

Tasks:

1. Download JMeter: The first thing you need to download is JMeter. You can download the latest version of JMeter from its official website, <http://jmeter.apache.org>
2. Create a test plan: Open JMeter and create a new test plan named "Lab7".
3. Test the website <http://demo.opencart.com> with the following requirements:
 - Simulate 10 people to perform the operation, and repeat 5 times
 - Simulated user login: <http://demo.opencart.com/index.php?route=account/login>
 - The simulated user waits for 100 milliseconds
 - Simulate the user browsing the product: http://demo.opencart.com/index.php?route=product/product&product_id=43
 - The simulated user waits for 300 milliseconds
 - Simulated user exit: <http://demo.opencart.com/index.php?route=account/logout>
4. Use cmd to execute the test plan and generate the web page
5. Choose another website to test similar design, for example: <https://www.demoblaze.com>、<https://www.phptravels.net>

Requirements for the experiment:

1. Finish the tasks above individually.
2. Post your experiment report to “智慧树”, the following information should be included in your report:
 - Screenshot of Jmeter successfully opened 1
 - Screenshot of Thread Group 1
 - Three screenshots of the HTTP request 1
 - Screenshot of the entire test plan sequence 1
 - Screenshot of web page 1
 - A test plan for another website 1
 - Screenshot of Thread Group 1
 - Screenshot of the HTTP request 1
 - Screenshot of the entire test plan sequence 1
 - Screenshot of web page 1

Submission deadline:

23:59 April 19, 2023.

1.install and open jmeter

Download

- Download Releases
- Release Notes

Documentation

- Get Started
- User Manual
- Best Practices
- Component Reference
- Functions Reference
- Properties Reference
- Change History
- Javadocs
- JMeter Wiki
- FAQ (Wiki)

Tutorials

- Distributed Testing
- Recording Tests
- JUnit Sampler
- Access Log Sampler
- Extending JMeter

Community

- Issue Tracking
- Security

we recommend you use a mirror to download our release builds, but you **must** [verify the integrity](#) of the downloaded files using signatures downloaded from our main distribution directories. Recent releases (48 hours) may not yet be available from all the mirrors.

You are currently using <https://dlcdn.apache.org/>. If you encounter a problem with this mirror, please select another mirror. If all mirrors are failing, there are *backup* mirrors (at the end of the mirrors list) that should be available.

Other mirrors:

The [KEYS](#) link links to the code signing keys used to sign the product. The [PGP](#) link downloads the OpenPGP compatible signature from our main site. The [SHA-512](#) link downloads the sha512 checksum from the main site. Please [verify the integrity](#) of the downloaded file.

For more information concerning Apache JMeter, see the [Apache JMeter](#) site.

[KEYS](#)

Apache JMeter 5.5 (Requires Java 8+)

