山东大学 计算机科学与技术 学院

云计算技术 课程实验报告

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实验题目：利用云平台搭建个人博客		
实验学时：2	实验日期：2023.03.14	

实验目的：熟悉个人博客系统的搭建。

具体包括：

参考方案：注册 Github 账号，搭建 Hexo 环境并实现个人博客搭建，撰写实验报告。

硬件环境：

联网的计算机一台

软件环境：

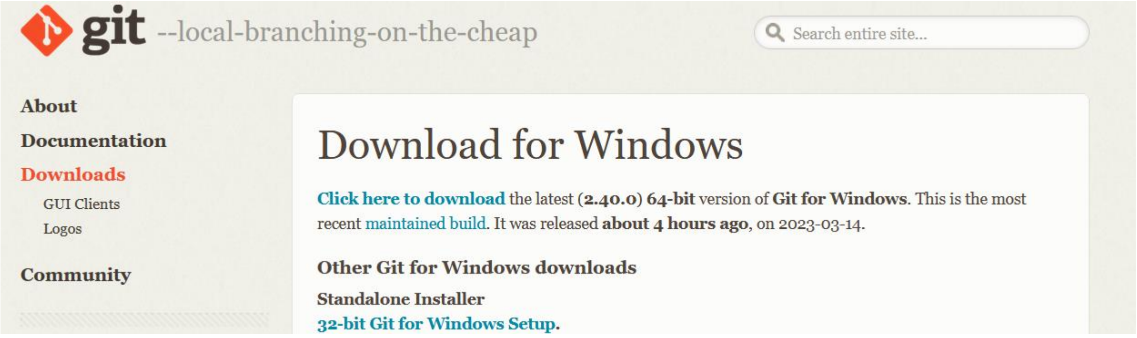
Windows or Linux

实验步骤与内容：

Hexo 搭建步骤

1. 安装 Git。

为了把本地的网页文件上传到 github 上面去，需要用到工具 Git。在 Windows 环境下需要在到 git 官网上下载.exe 文件。



Download for Windows

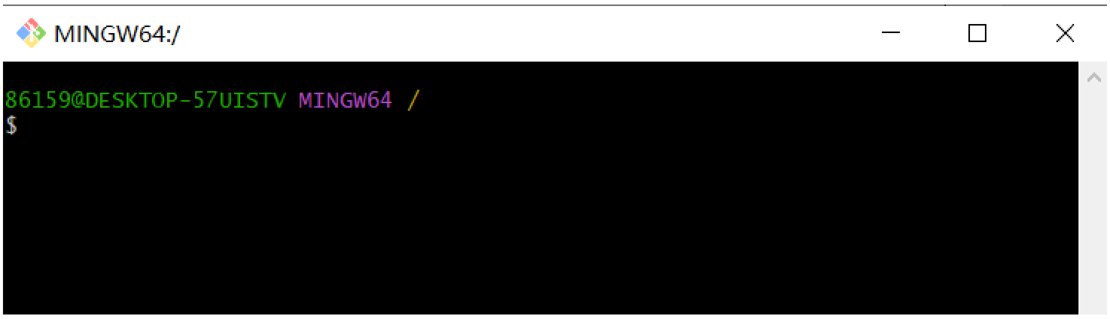
Click here to download the latest (2.40.0) 64-bit version of Git for Windows. This is the most recent maintained build. It was released about 4 hours ago, on 2023-03-14.

Other Git for Windows downloads

Standalone Installer

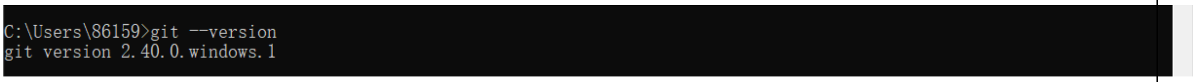
32-bit Git for Windows Setup.

安装选项选择默认安装即可，最终安装完成运行情况如下。



```
86159@DESKTOP-57UISTV MINGW64 /
$
```

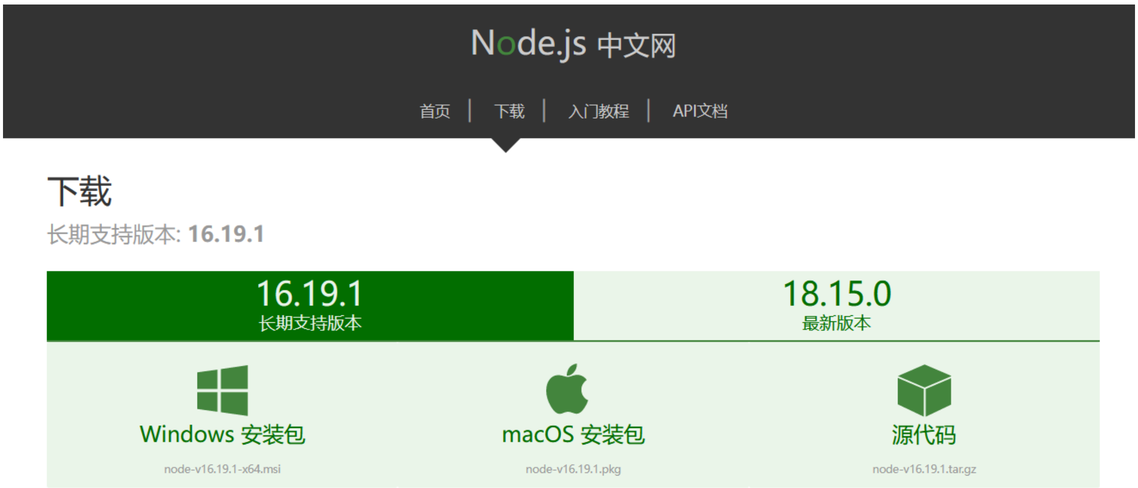
进入 cmd 下查看 git 环境



```
C:\Users\86159>git --version
git version 2.40.0.windows.1
```

