

Semaphore 实现信号灯 -JAVA

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原文链接: <https://ld246.com/article/1577803924252>

来源网站: [链滴](#)

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<pre> <code class="highlight-chroma"> <span class="highlight-line"> <span class="highlight-cl">  
</span> </span> </code> </pre>
```

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<p>package com.yhm.testSpringMvc.Thread;</p>  
<p>import java.util.Random;<br>  
import java.util.concurrent.ExecutorService;<br>  
import java.util.concurrent.Executors;<br>  
import java.util.concurrent.Semaphore;</p>  
<p>public class SemaphoreTest {</p>  
<pre> <code class="highlight-chroma"> <span class="highlight-line"> <span class="highlight-cl">  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> ExecutorService  
executorService = Executors.newCachedThreadPool();  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> Semaphore se  
aphore = new Semaphore(3);  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> for (int i = 0; i &  
&t; 999; i++) {  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> executorServ  
ce.submit(new Runnable() {  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> @Override  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> public void  
run() {  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> int time  
= new Random().nextInt(9999);  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> try {  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> sema  
aphore.acquire();  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> } catch ( <  
&nterruptedException e) {  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> e.prin  
StackTrace();  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> }  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> try {  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> Threa  
.sleep(time);  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> } catch ( <  
&nterruptedException e) {  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> e.prin  
StackTrace();  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> }  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> System.  
out.println(Thread.currentThread().getName() + "_睡眠了" + time);  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> semaph  
ore.release();  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> }  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> });  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> }  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> }  
</span> </span> <span class="highlight-line"> <span class="highlight-cl"> executorService  
shutdown();  
</span> </span> <span class="highlight-line"> <span class="highlight-cl">
```

