    Java高级课设01

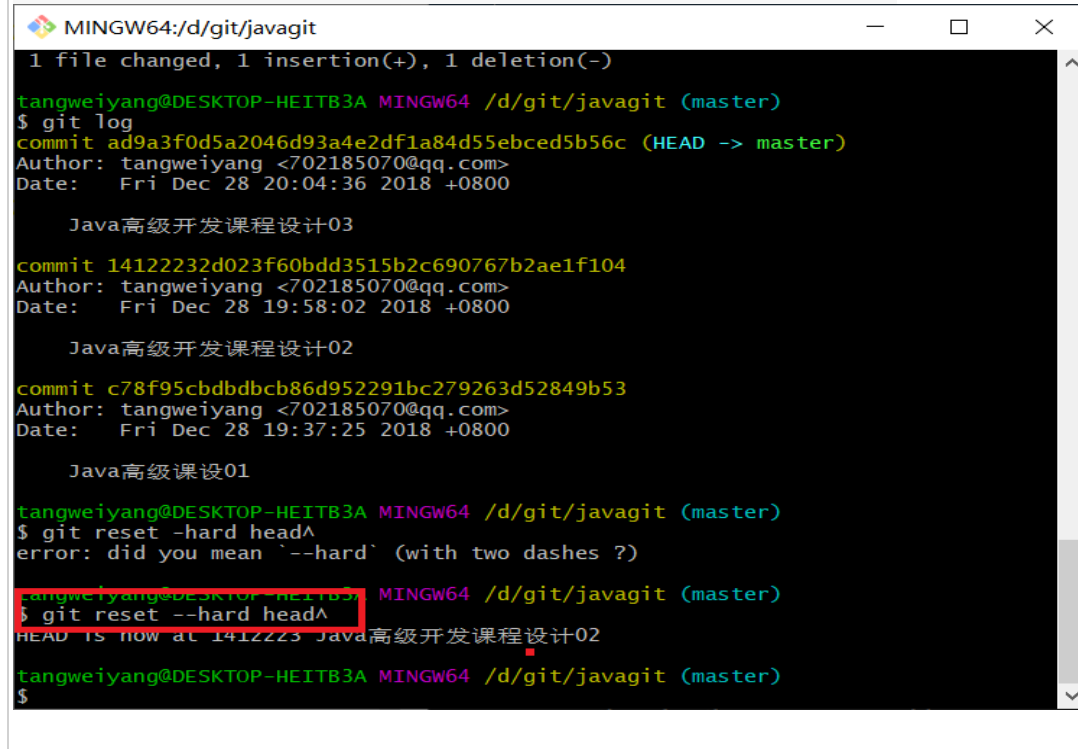
tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

## 4. 版本回退

```
git reset --hard head^
```

git rest 表示回退

head^ 表示回退上一次 head^^ 上上次 以此类推,也可以用 head~2



```
MINGW64:/d/git/javagit
1 file changed, 1 insertion(+), 1 deletion(-)

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git log
commit ad9a3f0d5a2046d93a4e2df1a84d55ebced5b56c (HEAD -> master)
Author: tangweiyang <702185070@qq.com>
Date:   Fri Dec 28 20:04:36 2018 +0800

    Java高级开发课程设计03

commit 14122232d023f60bdd3515b2c690767b2ae1f104
Author: tangweiyang <702185070@qq.com>
Date:   Fri Dec 28 19:58:02 2018 +0800

    Java高级开发课程设计02

commit c78f95cbdbdbcb86d952291bc279263d52849b53
Author: tangweiyang <702185070@qq.com>
Date:   Fri Dec 28 19:37:25 2018 +0800

    Java高级课设01

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git reset -hard head^
error: did you mean '--hard' (with two dashes ?)

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git reset --hard head^
HEAD is now at 1412223 Java高级开发课程设计02

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

## 5. 后悔药, 恢复新版本

这个有两种方法啊, 其实归根结底就是一种: 找到 commit id, 根据 id 回到对应的版本

- 如果命令窗没有关闭, 可以往上翻翻就可以找到的 commit id
- 如果命令窗关闭了, 通过 git reflog 查看日志

```
MINGW64:/d/git/javagit
HEAD is now at 1412223 Java高级开发课程设计02
tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git log
commit 1412223d023f60bdd3515b2c690767b2ae1f104 (HEAD -> master)
Author: tangweiyang <702185070@qq.com>
Date:   Fri Dec 28 19:58:02 2018 +0800

    Java高级开发课程设计02

commit c78f95cbdbdbcb86d952291bc279263d52849b53
Author: tangweiyang <702185070@qq.com>
Date:   Fri Dec 28 19:37:25 2018 +0800

    Java高级课设01

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git relog
git: 'relog' is not a git command. See 'git --help'.