2. 安装 nodejs

由于 Hexo 是基于 node.js 编写的，所以需要安装一下 node.js 和里面的 npm 工具。去 node.js 官网下载 Windows 安装包，同样默认安装即可。



下载

长期支持版本: 16.19.1

16.19.1 长期支持版本

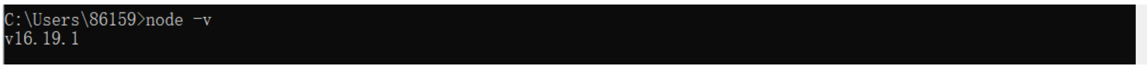
18.15.0 最新版本

Windows 安装包 node-v16.19.1-x64.msi

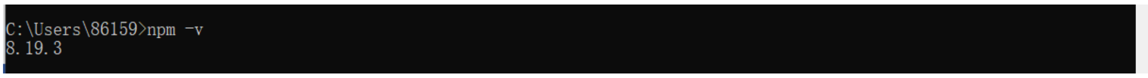
macOS 安装包 node-v16.19.1.pkg

源代码 node-v16.19.1.tar.gz

进入 cmd 下查看 node.js 环境



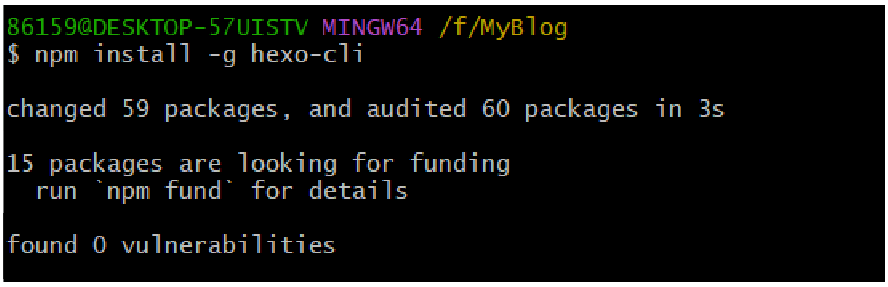
```
C:\Users\86159>node -v
v16.19.1
```



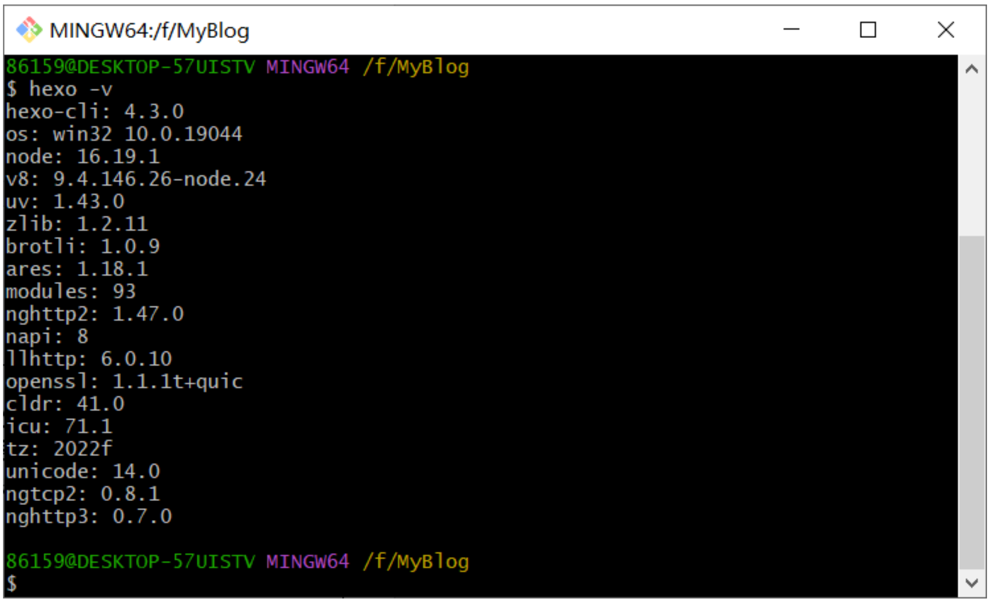
```
C:\Users\86159>npm -v
8.19.3
```

3. 安装 Hexo

在新文件夹 myblog 中存放自己的博客文件。在该文件夹下打开 git bash，输入 npm install -g hexo-cli 完成 hexo 的安装。并用 hexo -v 判断是否安装成功。

