

# 第零周周六

- 日期: 20160116
- 地点: 清华 FIT 一层小会议室
- 讲师: 李明 & 田思源

## 预备知识

- Install Tools
  - Meteor
  - Chrome
  - Sublime Text/WebStorm
  - Git and Github
- Commands
  - meteor create/run/add/mongo/deploy/log
  - git init/add/commit/push/pull/log
- Basics
  - [HTML5](#)
  - [CSS/LESS](#)
  - [JavaScript](#)

## 搭建开发环境

### 平台选择

- 首选 MacOS
- 次选 Linux (Ubuntu 14.04)
- 三选 Windows + Virtualbox + Ubuntu 14.04 虚拟镜像文件

现场提供Ubuntu 安装 U盘

### 安装运行基本步骤

```
ttsy@localhost:~$ curl https://install.meteor.com/ | sh
```

% Total	% Received	% Xferd	Average Speed	Time	Time	Time	Current
			Dload Upload	Total	Spent	Left	Speed
100	6674	0 6674	0 0	3829	0	--:--:--	0:00:01 --:--:-- 3829

Downloading Meteor distribution  
##### 100.0%

Meteor 1.2.1 has been installed in your home directory (~/.meteor).  
Writing a launcher script to /usr/local/bin/meteor for your convenience.  
This may prompt for your password.

To get started fast:

```
$ meteor create ~/my_cool_app
$ cd ~/my_cool_app
$ meteor
```

Or see the docs at:

[docs.meteor.com](https://docs.meteor.com)

```
ttsy@localhost:~$ meteor create ~/my_cool_app
Created a new Meteor app in '/home/ttsy/my_cool_app'.
```

To run your new app:

```
cd /home/ttsy/my_cool_app
meteor
```

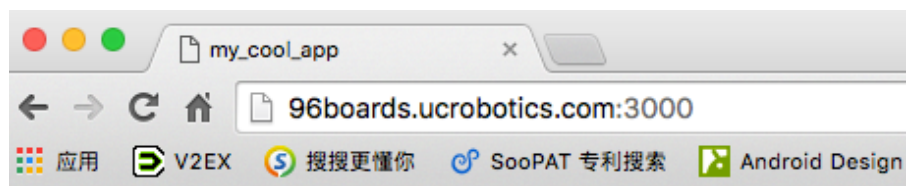
If you are new to Meteor, try some of the learning resources here:  
<https://www.meteor.com/learn>

```
ttsy@localhost:~$ cd ~/my_cool_app
ttsy@localhost:~/my_cool_app$ meteor
[[[[[ ~/my_cool_app ]]]]]
```

```
=> Started proxy.
=> Started MongoDB.
=> Started your app.
```

```
=> App running at: http://localhost:3000/
```

```
ttsy@localhost:~/my_cool_app$ ls -l
total 12
-rw-rw-r-- 1 ttsy ttsy 31 Jan 16 04:43 my_cool_app.css
-rw-rw-r-- 1 ttsy ttsy 224 Jan 16 04:43 my_cool_app.html
-rw-rw-r-- 1 ttsy ttsy 478 Jan 16 04:43 my_cool_app.js
```



# Welcome to Meteor!

[Click Me](#)

You've pressed the button 0 times.

## 基本命令

```
tsy@localhost:~/Microscope$ meteor help
Usage: meteor [--release <release>] [--help] <command> [args]
      meteor help <command>
      meteor [--version] [--arch]
```

With no arguments, 'meteor' runs the project in the current directory in local development mode. You can run it from the root directory of the project or from any subdirectory.

Use 'meteor create <path>' to create a new Meteor project.