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</span></span><span class="highlight-line"><span class="highlight-cl">}
</span></span></code></pre>
<p></p>
<pre><code class="highlight-chroma"><span class="highlight-line"><span class="highlight
cl">执行结果:
</span></span></code></pre>
<p>D:\JAVA\jdk8_64\bin\java -agentlib:jdwp=transport=dt_socket,address=127.0.0.1:58069,
uspend=y,server=n -javaagent:C:\Users\Lenovo.IntelliJ\Idea2017.3\system\captureAgent\deb
gger-agent.jar=C:\Users\Lenovo\AppData\Local\Temp\capture11664.props -Dfile.encoding=
TF-8 -classpath "D:\JAVA\jdk8_64\jre\lib\charsets.jar;D:\JAVA\jdk8_64\jre\lib\deploy.jar;D:\JA
A\jdk8_64\jre\lib\ext\access-bridge-64.jar;D:\JAVA\jdk8_64\jre\lib\ext\clldrdata.jar;D:\JAVA\jd
8_64\jre\lib\ext\dnsns.jar;D:\JAVA\jdk8_64\jre\lib\ext\jaccess.jar;D:\JAVA\jdk8_64\jre\lib\ext\jfr
rt.jar;D:\JAVA\jdk8_64\jre\lib\ext\localedata.jar;D:\JAVA\jdk8_64\jre\lib\ext\nashorn.jar;D:\JA
A\jdk8_64\jre\lib\ext\sunec.jar;D:\JAVA\jdk8_64\jre\lib\ext\sunjce_provider.jar;D:\JAVA\jdk8_6
\jre\lib\ext\sunmscapi.jar;D:\JAVA\jdk8_64\jre\lib\ext\sunpkcs11.jar;D:\JAVA\jdk8_64\jre\lib\ext\
t\zipfs.jar;D:\JAVA\jdk8_64\jre\lib\javaws.jar;D:\JAVA\jdk8_64\jre\lib\jce.jar;D:\JAVA\jdk8_64\jr
\lib\jfr.jar;D:\JAVA\jdk8_64\jre\lib\jfxswt.jar;D:\JAVA\jdk8_64\jre\lib\jsse.jar;D:\JAVA\jdk8_64\jr
\lib\management-agent.jar;D:\JAVA\jdk8_64\jre\lib\plugin.jar;D:\JAVA\jdk8_64\jre\lib\resourc
s.jar;D:\JAVA\jdk8_64\jre\lib\rt.jar;D:\ideaPros\codeGitee\ACM\target\classes;D:\repo\junit\junit
4.12\junit-4.12.jar;D:\repo\org\hamcrest\hamcrest-core\1.3\hamcrest-core-1.3.jar;D:\repo\ja
ax\servlet\servlet-api\2.5\servlet-api-2.5.jar;D:\repo\org\springframework\spring-core\4.2.5.RE
LEASE\spring-core-4.2.5.RELEASE.jar;D:\repo\commons-logging\commons-logging\1.2\com
ons-logging-1.2.jar;D:\repo\org\springframework\spring-beans\4.2.5.RELEASE\spring-beans-4
2.5.RELEASE.jar;D:\repo\org\springframework\spring-context\4.2.5.RELEASE\spring-context-4.
5.RELEASE.jar;D:\repo\org\springframework\spring-aop\4.2.5.RELEASE\spring-aop-4.2.5.RELE
SE.jar;D:\repo\org\springframework\spring-expression\4.2.5.RELEASE\spring-expression-4.2.5.RELEASE.jar;D:\repo\org\springframe
ork\spring-tx\4.2.5.RELEASE\spring-tx-4.2.5.RELEASE.jar;D:\repo\org\springframework\spring
web\4.2.5.RELEASE\spring-web-4.2.5.RELEASE.jar;D:\repo\org\springframework\spring-webm
c\4.2.5.RELEASE\spring-webmvc-4.2.5.RELEASE.jar;D:\repo\org\springframework\spring-test\4
2.5.RELEASE\spring-test-4.2.5.RELEASE.jar;D:\repo\org\slf4j\slf4j-log4j12\1.6.6\slf4j-log4j12-1.
6.jar;D:\repo\org\slf4j\slf4j-api\1.6.6\slf4j-api-1.6.6.jar;D:\repo\log4j\log4j\1.2.17\log4j-1.2.17.
ar;D:\repo\cglib\cglib-nodep\3.2.2\cglib-nodep-3.2.2.jar;D:\repo\org\aspectj\aspectjweaver\1
7.4\aspectjweaver-1.7.4.jar;D:\repo\com\alibaba\dubbo\2.5.3\dubbo-2.5.3.jar;D:\repo\org\spr
ngframework\spring\2.5.6.SEC03\spring-2.5.6.SEC03.jar;D:\repo\org\javassist\javassist\3.15.0
GA\javassist-3.15.0-GA.jar;D:\repo\org\jboss\netty\netty\3.2.5.Final\netty-3.2.5.Final.jar;D:\ch
ngxu\intelliJ\IDEA\IntelliJ IDEA 2017.3.5\lib\idea_rt.jar" com.yhm.testSpringMvc.Thread.Semap
oreTest<br>
Connected to the target VM, address: '127.0.0.1:58069', transport: 'socket'<br>
pool-1-thread-6_睡眠了 1945<br>
pool-1-thread-5_睡眠了 204<br>
pool-1-thread-1_睡眠了 3311<br>
pool-1-thread-2_睡眠了 4171<br>
pool-1-thread-7_睡眠了 5469<br>
pool-1-thread-4_睡眠了 8175<br>
pool-1-thread-3_睡眠了 6203<br>
pool-1-thread-10_睡眠了 3853<br>
pool-1-thread-9_睡眠了 5954<br>
pool-1-thread-8_睡眠了 7652<br>
pool-1-thread-11_睡眠了 8733<br>
pool-1-thread-12_睡眠了 7894<br>
pool-1-thread-13_睡眠了 9047<br>
pool-1-thread-14_睡眠了 6079<br>
pool-1-thread-15_睡眠了 4987<br>
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pool-1-thread-16_睡眠了 7699<br>
pool-1-thread-18_睡眠了 4287<br>
pool-1-thread-19_睡眠了 2121<br>
pool-1-thread-17_睡眠了 8863<br>
pool-1-thread-20_睡眠了 5647<br>
pool-1-thread-22_睡眠了 5091<br>
pool-1-thread-23_睡眠了 4330<br>
pool-1-thread-21_睡眠了 9225<br>
pool-1-thread-25_睡眠了 1597<br>
pool-1-thread-26_睡眠了 2666<br>
pool-1-thread-27_睡眠了 2710<br>
pool-1-thread-24_睡眠了 7631<br>
pool-1-thread-30_睡眠了 3075<br>
pool-1-thread-29_睡眠了 7822<br>
pool-1-thread-28_睡眠了 8538<br>
pool-1-thread-32_睡眠了 3205<br>
pool-1-thread-33_睡眠了 3575<br>
pool-1-thread-31_睡眠了 8938<br>
pool-1-thread-35_睡眠了 5823<br>
pool-1-thread-37_睡眠了 1192<br>
pool-1-thread-36_睡眠了 4203<br>
pool-1-thread-34_睡眠了 8229<br>
pool-1-thread-39_睡眠了 1466<br>
pool-1-thread-40_睡眠了 2624<br>
pool-1-thread-42_睡眠了 1775<br>
pool-1-thread-38_睡眠了 5461<br>
pool-1-thread-41_睡眠了 4901<br>
pool-1-thread-44_睡眠了 3605<br>
pool-1-thread-43_睡眠了 5416<br>
pool-1-thread-47_睡眠了 1754<br>
pool-1-thread-48_睡眠了 261<br>
pool-1-thread-46_睡眠了 7617<br>
pool-1-thread-45_睡眠了 5976<br>
pool-1-thread-49_睡眠了 3919<br>
cpool-1-thread-52_睡眠了 3054<br>
pool-1-thread-53_睡眠了 1236</p>
<pre> <code class="highlight-chroma"> </code> </pre>
```