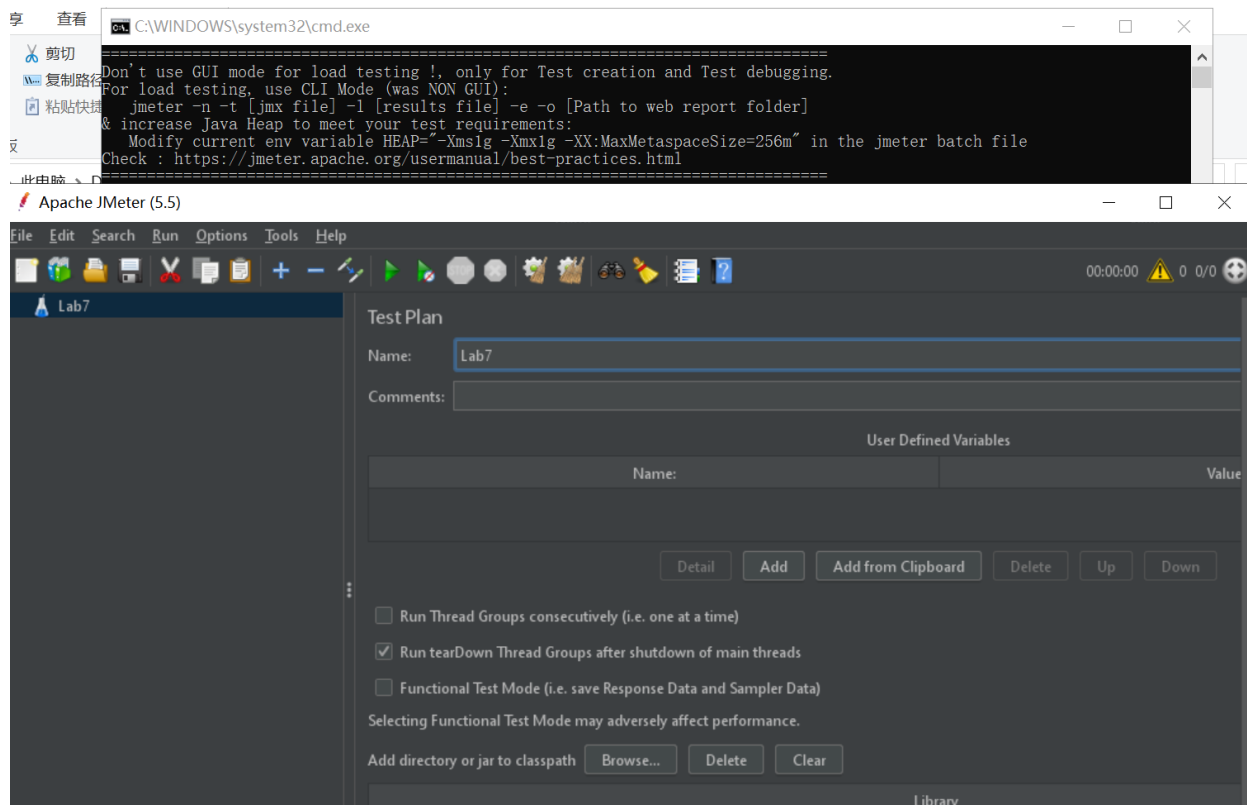
Binaries

[apache-jmeter-5.5.tgz sha512 pgp](#)
[apache-jmeter-5.5.zip sha512 pgp](#)

在官网下载jmeter并且解压。

Jmeter >	apache-jmeter-5.5 >	bin	
名称	修改日期	类型	大小
BeanShellListeners.bshrc	1980/2/1 0:00	BSHRC 文件	2 KB
BeanShellSampler.bshrc	1980/2/1 0:00	BSHRC 文件	3 KB
create-rmi-keystore.bat	1980/2/1 0:00	Windows 批处理文件	2 KB
create-rmi-keystore.sh	1980/2/1 0:00	Shell Script	2 KB
hc.parameters	1980/2/1 0:00	PARAMETERS 文件	2 KB
heapdump.cmd	1980/2/1 0:00	Windows 命令脚本	2 KB
heapdump.sh	1980/2/1 0:00	Shell Script	1 KB
jaas.conf	1980/2/1 0:00	CONF 文件	2 KB
jmeter	1980/2/1 0:00	文件	9 KB
jmeter.bat	1980/2/1 0:00	Windows 批处理文件	9 KB
jmeter.log	2022/11/1 12:54	文本文件	0 KB