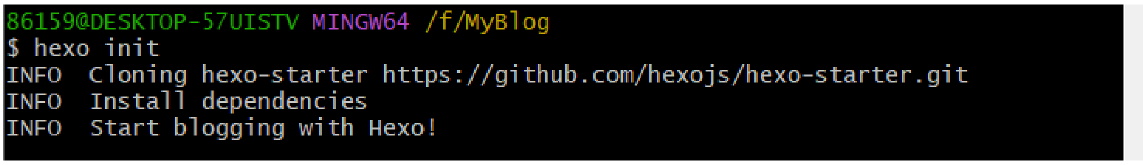


```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ npm install -g hexo-cli

changed 59 packages, and audited 60 packages in 3s

15 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
```

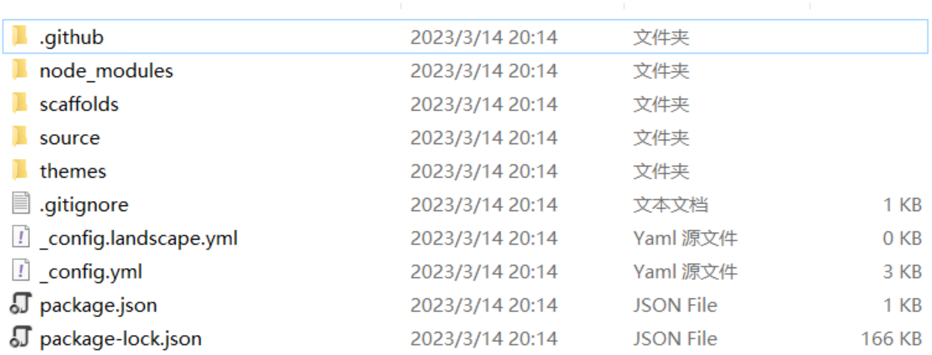


```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ hexo -v
hexo-cli: 4.3.0
os: win32 10.0.19044
node: 16.19.1
v8: 9.4.146.26-node.24
uv: 1.43.0
zlib: 1.2.11
brotli: 1.0.9
ares: 1.18.1
modules: 93
nghttp2: 1.47.0
napi: 8
llhttp: 6.0.10
openssl: 1.1.1t+quic
cldr: 41.0
icu: 71.1
tz: 2022f
unicode: 14.0
ngtcp2: 0.8.1
nghttp3: 0.7.0

86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$
```

输入 hexo init 初始化文件夹，其包含内容如下。

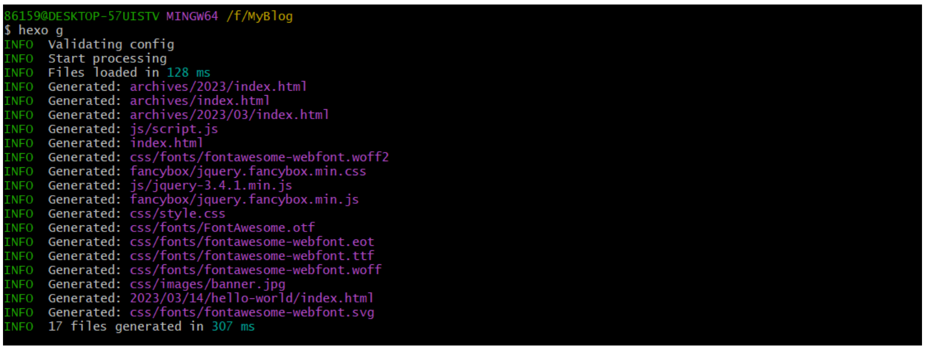


```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ hexo init
INFO  Cloning hexo-starter https://github.com/hexojs/hexo-starter.git
INFO  Install dependencies
INFO  Start blogging with Hexo!
```

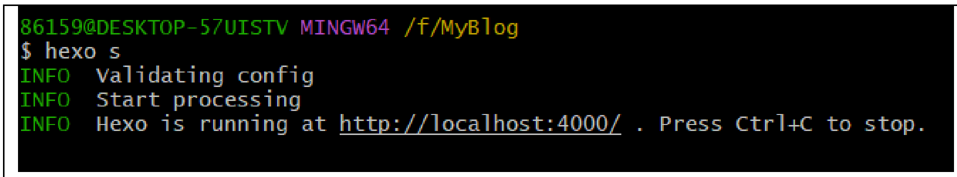


.github	2023/3/14 20:14	文件夹	
node_modules	2023/3/14 20:14	文件夹	
scaffolds	2023/3/14 20:14	文件夹	
source	2023/3/14 20:14	文件夹	
themes	2023/3/14 20:14	文件夹	
.gitignore	2023/3/14 20:14	文本文档	1 KB
_config.landscape.yml	2023/3/14 20:14	Yaml 源文件	0 KB
_config.yml	2023/3/14 20:14	Yaml 源文件	3 KB
package.json	2023/3/14 20:14	JSON File	1 KB
package-lock.json	2023/3/14 20:14	JSON File	166 KB