#### Commands:

run	[default] Run this project in local development mode.
debug	Run the project, but suspend the server process for debugging.
create	Create a new project.
update	Upgrade this project's dependencies to their latest versions.
add	Add a package to this project.
remove	Remove a package from this project.
list	List the packages explicitly used by your project.
add-platform	Add a platform to this project.
remove-platform	Remove a platform from this project.
list-platforms	List the platforms added to your project.
build	Build this project for all platforms.
lint	Build this project and run the linters printing all errors and warnings.
shell	Launch a Node REPL for interactively evaluating server-side code.
mongo	Connect to the Mongo database for the specified site.
reset	Reset the project state. Erases the local database.
deploy	Deploy this project to Meteor.
logs	Show logs for specified site.
authorized	View or change authorized users and organizations for a site.
claim	Claim a site deployed with an old Meteor version.
login	Log in to your Meteor developer account.
logout	Log out of your Meteor developer account.
whoami	Prints the username of your Meteor developer account.
test-packages	Test one or more packages.
admin	Administrative commands.
list-sites	List sites for which you are authorized.
publish-release	Publish a new meteor release to the package server.
publish	Publish a new version of a package to the package server.
publish-for-arch	Builds an already-published package for a new platform.
search	Search through the package server database.
show	Show detailed information about a release or package.

See 'meteor help <command>' for details on a command.

## meteor update

```
tsy@localhost:~/Microscope$ meteor update
```

Changes to your project's package version selections from updating the release:

accounts-base	upgraded from 1.2.1 to 1.2.2
accounts-password	upgraded from 1.1.3 to 1.1.4
autoupdate	upgraded from 1.2.3 to 1.2.4
check	upgraded from 1.0.6 to 1.1.0
ddp-common	upgraded from 1.2.1 to 1.2.2
ddp-server	upgraded from 1.2.1 to 1.2.2
ecmascript	upgraded from 0.1.5 to 0.1.6
ecmascript-collections	removed from your project
ecmascript-runtime	added, version 0.2.6
email	upgraded from 1.0.7 to 1.0.8
es5-shim	upgraded from 4.1.13 to 4.1.14
meteor	upgraded from 1.1.9 to 1.1.10
mongo	upgraded from 1.1.2 to 1.1.3
promise	upgraded from 0.5.0 to 0.5.1
random	upgraded from 1.0.4 to 1.0.5
reactive-dict	upgraded from 1.1.2 to 1.1.3
standard-minifiers	upgraded from 1.0.1 to 1.0.2
stylus	upgraded from 2.511.0_2 to 2.511.1
templating	upgraded from 1.1.4 to 1.1.5
webapp	upgraded from 1.2.2 to 1.2.3

Microscope: updated to Meteor 1.2.1.

Changes to your project's package version selections from updating package versions:

ian:accounts-ui-bootstrap-3	upgraded from 1.2.83 to 1.2.84
twbs:bootstrap	upgraded from 3.3.5 to 3.3.6

## meteor mongo

```

tsy@localhost:~/Microscope$ meteor mongo
MongoDB shell version: 2.6.7
connecting to: 127.0.0.1:3001/meteor
Welcome to the MongoDB shell.
For interactive help, type "help".
For more comprehensive documentation, see
  http://docs.mongodb.org/
Questions? Try the support group
  http://groups.google.com/group/mongodb-user
meteor:PRIMARY> help
    db.help()                help on db methods
    db.mycoll.help()         help on collection methods
    sh.help()                sharding helpers
    rs.help()                replica set helpers
    help admin               administrative help
    help connect             connecting to a db help
    help keys                key shortcuts
    help misc                misc things to know
    help mr                  mapreduce

    show dbs                 show database names
    show collections         show collections in current database
    show users               show users in current database
    show profile             show most recent system.profile entries with time
>= 1ms
    show logs                show the accessible logger names
    show log [name]         prints out the last segment of log in memory,
'global' is default
    use <db_name>           set current database
    db.foo.find()            list objects in collection foo
    db.foo.find( { a : 1 } ) list objects in foo where a == 1
    it                       result of the last line evaluated; use to further
iterate
    DBQuery.shellBatchSize = x set default number of items to display on shell
    exit                     quit the mongo shell
meteor:PRIMARY>