在bin目录下点击jmeter.bat运行。

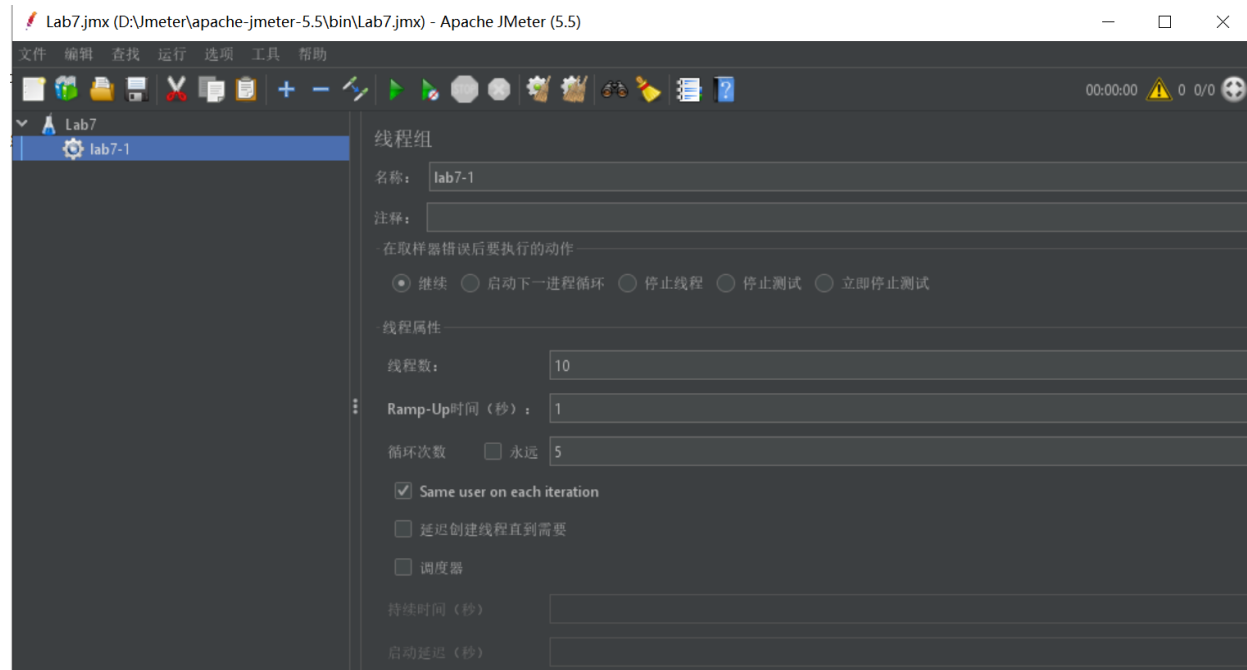


2.Test website1

2.1 设置线程组

在“lab7-1”线程组中，设置以下值：

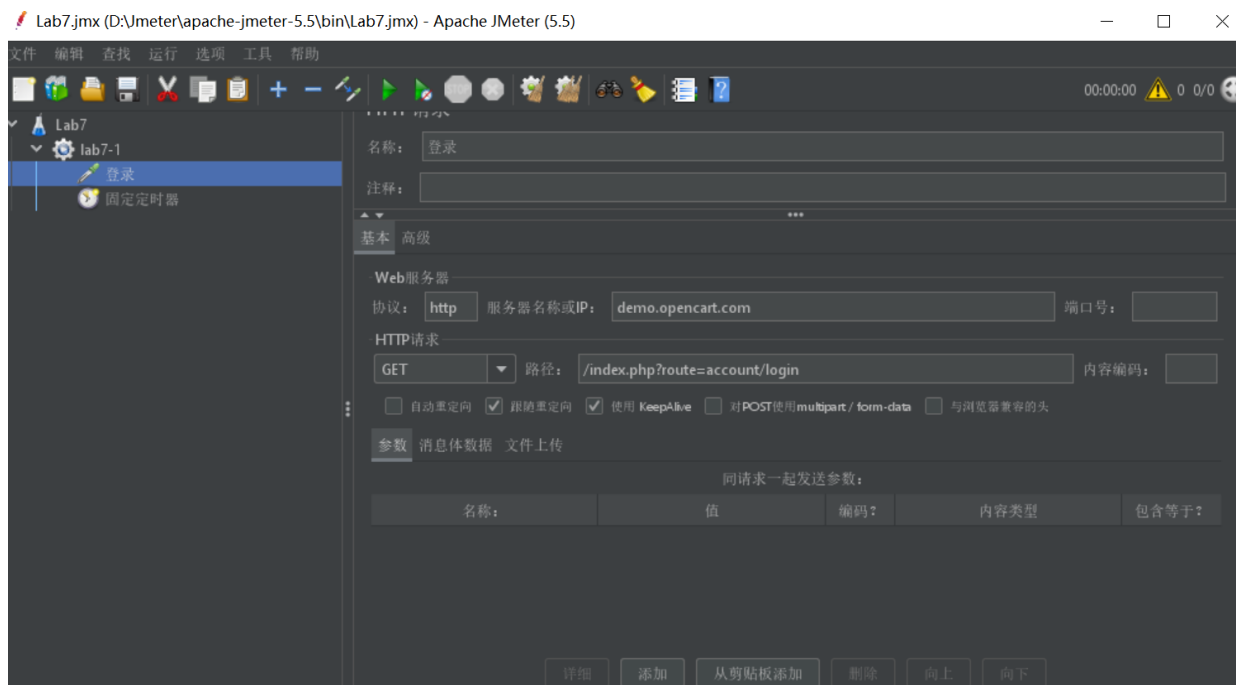
- 线程数（用户）：10
- 循环次数：5



2.2 设置http请求

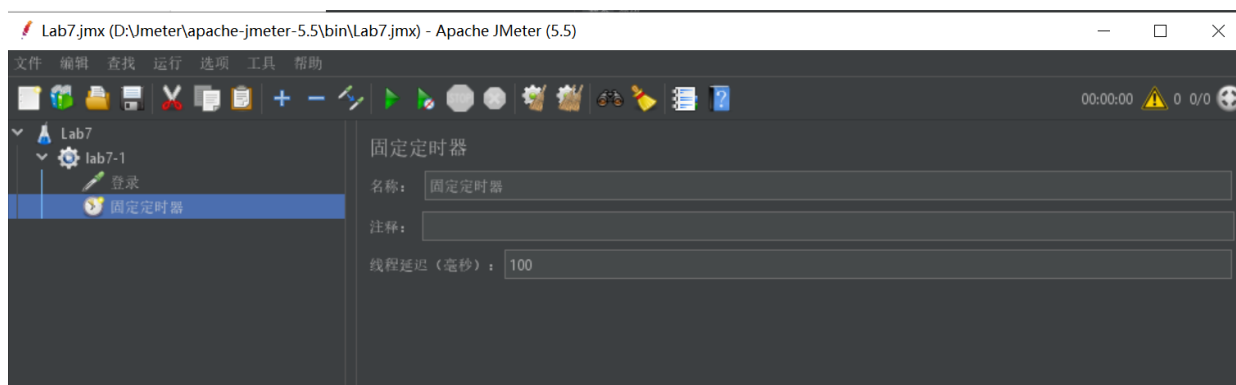
为登录页面配置HTTP请求采样器：

- 名称：“登录”
- 协议：“http”
- 服务器名称或IP：“demo.opencart.com”
- 路径：“/index.php?route=account/login”