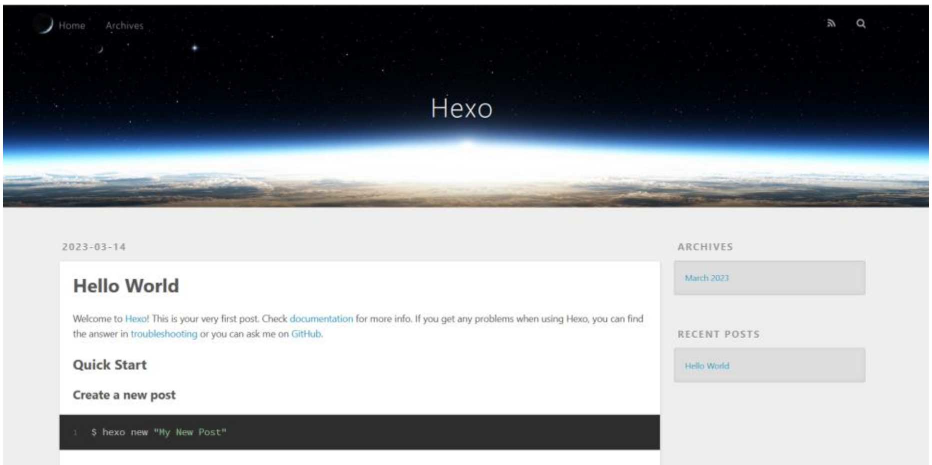
输入 hexo g 生成静态网页，然后输入 hexo s 打开本地服务器。



```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ hexo g
INFO  Validating config
INFO  Start processing
INFO  Files loaded in 128 ms
INFO  Generated: archives/2023/index.html
INFO  Generated: archives/index.html
INFO  Generated: archives/2023/03/index.html
INFO  Generated: js/script.js
INFO  Generated: index.html
INFO  Generated: css/fonts/fontawesome-webfont.woff2
INFO  Generated: fancybox/jquery.fancybox.min.css
INFO  Generated: js/jquery-3.4.1.min.js
INFO  Generated: fancybox/jquery.fancybox.min.js
INFO  Generated: css/style.css
INFO  Generated: css/fonts/FontAwesome.otf
INFO  Generated: css/fonts/fontawesome-webfont.eot
INFO  Generated: css/fonts/fontawesome-webfont.ttf
INFO  Generated: css/fonts/fontawesome-webfont.woff
INFO  Generated: css/images/banner.jpg
INFO  Generated: 2023/03/14/hello-world/index.html
INFO  Generated: css/fonts/fontawesome-webfont.svg
INFO  17 files generated in 307 ms
```



```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ hexo s
INFO  Validating config
INFO  Start processing
INFO  Hexo is running at http://localhost:4000/ . Press Ctrl+C to stop.
```



2023-03-14

Hello World

Welcome to Hexo! This is your very first post. Check documentation for more info. If you get any problems when using Hexo, you can find the answer in troubleshooting or you can ask me on GitHub.

Quick Start

Create a new post

```
$ hexo new "My New Post"
```

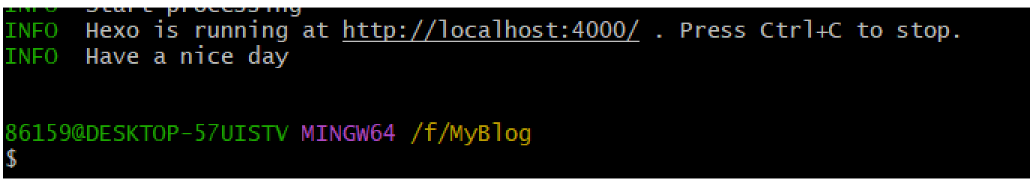
ARCHIVES

March 2023

RECENT POSTS

Hello World

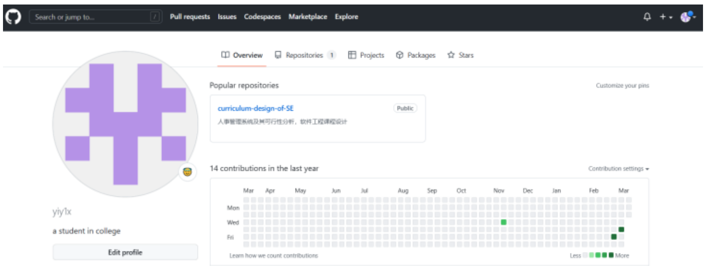
按 ctrl+c 关闭本地服务器。



```
INFO  Start processing
INFO  Hexo is running at http://localhost:4000/ . Press Ctrl+C to stop.
INFO  Have a nice day


86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$
```