The most similar command is
    reflow

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git reflow
1412223 (HEAD -> master) HEAD@{0}: reset: moving to head^
ad9a3f0 HEAD@{1}: commit: Java高级开发课程设计03
1412223 (HEAD -> master) HEAD@{2}: commit: Java高级开发课程设计02
c78f95c HEAD@{3}: commit (initial): Java高级课设01

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

- 恢复到新版本

```
git reset --hard commitId

MINGW64:/d/git/javagit
Author: tangweiyang <702185070@qq.com>
Date:   Fri Dec 28 19:37:25 2018 +0800

    Java高级课设01

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git relog
git: 'relog' is not a git command. See 'git --help'.

The most similar command is
    reflow

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git reflow commit id
1412223 (HEAD -> master) HEAD@{0}: reset: moving to head^
ad9a3f0 HEAD@{1}: commit: Java高级开发课程设计03
1412223 (HEAD -> master) HEAD@{2}: commit: Java高级开发课程设计02
c78f95c HEAD@{3}: commit (initial): Java高级课设01

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master) commit id 写错
$ git reset --hard ad9a3fo
fatal: ambiguous argument 'ad9a3fo': unknown revision or path not in the working
tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'

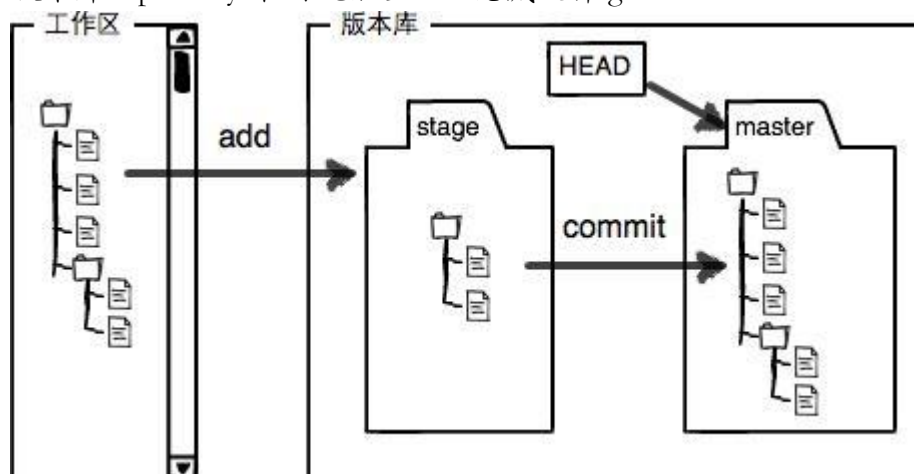
tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git reset --hard ad9a3fo
HEAD is now at ad9a3f0 Java高级开发课程设计03 写正确的反馈

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```



## 6. 工作区、暂存区概念很重要

- 工作区：在你电脑里 Git 存放文件的地方
- 版本库 repository: 在你电脑里 Git 隐藏文件.git



- 回头看看 git add 和 git commit 内部怎么操作的
  - git add 文件添加进去,是将文件提交到暂存区
  - git commit 文件提交,是将暂存区的所有文件提交到 git 仓库 repository 的当前分支
  - 在工作区新建一个新文档,git status 查看状态

```
MINGW64:/d/git/javagit
fatal: ambiguous argument 'ad9a3fo': unknown revision or path not in the working tree.
Use '--' to separate paths from revisions, like this:
'git <command> [<revision>...] -- [<file>...]'

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git reset --hard ad9a3f0
HEAD is now at ad9a3f0 Java高级开发课程设计03

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)

    "\346\226\260\345\273\272\346\226\207\346\234\254\346\226\207\346\241\243.txt"

nothing added to commit but untracked files present (use "git add" to track)

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)

    demo.txt

nothing added to commit but untracked files present (use "git add" to track)

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```

## 提交到版本库

```
MINGW64:/d/git/javagit
tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git diff
diff --git a/JavaGit/readme.txt b/JavaGit/readme.txt
index 87c0a0a..b578979 100644
--- a/JavaGit/readme.txt
+++ b/JavaGit/readme.txt
@@ -1,3 +1,3 @@
 hello,git
 I am proud of you
-vesion 2.0
\ No newline at end of file
+vesion 3.0
\ No newline at end of file

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git add /d/git/JavaGit/demo.txt
一次添加多份文件到暂存区,

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git /d/git/JavaGit/readme.txt
error: cannot spawn git-D:/git/JavaGit/readme.txt: Invalid argument

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git add /d/git/JavaGit/readme.txt

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$ git commit -m "Java高级开发课程设计4.0"
[master 2e566e8] Java高级开发课程设计4.0
2 files changed, 4 insertions(+), 1 deletion(-)
create mode 100644 JavaGit/demo.txt
一次将所有暂存区的文件提交到版本库

tangweiyang@DESKTOP-HEITB3A MINGW64 /d/git/javagit (master)
$
```