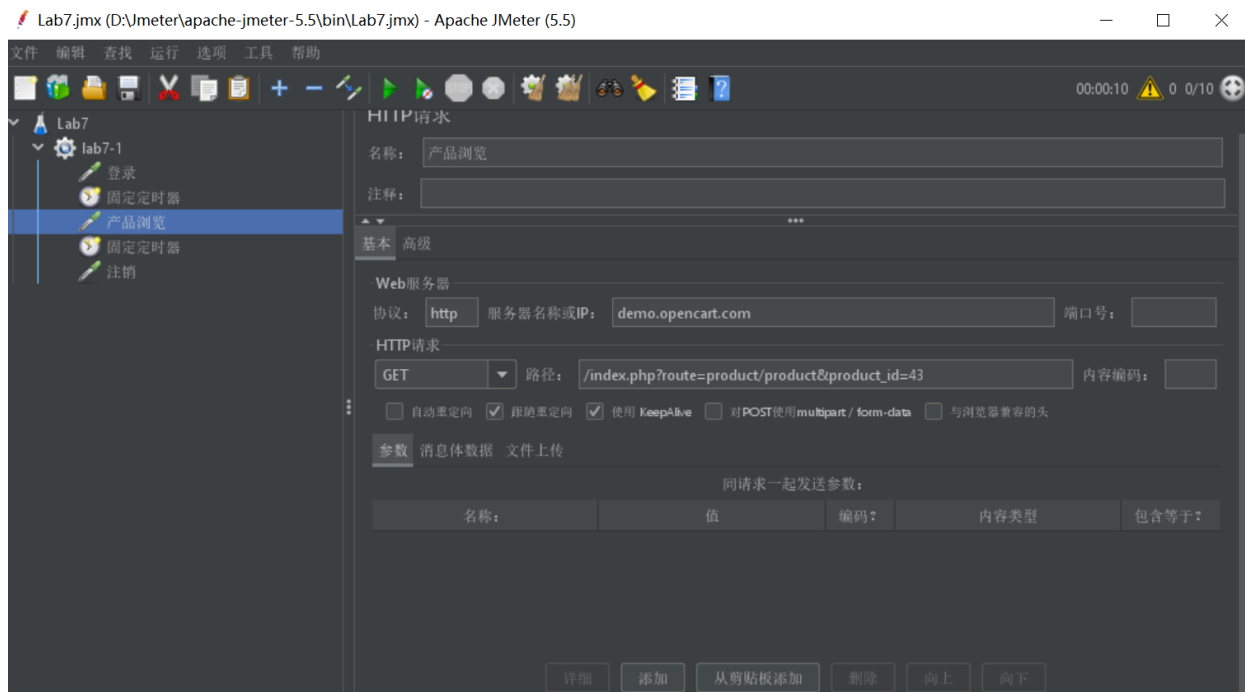
添加“固定定时器”模拟100ms等待：

- 选择“添加”->“定时器”->“固定定时器”。
- 设置“线程延迟（以毫秒为单位）”：100

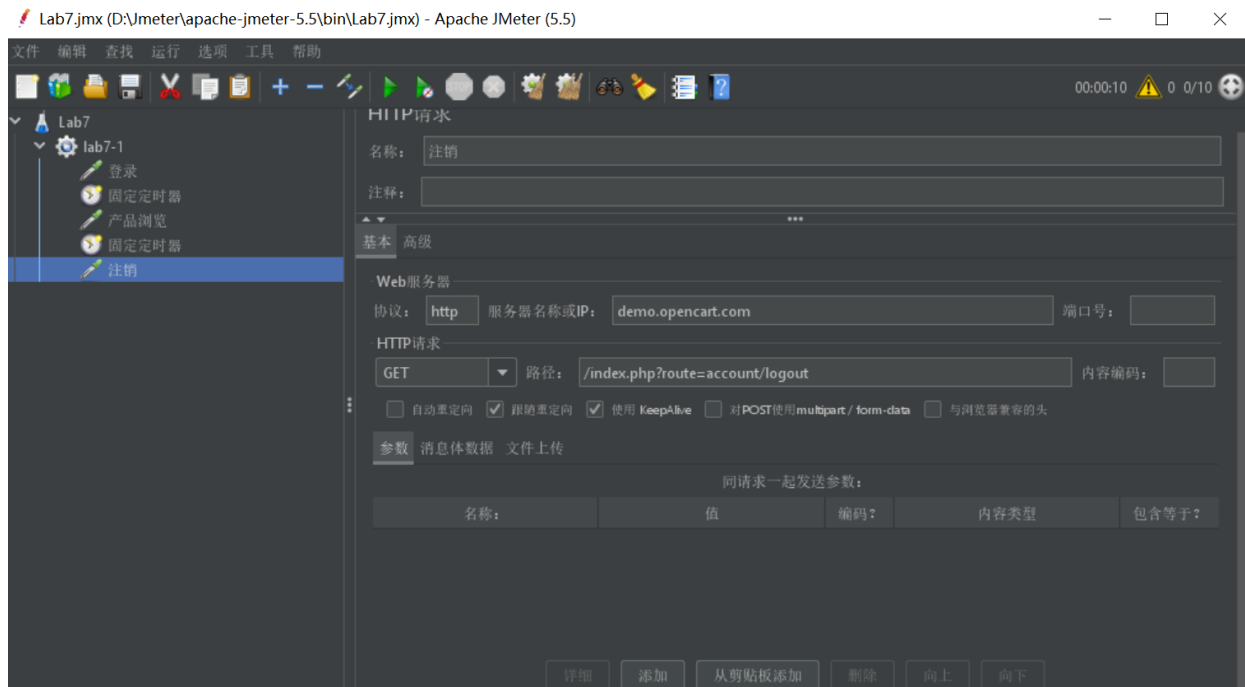


重复，为产品浏览和注销操作调整路径和定时器：

- 产品浏览：
 - 路径：“/index.php?route=product/product&product_id=43”
 - 定时器：300ms



- 注销:
 - 路径: “/index.php?route=account/logout”
 - 无需定时器，因为这是最后一个操作。



整个测试流程如下：



2.3 执行测试计划并生成网页

使用cmd执行测试计划并生成网页：

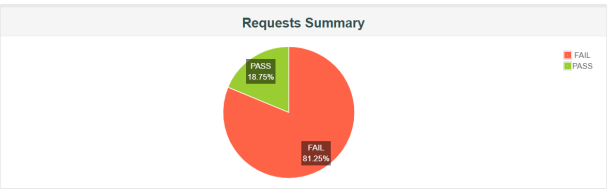
- a. 打开命令提示符（cmd），使用“cd”命令导航到Jmeter的“bin”目录。

```
cd D:\Jmeter\apache-jmeter-5.5\bin
```

- b. 运行以下命令以执行测试计划并生成HTML报告：

```
jmeter -n -t D:\Jmeter\apache-jmeter-5.5\bin\Lab7.jmx -l D:\Jmeter\logs\results1.jtl -e -o D:\Jmeter\report\report1
```

APDEX (Application Performance Index)			
Apdex	T (Toleration threshold)	F (Frustration threshold)	Label
0.071	500 ms	1 sec 500 ms	Total
0.000	500 ms	1 sec 500 ms	产品浏览-1
0.000	500 ms	1 sec 500 ms	登录
0.000	500 ms	1 sec 500 ms	注销
0.000	500 ms	1 sec 500 ms	产品浏览
0.200	500 ms	1 sec 500 ms	登录-1
0.750	500 ms	1 sec 500 ms	登录-0
1.000	500 ms	1 sec 500 ms	产品浏览-0



Statistics																
Requests		Executions			Response Times (ms)								Throughput		Network (KB/sec)	
Label	#Samples	FAIL	Error %	Average	Min	Max	Median	90th pct	95th pct	99th pct	Transactions/s	Received	Sent			
Total	176	143	81.25%	290.66	47	2702	52.00	1343.50	1916.05	2556.47	19.14	49.92	3.14			