4. 注册 Github 账号创建个人仓库

注册过程比较容易，最终注册账号如下。



yiy1x

a student in college

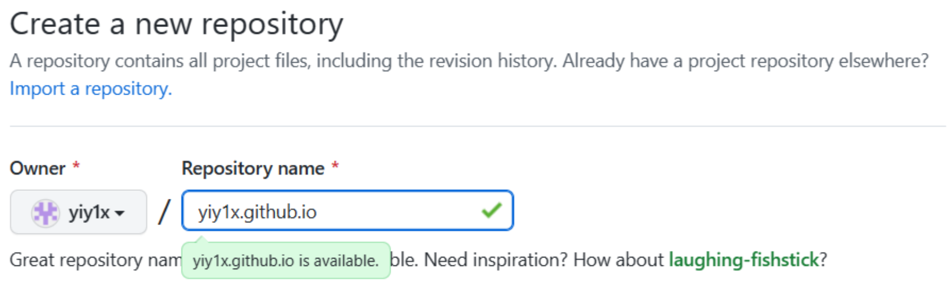
Popular repositories

curriculum-design-of-SE Public

人事管理系统及其可行性分析，软件工程课程设计

14 contributions in the last year

新建一个项目仓库 New repository。



Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

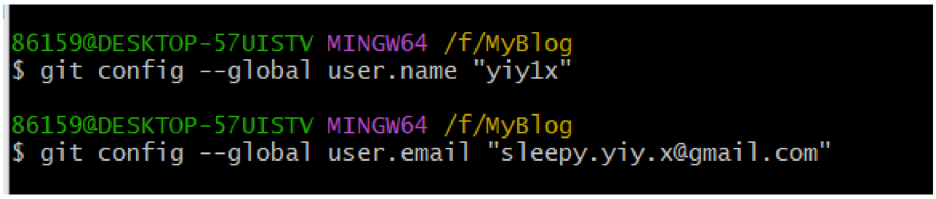
Owner *　　Repository name *

yiy1x / yiy1x.github.io ✓

Great repository nam yiy1x.github.io is available. ble. Need inspiration? How about laughing-fishstick?

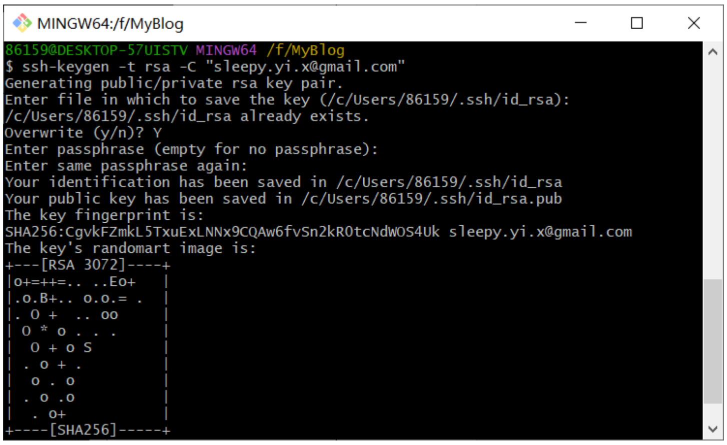
5. 生成 SSH 添加到 GitHub

生成 SSH 添加到 GitHub，连接 Github 与本地。用 git bash 输入以下命令，进行 github 的匹配。



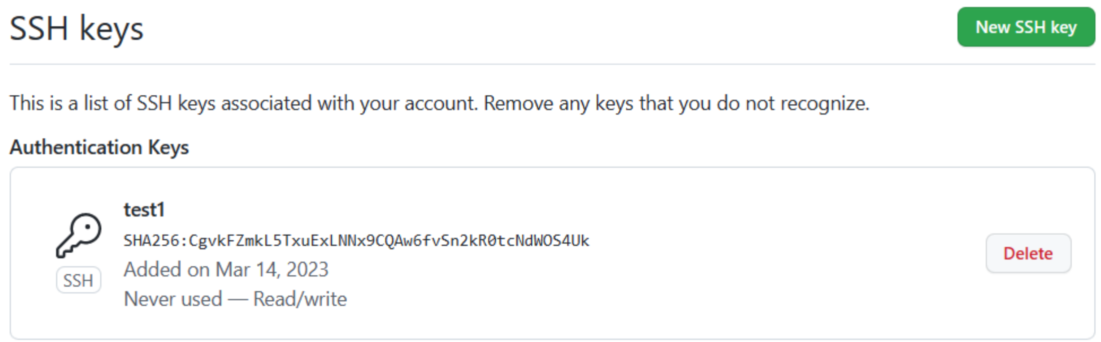
```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ git config --global user.name "yiy1x"

86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ git config --global user.email "sleepy.yiy.x@gmail.com"
```

最终生成秘钥如下。



```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ ssh-keygen -t rsa -C "sleepy.yi.x@gmail.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/86159/.ssh/id_rsa):
/c/Users/86159/.ssh/id_rsa already exists.
Overwrite (y/n)? Y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/86159/.ssh/id_rsa
Your public key has been saved in /c/Users/86159/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:CgvkFZmkL5TxuExLNNx9CQAw6fvSn2kR0tcNdWOS4Uk sleepy.yi.x@gmail.com
The key's randomart image is:
+---[RSA 3072]----+
|o+=++=.. ..Eo+   |
|.o.B+.. o.o.= .  |
|. O +  .. oo     |
| O * o . . .     |
|  O + o S        |
| . o + .         |
|  o . o          |
| . o .o          |
|  . o+           |
+----[SHA256]-----+
```

