

Exam 1 - HttpProxy

ID	Author	Date
2017303024	Zhang Chunxu	Sat 16 Nov 2019

Key point

1. used **thread pool** to implement multi-thread operations.
2. used **strategy design pattern** to reduce maintenance difficulty, and clear the code.
3. used **builder design pattern** to keep `HttpRequest` and `HttpResponse` constant, and provide flexible build process.
4. defined **HTTP status** name and corresponding code.
5. considered **robustness**.

How to run

Run

```
java -jar HttpProxy.jar  
# or you want to run on another port  
java -jar HttpProxy.jar 1080
```

Note

1. Most browser use HTTP/1.1 as default HTTP version. If you want this proxy can support HTTP/1.1, you can uncomment the code in `HttpHandler.java` on 94 and 95 lines.

Demo shootscreen

The terminal window on the left shows the output of a Java program. The output is a long string of hexadecimal characters, which is a base64 encoded message. The message, when decoded, reads: "祝贺我校李贺军教授，校友罗琦 张平、向锦武教授当选中国工程院院士".

The web browser on the right shows the Northwest University of Science and Technology website. The banner features Professor Luo Qi and other faculty members. Below the banner is a table of network requests.

Time	Method	Domain	File	Size	Type	Transferred	100%
0.666	script	js	6.10 KB	6.10 KB			
0.666	script	js	698 B	729 B			
0.666	script	js	716 KB	28.5 KB			
0.666	script	js	1.81 KB	3.27 KB			
0.666	img	gif	277 B	0 B			
0.666	img	png	3.07 KB	2.73 KB			
0.666	img	header.png	3.06 KB	2.73 KB			
0.666	img	yaoguo.png	14.93 KB	14.5 KB			
0.666	img	body.jpg	32.08 KB	31.7 KB			
0.666	img	01.png	3.79 KB	3.45 KB			
0.666	img	02.png	3.44 KB	3.10 KB			
0.666	img	10.png	17.31 KB	16.5 KB			
0.666	img	11.png	15.97 KB	15.2 KB			
0.666	img	12.png	1.40 KB	1.2 KB			