```

## meteor deploy

```

tsy@localhost:~/Microscope$ meteor deploy maodou-class
To instantly deploy your app on a free testing server, just enter your email
address!

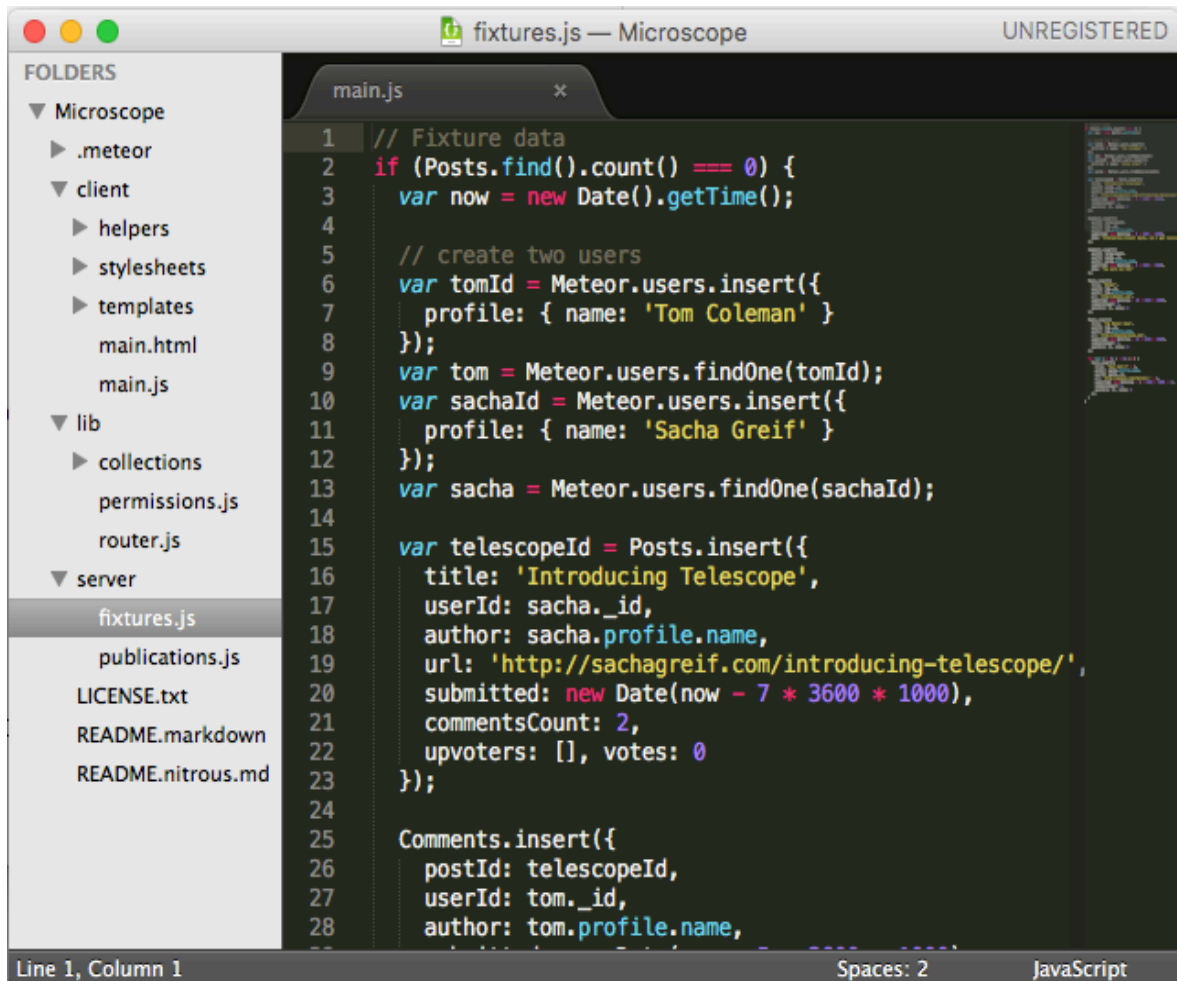
Email: tiansiyuan@gmail.com

Logging in as tiansiyuan.
Password:
Deploying to maodou-class.meteor.com.
Now serving at http://maodou-class.meteor.com