将.ssh 文件夹中内容复制，并在 github 上新建一个 SSH，将该文件夹中的公钥信息复制进去。

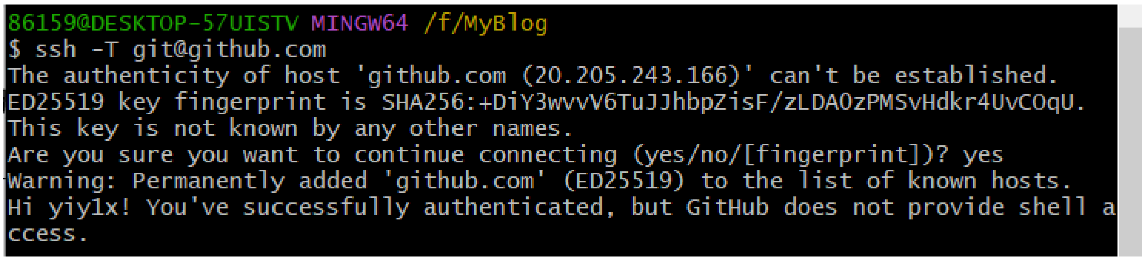


This is a list of SSH keys associated with your account. Remove any keys that you do not recognize.

Authentication Keys

test1
SHA256:CgvkFZmkL5TxuExLNNx9CQAw6fvSn2kR0tcNdWOS4Uk
Added on Mar 14, 2023
Never used — Read/write

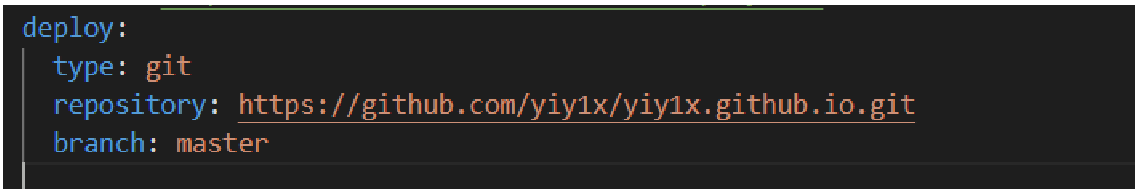
输入 ssh -T git@github.com，最后显示用户名，成功。



```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ ssh -T git@github.com
The authenticity of host 'github.com (20.205.243.166)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqU.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
Hi yiy1x! You've successfully authenticated, but GitHub does not provide shell a
ccess.
```

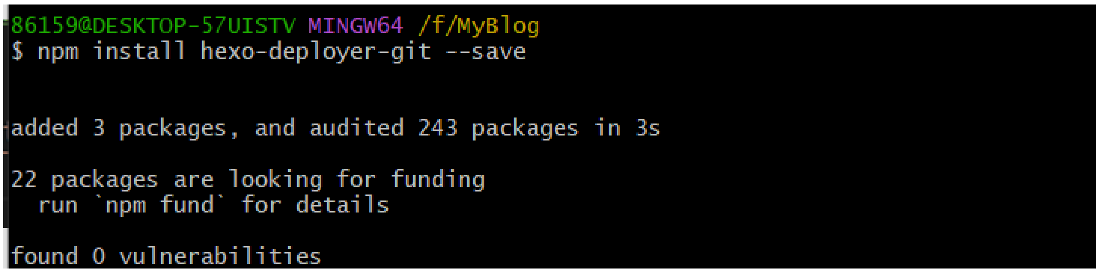
6. 将 hexo 部署到 GitHub

打开_config.yml 文件，将最后部分修改如下。



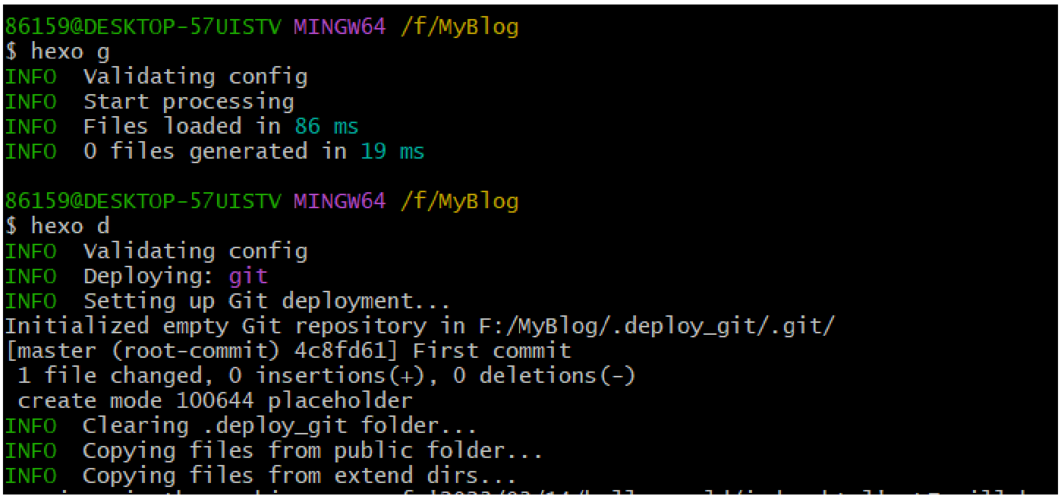
```
deploy:
  type: git
  repository: https://github.com/yiy1x/yiy1x.github.io.git
  branch: master
```