产品浏览	50	50	100.00%	67.00	47	318	51.00	57.00	313.90	318.00	8.27	3.76	1.43			
产品浏览-0	3	0	0.00%	265.67	261	270	266.00	270.00	270.00	270.00	11.11	5.31	1.81			
产品浏览-1	3	3	100.00%	49.67	48	52	49.00	52.00	52.00	52.00	52.63	22.46	8.58			
注销	50	50	100.00%	52.64	47	69	51.00	61.70	65.90	69.00	8.44	3.60	1.25			
登录	50	40	80.00%	462.74	47	2702	51.00	2218.50	2459.65	2702.00	6.05	25.99	1.07			
登录-0	10	0	0.00%	449.70	316	650	462.00	638.90	650.00	650.00	7.34	3.39	1.08			
登录-1	10	0	0.00%	1659.40	1101	2310	1763.00	2274.60	2310.00	2310.00	4.21	81.22	0.62			

Errors			
Type of error	Number of errors	% in errors	% in all samples
429/Too Many Requests	143	100.00%	81.25%

Top 5 Errors by sampler														
Sample	#Samples	#Errors	Error	#Errors	Error	#Errors	Error	#Errors	Error	#Errors	Error	#Errors	Error	#Errors
Total	176	143	429/Too Many Requests	143										
产品浏览	50	50	429/Too Many Requests	50										
产品浏览-1	3	3	429/Too Many Requests	3										
注销	50	50	429/Too Many Requests	50										
登录	50	40	429/Too Many Requests	40										

从以上结果不难得出：

- 总请求数（Total）：共发出了176个请求。
- 错误请求数（Total Errors）：共有143个请求出错，错误率为81.25%。
- 错误类型：主要的错误类型是HTTP 429（Too Many Requests），表明服务器因为收到过多的请求而拒绝响应。

测试中几乎所有的请求都受到了HTTP 429错误的影响，表明服务器在短时间内收到了太多的请求。当前的测试计划可能对服务器施加了过大的压力，导致服务器无法正常响应。

