

Scratch3.0 gui 代码学习

1. 启动过程打印信息：[参见后面附录](#)

2. 既然程序启动需要执行 npm start 那么就从 npm start 开始学习，掌握这方面的框架知识后就可以能够进阶了。

>在 NodeJS 项目中，用 package.json 文件来声明项目中使用的模块[\[http://www.cnblogs.com/zhang-jian/p/5035424.html\]](http://www.cnblogs.com/zhang-jian/p/5035424.html)

>工程文件中 node_modules 目录下存放所有的库文件。

>让我研究增加新的 blocky 的功能 https://wiki.scratch.mit.edu/wiki/Blocks#Pen_blocks

>package.json 里面的 peerdependencies [\[https://nodejs.org/en/blog/npm/peer-dependencies/\]](https://nodejs.org/en/blog/npm/peer-dependencies/)

>npm start 执行后，是执行的 package.json 里面的 scripts 里面对应的项

“/home/bibaodi/demo/scratch-gui/node_modules/.bin/webpack-dev-server”。这个程序会执行 webpack.config.js 按照 entry 的对应关系，当浏览器访问 gui 的时候，会访问 index.jsx.

>这个就可以进一步了，后面比较关键的就是 webpack 的执行，webpack 是一个很重要的组成部分。webpack 很重要的一个配置文件 webpack.config.js。scripts 中 start 对应的部分是 "start": "webpack-dev-server"。

>package.conf 字段详解解释了 npm scripts 中各个字段的意义[\[https://docs.npmjs.com/misc/scripts\]](https://docs.npmjs.com/misc/scripts)
[\[http://www.cnblogs.com/dtdxr/p/4758265.html\]](http://www.cnblogs.com/dtdxr/p/4758265.html)

>现在开始分析 webpack-dev-server [\[http://www.cnblogs.com/hhhyaon/p/5664002.html\]](http://www.cnblogs.com/hhhyaon/p/5664002.html)
[\[https://segmentfault.com/a/1190000006964335\]](https://segmentfault.com/a/1190000006964335)

>webpack 官方[\[https://webpack.js.org/guides/development/#using-webpack-dev-server\]](https://webpack.js.org/guides/development/#using-webpack-dev-server)

>webpack.config.js 选项说明 [\[https://webpack.js.org/configuration/dev-server/\]](https://webpack.js.org/configuration/dev-server/)

>webpack 教程解释了 webpack.config.js 这个配置文件的意义[\[https://blog.zfanw.com/webpack-tutorial/\]](https://blog.zfanw.com/webpack-tutorial/) 这个说明一个知识点：block 方面的代码存放于(blockonly: './src/examples/blocks-only.jsx')。到达这里说明了一点，webpack 的作用主要的用来作为一个方便的打包、部署、发布的工具，然而 webpack-dev-server 主要是服务与 webpack 的。

>主要的工作代码开始于 index.jsx。既有 react 的语法又有 jsx 语法特性。

[\[http://www.runoob.com/react/react-tutorial.html\]](http://www.runoob.com/react/react-tutorial.html) 菜鸟教程开始入门，哈哈

>如果想要增加自己的 block，那么只要修改/scratch-gui/node_modules/scratch-blocks/里面的文件，然后重新编译生效就可以了。

朱亚飞已经修改的文件：

>>./node_modules/scratch-vm/dist/mode/scratch-vm.js

>>./node_modules/scratch-blocks/dist/vertical.js

>>../src/scratch-gui/node_modules/scratch-vm/src/blocks/scratch3_motion.js

经过对 scratch-gui 中代码对上述文件调用的过程分析，发现如果直接对上述文件进行修改的话，是没有问题的。我们目前阶段如果可以对上述文件做正确的修改，借助于 sublime JSFormat 等工具，那么就不需要搭建 scratch-vm ,scratch-blocks 的代码框架，不需要解决 npm 下载 module 怎么本地化的问题。

至于代码的版本控制的话，仅仅对 scratch-gui 进行控制就好。

建议参考网站：

1. npm 官方：<https://www.npmjs.com/>

2. react 入门教材：<http://www.ruanyifeng.com/blog/2015/03/react.html> 阮一峰

3. react 官方文档：<https://reactjs.org/docs/react-api.html#react.children>

4. HOC 介绍：<https://segmentfault.com/a/1190000008112017>

npm start

```
> scratch-gui@0.1.0 start /home/bibaodi/demo/scratch-gui
> webpack-dev-server
```