用 npm install hexo-deployer-git --save 安装 deploy-git,将命令部署到 github 上。



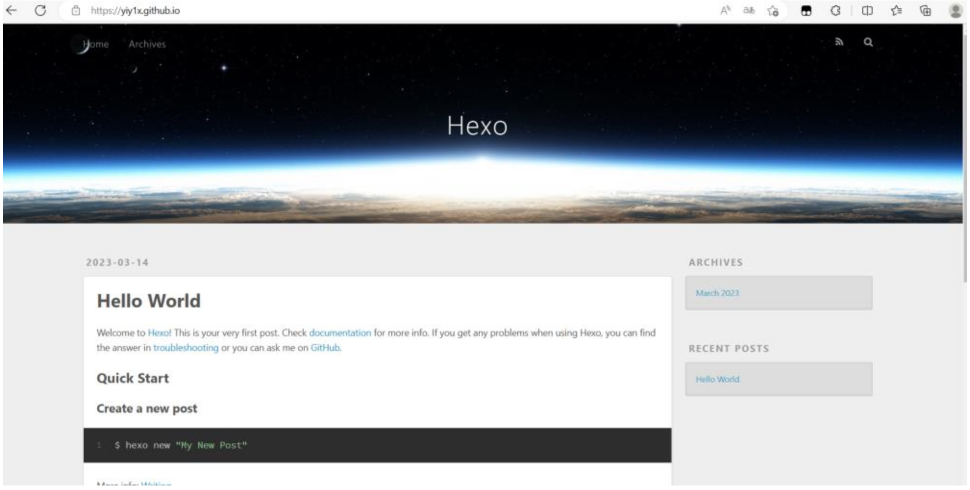
```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ npm install hexo-deployer-git --save


added 3 packages, and audited 243 packages in 3s

22 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
```

用 hexo g 生成静态文章，hexo d 部署文章。



```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ hexo g
INFO  Validating config
INFO  Start processing
INFO  Files loaded in 86 ms
INFO  0 files generated in 19 ms

86159@DESKTOP-57UISTV MINGW64 /f/MyBlog
$ hexo d
INFO  Validating config
INFO  Deploying: git
INFO  Setting up Git deployment...
Initialized empty Git repository in F:/MyBlog/.deploy_git/.git/
[master (root-commit) 4c8fd61] First commit
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 placeholder
INFO  Clearing .deploy_git folder...
INFO  Copying files from public folder...
INFO  Copying files from extend dirs...
```

连接完毕后，打开效果如下



2023-03-14

Hello World

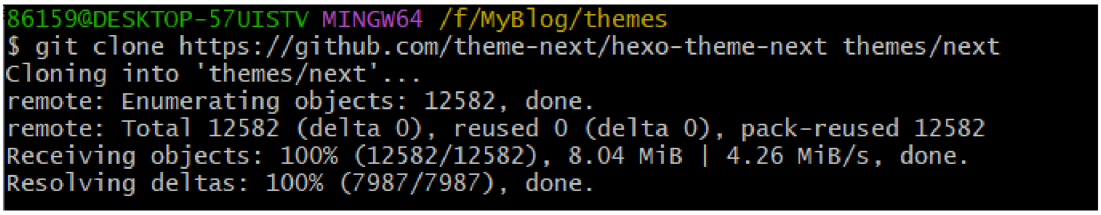
Welcome to Hexo! This is your very first post. Check documentation for more info. If you get any problems when using Hexo, you can find the answer in troubleshooting or you can ask me on GitHub.

Quick Start

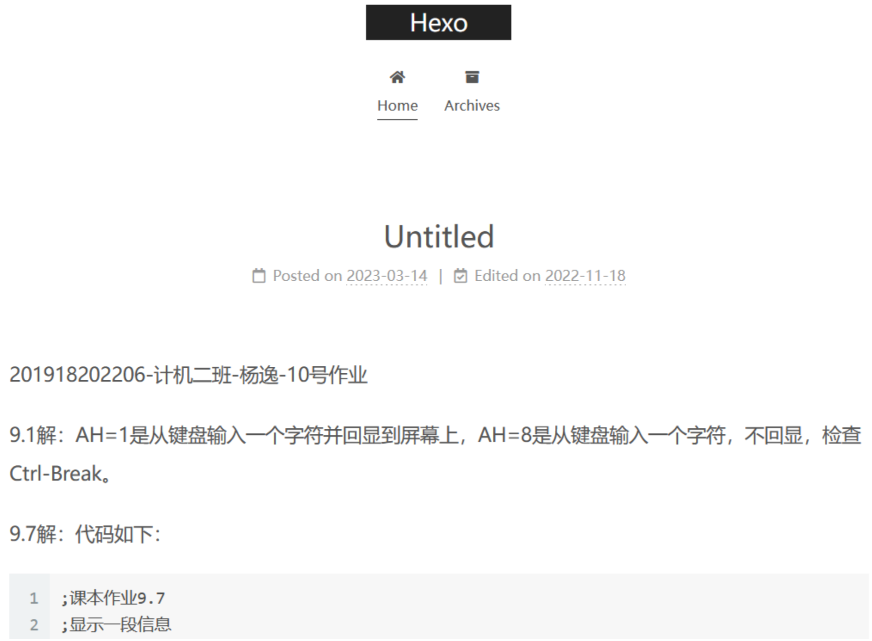
Create a new post

```
$ hexo new "My New Post"
```