3.Test website2

3.1 创建测试计划

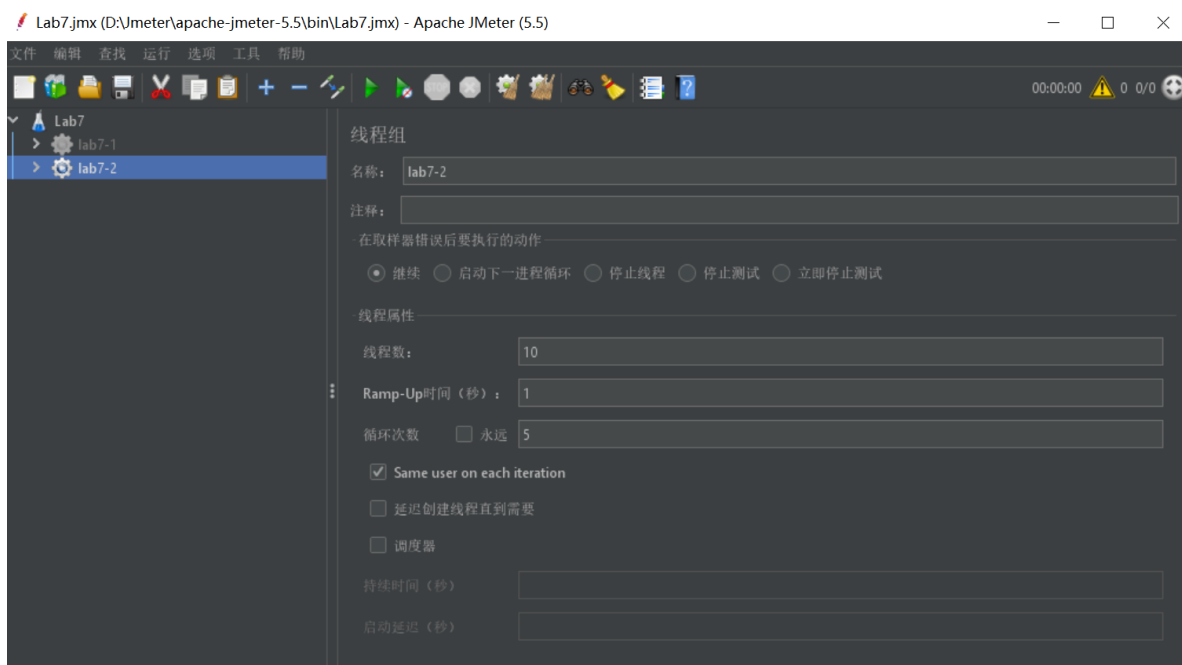
Test the website <https://www.demoblaze.com> with the following requirements:

- Simulate 10 people to perform the operation, and repeat 5 times
- Simulated home page: <https://www.demoblaze.com>
- The simulated user waits for 200 milliseconds
- Simulate the user browsing the product: <https://www.demoblaze.com/prod.html?idp=1>
- The simulated user waits for 200 milliseconds
- Simulated user browsing the cart: <https://www.demoblaze.com/cart.html>

3.2 设置线程组

在“Lab7-2”线程组中，设置以下值：

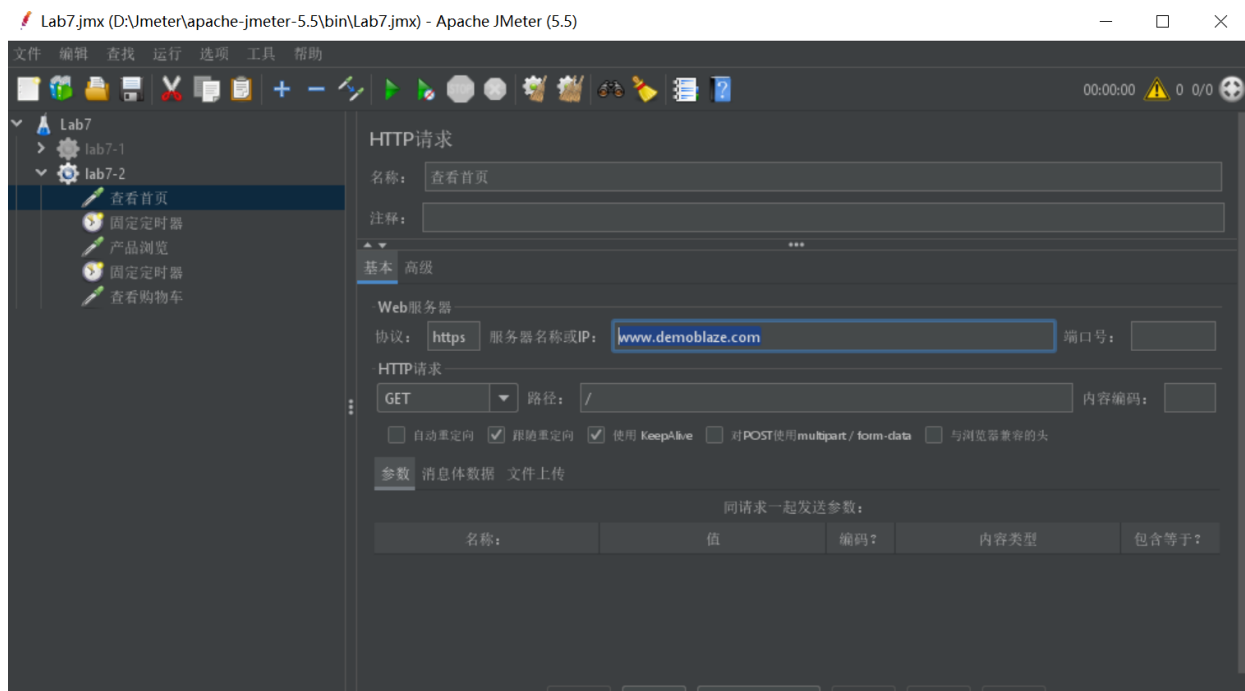
- 线程数（用户）：10
- 循环次数：5



3.3 设置http请求

为登录页面配置HTTP请求采样器：

- 名称：“查看首页”
- 协议：“https”
- 服务器名称或IP：“www.demoblaze.com”
- 路径：“/”