Project is running at <http://0.0.0.0:8601/>

webpack output is served from /

Content not from webpack is served from /home/bibaodi/demo/scratch-gui/build

Hash: 9f02fcd9a3d80661cf07

Version: webpack 3.8.1

Time: 24619ms

Asset	Size	Chunks	Chunk Names
static/blocks-media/icons/event_when-broadcast-received_green.svg	1.65 kB	[emitted]	[emitted]
gui.js	2.97 kB	0 [emitted]	gui
blocksonly.js	3.67 kB	2 [emitted]	blocksonly
lib.min.js	9.68 MB	3 [emitted]	[big] lib
gui.js.map	3.24 kB	0 [emitted]	gui
player.js.map	5.17 kB	1 [emitted]	player
blocksonly.js.map	3.88 kB	2 [emitted]	blocksonly
lib.min.js.map	10.9 MB	3 [emitted]	lib
index.html	314 bytes	[emitted]	
blocks-only.html	342 bytes	[emitted]	
player.html	333 bytes	[emitted]	
static/blocks-media/1x1.gif	43 bytes	[emitted]	
static/blocks-media/click.mp3	8.13 kB	[emitted]	
static/blocks-media/click.ogg	5.45 kB	[emitted]	
static/blocks-media/delete.mp3	9.8 kB	[emitted]	
static/blocks-media/delete.ogg	8.62 kB	[emitted]	
static/blocks-media/delete.wav	11.9 kB	[emitted]	
static/blocks-media/dropdown-arrow-dark.svg	573 bytes	[emitted]	
static/blocks-media/click.wav	3.19 kB	[emitted]	
static/blocks-media/eyedropper.svg	3.55 kB	[emitted]	
static/blocks-media/green-flag.svg	1.19 kB	[emitted]	
static/blocks-media/handclosed.cur	326 bytes	[emitted]	
static/blocks-media/handdelete.cur	766 bytes	[emitted]	
static/blocks-media/handopen.cur	198 bytes	[emitted]	
static/blocks-media/icons/arrow.svg	1.21 kB	[emitted]	
static/blocks-media/icons/control_forever.svg	4.67 kB	[emitted]	
static/blocks-media/icons/control_repeat.svg	1.99 kB	[emitted]	
static/blocks-media/icons/control_stop.svg	301 bytes	[emitted]	
static/blocks-media/icons/control_wait.svg	1.14 kB	[emitted]	
static/blocks-media/icons/event_broadcast_blue.svg	1.65 kB	[emitted]	
static/blocks-media/icons/event_broadcast_coral.svg	1.66 kB	[emitted]	
static/blocks-media/icons/event_broadcast_green.svg	1.66 kB	[emitted]	
static/blocks-media/icons/event_broadcast_magenta.svg	1.66 kB	[emitted]	
static/blocks-media/icons/event_broadcast_orange.svg	1.66 kB	[emitted]	
static/blocks-media/icons/event_broadcast_purple.svg	1.65 kB	[emitted]	
static/blocks-media/icons/event_when-broadcast-received_blue.svg	1.65 kB	[emitted]	
static/blocks-media/icons/event_when-broadcast-received_coral.svg	1.65 kB	[emitted]	
player.js	7.13 kB	1 [emitted]	player
static/blocks-media/icons/event_when-broadcast-received_magenta.svg	1.66 kB	[emitted]	
static/blocks-media/icons/event_when-broadcast-received_orange.svg	1.66 kB	[emitted]	
static/blocks-media/icons/event_when-broadcast-received_purple.svg	1.65 kB	[emitted]	
static/blocks-media/icons/event_whenflagclicked.svg	634 bytes	[emitted]	
static/blocks-media/icons/set-led_blue.svg	2.04 kB	[emitted]	
static/blocks-media/icons/set-led_coral.svg	2.04 kB	[emitted]	
static/blocks-media/icons/set-led_green.svg	2.04 kB	[emitted]	
static/blocks-media/icons/set-led_magenta.svg	2.04 kB	[emitted]	
static/blocks-media/icons/set-led_mystery.svg	2.96 kB	[emitted]	
static/blocks-media/icons/set-led_orange.svg	2.04 kB	[emitted]	
static/blocks-media/icons/set-led_purple.svg	2.04 kB	[emitted]	
static/blocks-media/icons/set-led_white.svg	2.04 kB	[emitted]	
static/blocks-media/icons/set-led_yellow.svg	2.04 kB	[emitted]	
static/blocks-media/icons/wedo_motor-clockwise.svg	3.75 kB	[emitted]	