可以通过更改主题使其有更精美的格式，也可以向其上传文件、博客内容，每次更新都需要重新 g 生成，d 上传，之后可以从网页访问得到。下图就是使用 next 格式，并上传了我的汇编作业后的博客页面。



```
86159@DESKTOP-57UISTV MINGW64 /f/MyBlog/themes
$ git clone https://github.com/theme-next/hexo-theme-next themes/next
Cloning into 'themes/next'...
remote: Enumerating objects: 12582, done.
remote: Total 12582 (delta 0), reused 0 (delta 0), pack-reused 12582
Receiving objects: 100% (12582/12582), 8.04 MiB | 4.26 MiB/s, done.
Resolving deltas: 100% (7987/7987), done.
```



Untitled

Posted on 2023-03-14 | Edited on 2022-11-18

201918202206-计机二班-杨逸-10号作业

9.1解：AH=1是从键盘输入一个字符并回显到屏幕上，AH=8是从键盘输入一个字符，不回显，检查Ctrl-Break。

9.7解：代码如下：

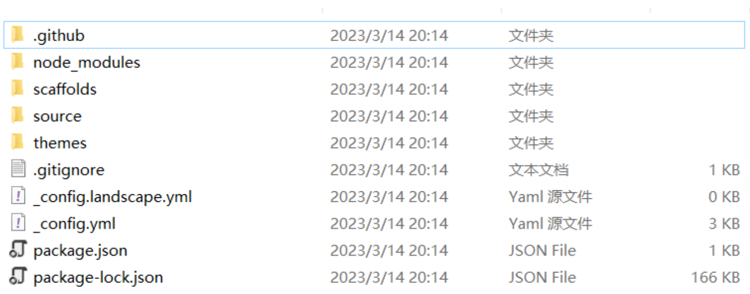
```
;课本作业9.7
;显示一段信息
```

结论分析与体会：

1. Hexo 是一款基于 Node.js 的静态博客框架，依赖少易于安装使用，可以方便的生成静态网页托管在 GitHub 和 Coding 上，是搭建博客的首选框架。

2. Git 是目前世界上最先进的分布式版本控制系统，可以有效、高速的处理从很小到非常大的项目版本管理。而关于 git 的下载，对于 Windows 需要按照上述实验步骤下载，但是对于 linux 环境下只需在终端中输入 sudo apt-get install git 即可完成安装。这是因为最早的 git 就是在 linux 上编写的。

3. Hexo 初始化后，生成了很多文件，其中部分文件的作用如下。node_modules：依赖包，包含 node.js 各种库的目录；public：存放生成的页面；scaffolds：生成文章的一些模板；source：存放着文章、各类页面、图像等文件；themes：存放着主题文件，一般也用不到；_config.yml：博客的配置文件。



.github	2023/3/14 20:14	文件夹	
node_modules	2023/3/14 20:14	文件夹	
scaffolds	2023/3/14 20:14	文件夹	
source	2023/3/14 20:14	文件夹	
themes	2023/3/14 20:14	文件夹	
.gitignore	2023/3/14 20:14	文本文档	1 KB
_config.landscape.yml	2023/3/14 20:14	Yaml 源文件	0 KB
_config.yml	2023/3/14 20:14	Yaml 源文件	3 KB
package.json	2023/3/14 20:14	JSON File	1 KB
package-lock.json	2023/3/14 20:14	JSON File	166 KB

4. 要创建一个和你用户名相同的仓库，后面加.[http://github.io，只有这样，将来部署到GitHub page的时候,才会被识别,也就是http://xxxx.github.io，其中xxx就是注册GitHub的用户名。

5. ssh，简单来讲，就是一个秘钥。其中，id_rsa 是你这台电脑的私人秘钥，id_rsa.pub 是公共秘钥。把公钥放在 GitHub 上，这样当你链接 GitHub 自己的账户时，它就会根据公钥匹配你的私钥，当能够相互匹配时，才能够顺利的通过git上传你的文件到GitHub上。

6. 常用hexo命令如下：

```
hexo n "postName" #新建文章
hexo n page "pageName" #新建页面
hexo g #生成静态页面至public目录
hexo s #开启预览访问端口（默认端口4000，'ctrl + c'关闭server）
hexo d #部署到GitHub
```