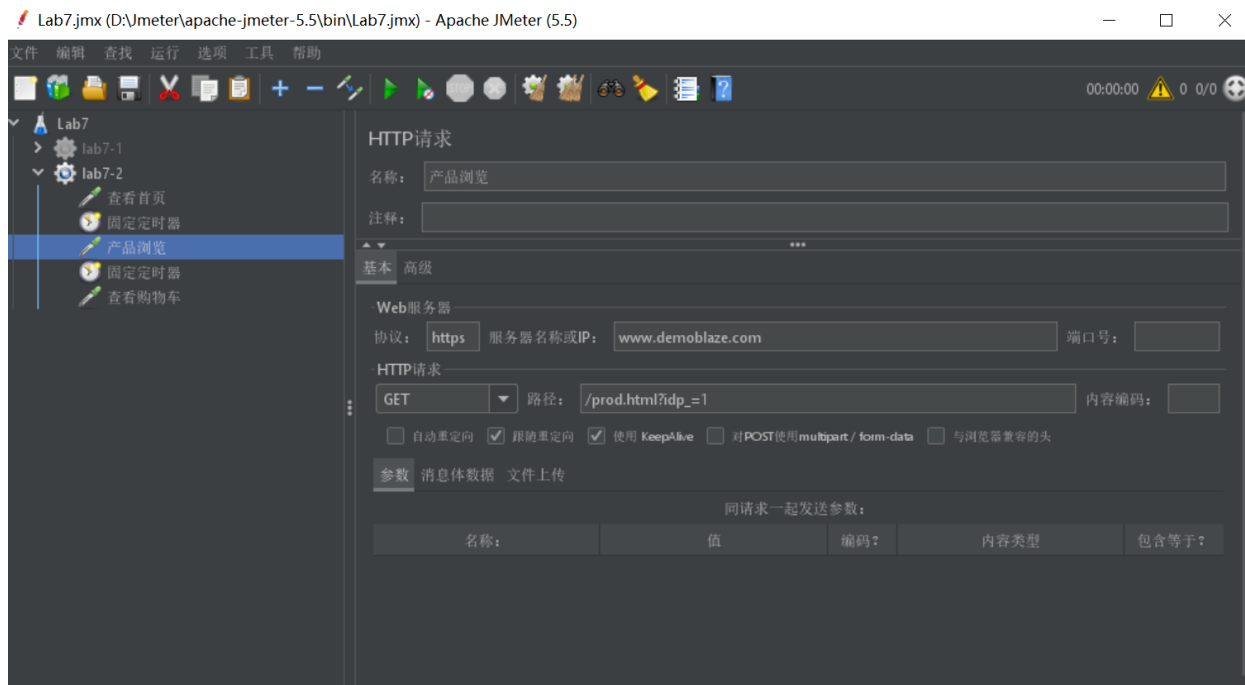
添加“固定定时器”以在查看首页后模拟200ms等待：

- 选择“添加”->“定时器”->“固定定时器”。
- 设置“线程延迟（以毫秒为单位）”：200

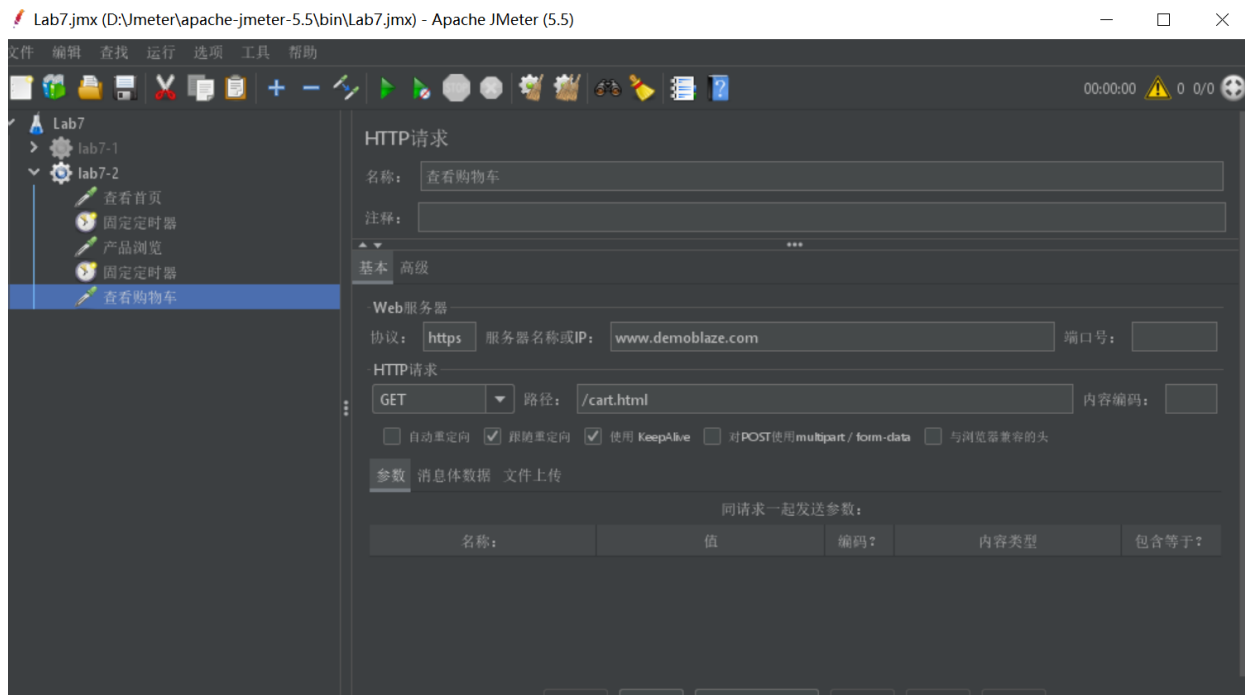


重复，为产品浏览和查看购物车调整路径和定时器：

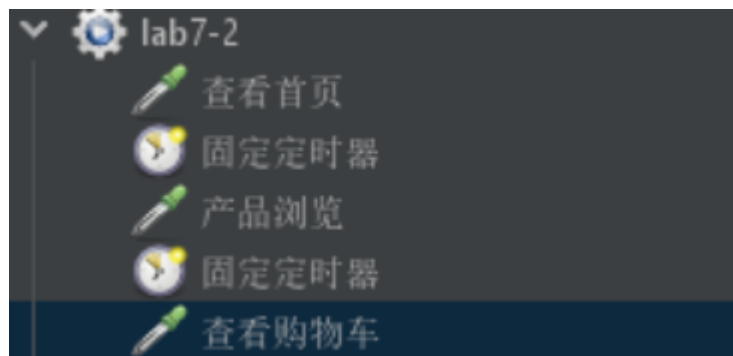
- 产品浏览：
 - 路径：“/prod.html?idp=1”
 - 定时器：200ms



- 查看购物车:
 - 路径: "/cart.html"



整个测试流程如下:



3.4 执行测试计划并生成网页

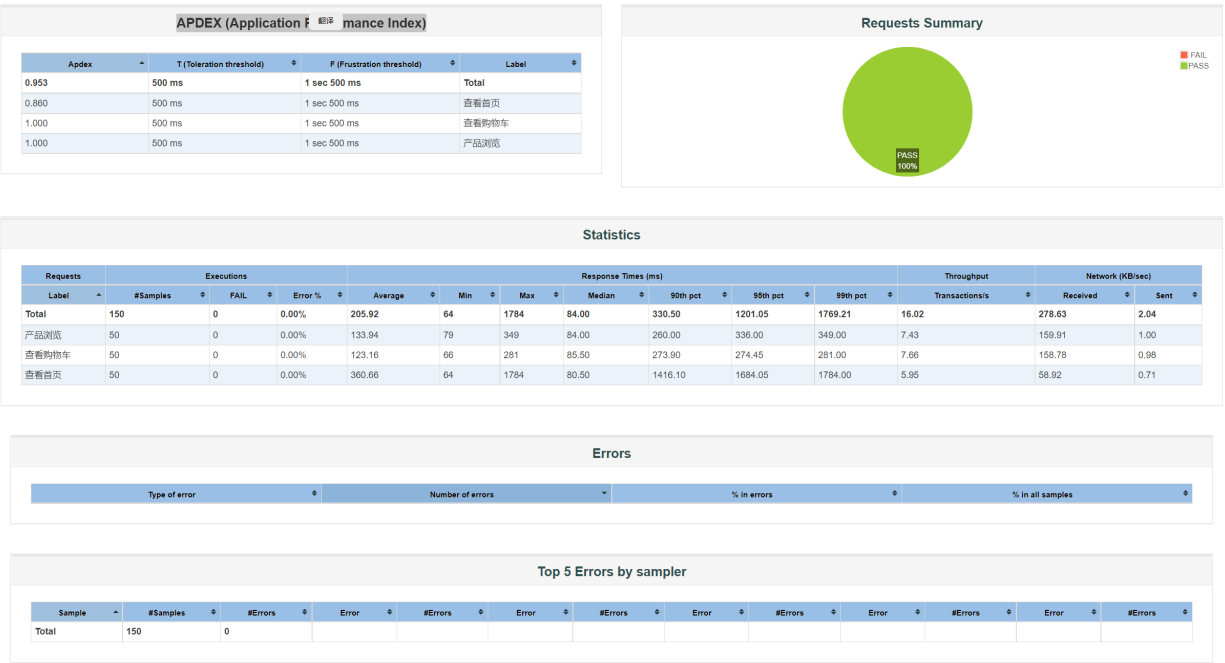
使用cmd执行测试计划并生成网页：

- a. 打开命令提示符（cmd），使用“cd”命令导航到Jmeter的“bin”目录。

```
cd D:\Jmeter\apache-jmeter-5.5\bin
```

- b. 运行以下命令以执行测试计划并生成HTML报告：

```
jmeter -n -t D:\Jmeter\apache-jmeter-5.5\bin\Lab7.jmx -l D:\Jmeter\logs\results2.jtl -e -o D:\Jmeter\report\report2
```



- 总请求数（Total）：共发出了150个请求。
- 错误请求数（Total Errors）：没有请求出错，错误率为0.00%。

从这次测试结果来看，测试计划成功完成，没有发生任何错误。服务器能够在短时间内处理请求并保持较高的响应速度。这表明该网站服务器性能较好，能够在测试的负载条件下正常运行。