



链滴

# 多线程快速入门

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原文链接: <https://ld246.com/article/1558579756345>

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## 多线程创建方式

- 1、继承Thread类 重写run方法
- 2、实现Runnable接口,重写run方法
- 3、使用匿名内部类方式

### 使用继承Thread类还是使用实现Runnable接口好?

使用实现Runnable接口好, 原因实现了接口还可以继续继承, 继承了类不能再继承。

### 启动线程是使用调用start方法还是run方法?

开始执行线程 注意 开启线程不是调用run方法, 而是start方法

调用run只是调用实例方法。

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font-size:9.0000pt;mso-font-kerning:1.0000pt;">常用线程</span></b><b><span style="mso
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一个新的 <font face="Calibri">Thread</font> <font face="宋体">对象</font> </span><span
tyle="font-family:Calibri;mso-fareast-font-family:宋体;mso-bidi-font-family:'Times New Roman
;
font-size:9.0000pt;mso-font-kerning:1.0000pt;"><o:p></o:p></span></p></td></tr></tbo
y></table>
```

## 多线程运行状态



### (一) 新建状态

当用new操作符创建一个线程时，例如new Thread(r)，线程还没有开始运行，此时线程处在新建状态。当一个线程处于新生状态时，程序还没有开始运行线程中的代码

### (二) 就绪状态

一个新创建的线程并不自动开始运行，要执行线程，必须调用线程的start()方法。当线程对象调用start()方法即启动了线程，start()方法创建线程运行的系统资源，并调度线程运行run()方法。当start()方法回后，线程就处于就绪状态。

处于就绪状态的线程并不一定立即运行run()方法，线程还必须同其他线程竞争CPU时间，只有获得CPU时间才可以运行线程。因为在单CPU的计算机系统中，不可能同时运行多个线程，一个时刻仅有一个程处于运行状态。因此此时可能有多个线程处于就绪状态。对多个处于就绪状态的线程是由Java运行系统的线程调度程序(thread scheduler)来调度的。

### (三) 运行状态

当线程获得CPU时间后，它才进入运行状态，真正开始执行run()方法。

### (四) 阻塞状态

线程运行过程中，可能由于各种原因进入阻塞状态：

- 1> 线程通过调用sleep方法进入睡眠状态；
- 2> 线程调用一个在I/O上被阻塞的操作，即该操作在输入输出操作完成之前不会返回到它的调用者；
- 3> 线程试图得到一个锁，而该锁正被其他线程持有；
- 4> 线程在等待某个触发条件；

### (五) 死亡状态



有两个原因会导致线程死亡：

1> run方法正常退出而自然死亡，

2> 一个未捕获的异常终止了run方法而使线程猝死。

为了确定线程在当前是否存活着（就是要么是可运行的，要么是被阻塞了），需要使用isAlive方法。果是可运行或被阻塞，这个方法返回true；如果线程仍旧是new状态且不是可运行的，或者线程死了，则返回false。