```

## 编辑器

### Sublime

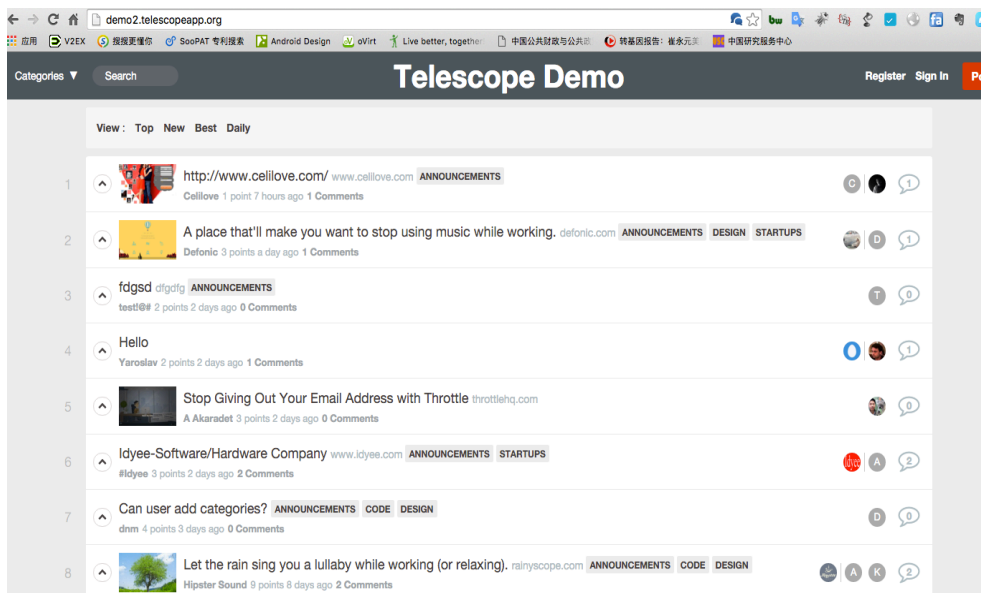


### WebStorm

```
1 // Fixture data
2 if (Posts.find().count() === 0) {
3   var now = new Date().getTime();
4
5   // create two users
6   var tomId = Meteor.users.insert({
7     profile: { name: 'Tom Coleman' }
8   });
9   var tom = Meteor.users.findOne(tomId);
10  var sachaId = Meteor.users.insert({
11    profile: { name: 'Sacha Greif' }
12  });
13  var sacha = Meteor.users.findOne(sachaId);
14
15  var telescopeId = Posts.insert({
16    title: 'Introducing Telescope',
17    userId: sacha._id,
18    author: sacha.profile.name,
19    url: 'http://sachagreif.com/introducing-telescope/',
20    submitted: new Date(now - 7 * 3600 * 1000),
21    commentsCount: 2,
22    upvoters: [], votes: 0
23  });
24
25  Comments.insert({
26    postId: telescopeId,
27    userId: tom._id,
28    author: tom.profile.name,
29    submitted: new Date(now - 5 * 3600 * 1000),
30    body: 'Interesting project Sacha, can I get involved?'
31  });
32
33  Comments.insert({
34    postId: telescopeId,
35    userId: sacha._id,
36    author: sacha.profile.name,
37    submitted: new Date(now - 3 * 3600 * 1000),
38    body: 'You sure can Tom!'
39  });
40
41  Posts.insert({
42    title: 'Meteor',
43    userId: tom._id,
44    author: tom.profile.name,
45    url: 'http://meteor.com',
46    submitted: new Date(now - 10 * 3600 * 1000),
```