static/blocks-media/icons/wedo_motor-counterclockwise.svg	3.73 kB	[emitted]	
static/blocks-media/icons/wedo_motor-speed_fast.svg	4.33 kB	[emitted]	
static/blocks-media/icons/wedo_motor-speed_med.svg	4.35 kB	[emitted]	
static/blocks-media/icons/wedo_motor-speed_slow.svg	4.36 kB	[emitted]	
static/blocks-media/icons/wedo_when-distance_close.svg	4.75 kB	[emitted]	
static/blocks-media/icons/wedo_when-tilt-backward.svg	4.91 kB	[emitted]	
static/blocks-media/icons/wedo_when-tilt-forward.svg	4.93 kB	[emitted]	
static/blocks-media/icons/wedo_when-tilt-left.svg	3.65 kB	[emitted]	
static/blocks-media/icons/wedo_when-tilt-right.svg	3.66 kB	[emitted]	
static/blocks-media/icons/wedo_when-tilt.svg	4.11 kB	[emitted]	
static/blocks-media/repeat.svg	1.24 kB	[emitted]	
static/blocks-media/rotate-left.svg	1.06 kB	[emitted]	
static/blocks-media/rotate-right.svg	1.06 kB	[emitted]	
static/blocks-media/sprites.png	4.15 kB	[emitted]	
static/blocks-media/sprites.svg	1.77 kB	[emitted]	
static/blocks-media/zoom-in.svg	634 bytes	[emitted]	
static/blocks-media/zoom-out.svg	582 bytes	[emitted]	
static/blocks-media/zoom-reset.svg	501 bytes	[emitted]	
static/blocks-media/dropdown-arrow.svg	569 bytes	[emitted]	
static/extensions/example-extension.js	9.99 kB	[emitted]	
extension-worker.js	43.4 kB	[emitted]	
extension-worker.js.map	41.7 kB	[emitted]	
[0] ./node_modules/react/index.js	190 bytes	{3} [built]	
[16] ./node_modules/react-dom/index.js	1.36 kB	{3} [built]	
[27] (webpack)-dev-server/client?http://0.0.0.0:8601	7.95 kB	{3} [built]	

```
[33] ./node_modules/url/url.js 23.3 kB {3} [built]
[36] ./src/lib/app-state-hoc.jsx 1.86 kB {3} [built]
[47] ./src/containers/gui.jsx 5.71 kB {3} [built]
[132] multi (webpack)-dev-server/client?http://0.0.0.0:8601 react react-dom 52 bytes {3} [built]
[150] ./node_modules/react/cjs/react.development.js 55.3 kB {3} [built]
[166] multi (webpack)-dev-server/client?http://0.0.0.0:8601 ./src/index.jsx 40 bytes {0} [built]
[167] ./src/index.jsx 1 kB {0} [built]
[459] ./src/index.css 1.2 kB {0} [built]
[461] multi (webpack)-dev-server/client?http://0.0.0.0:8601 ./src/examples/blocks-only.jsx 40 bytes {2} [built]
[462] ./src/examples/blocks-only.jsx 1.88 kB {2} [built]
[465] multi (webpack)-dev-server/client?http://0.0.0.0:8601 ./src/examples/player.jsx 40 bytes {1} [built]
[466] ./src/examples/player.jsx 5.49 kB {1} [built]
+ 454 hidden modules
Child html-webpack-plugin for "index.html":
  1 asset
    [0] ./node_modules/html-webpack-plugin/lib/loader.js!./src/index.ejs 627 bytes {0} [built]
    [1] ./node_modules/lodash/lodash.js 540 kB {0} [built]
    [2] (webpack)/buildin/global.js 488 bytes {0} [built]
    [3] (webpack)/buildin/module.js 495 bytes {0} [built]
Child html-webpack-plugin for "blocks-only.html":
  1 asset
    [0] ./node_modules/html-webpack-plugin/lib/loader.js!./src/index.ejs 627 bytes {0} [built]
    [1] ./node_modules/lodash/lodash.js 540 kB {0} [built]
    [2] (webpack)/buildin/global.js 488 bytes {0} [built]
    [3] (webpack)/buildin/module.js 495 bytes {0} [built]
Child html-webpack-plugin for "player.html":
  1 asset
    [0] ./node_modules/html-webpack-plugin/lib/loader.js!./src/index.ejs 627 bytes {0} [built]
    [1] ./node_modules/lodash/lodash.js 540 kB {0} [built]
    [2] (webpack)/buildin/global.js 488 bytes {0} [built]
    [3] (webpack)/buildin/module.js 495 bytes {0} [built]
webpack: Compiled successfully.
```