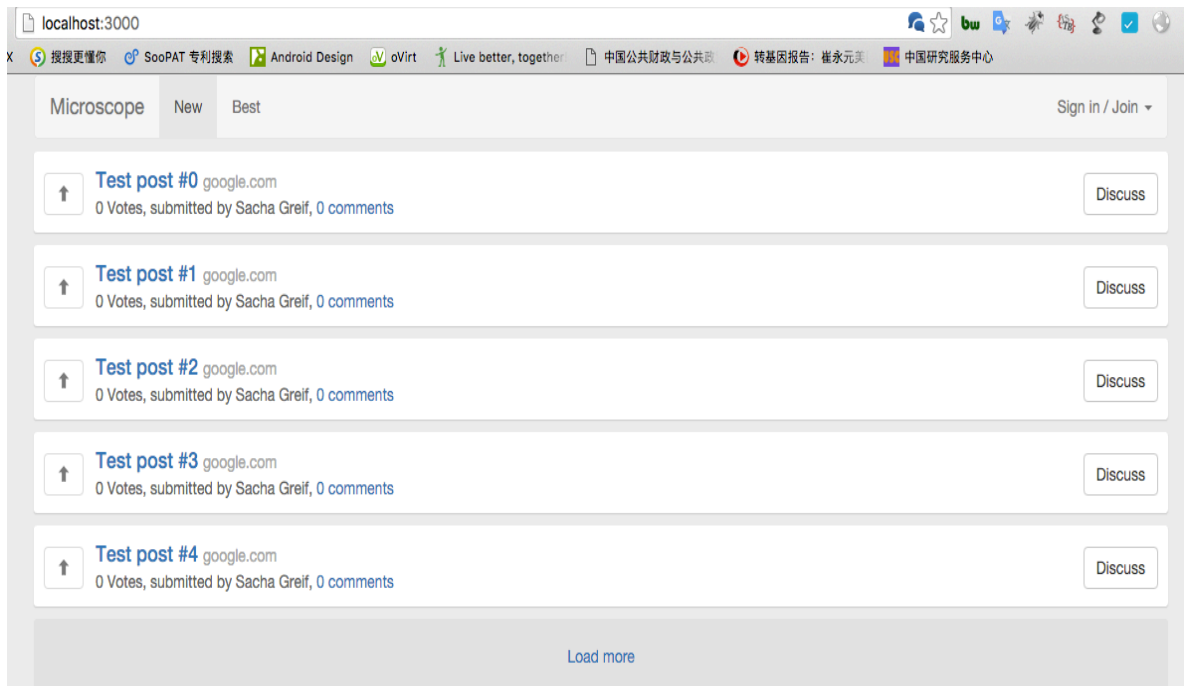
## 代码分析：Microscope Telescope





## Microscope

我们将构建的应用是一个简化版的社交新闻网站，类似 Hacker News 或 Reddit，称为 Microscope（借鉴 基于 Meteor 的开源应用 Telescope），在课程中，解决构建 Meteor 应用需要的各种要素，例如用户账户、Collection、路由等等，后续会逐步讲到。



```
ttsy@localhost:~/Microscope$ tree .
.
├── client
│   ├── helpers
│   │   ├── config.js
│   │   └── errors.js
```

```

| | └─ handlebars.js
| └─ main.html
| └─ main.js
| └─ stylesheets
|   └─ style.css
| └─ templates
|   └─ application
|     └─ layout.html
|       └─ layout.js
|         └─ not_found.html
|       └─ comments
|         └─ comment_item.html
|           └─ comment_item.js
|             └─ comment_submit.html
|               └─ comment_submit.js
|       └─ includes
|         └─ access_denied.html
|           └─ errors.html
|             └─ errors.js
|               └─ header.html
|                 └─ header.js
|                   └─ loading.html
|       └─ notifications
|         └─ notifications.html
|           └─ notifications.js
|       └─ posts
|         └─ post_edit.html
|           └─ post_edit.js
|             └─ post_item.html
|               └─ post_item.js
|                 └─ post_page.html
|                   └─ post_page.js
|                     └─ posts_list.html
|                       └─ posts_list.js
|                         └─ post_submit.html
|                           └─ post_submit.js
└─ lib
  └─ collections
    └─ comments.js
      └─ notifications.js
        └─ posts.js
          └─ permissions.js
            └─ router.js
└─ LICENSE.txt
└─ README.markdown
└─ README.nitrous.md
└─ server
  └─ fixtures.js
    └─ publications.js

```

12 directories, 41 files

tsy@localhost:~/Microscope\$