

13-2-24

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## Deadlock

```
class A {
    synchronized void foo (B b) {
        String name = Thread.currentThread().getName();
        System.out.println(name + "entered A.foo");
        try {
            Thread.sleep(10000);
        }
        catch (Exception e) {
            System.out.println("A Interrupted");
        }
        System.out.println(name + "trying to call B.last()");
        b.last();
    }

    void last() {
        System.out.println("Inside A.last");
    }
}

class B {
    synchronized void bar (A a) {
        String name = Thread.currentThread().getName();
        System.out.println(name + "entered B.bar");
        try {
            Thread.sleep(10000);
        }
        catch (Exception e) {
            System.out.println("B Interrupted");
        }
        System.out.println(name + "trying to call A.last()");
        a.last();
    }
}
```

```
void last() {
    System.out.println("Inside A.last");
}
```

```
}
class Deadlock implements Runnable {
    A a = new A();
    B b = new B();
```

```
    Deadlock() {
        Thread.currentThread().setName("MainThread");
        Thread t = new Thread(this, "Racing Thread");
        t.start();
        a.last();
        System.out.println("Back in main thread");
    }
```

```
    public void run() {
        b.bar(a);
        System.out.println("Back in main other thread");
    }
```

```
    public static void main(String args[]) {
        new Deadlock();
    }
}
```

Output:

MainThread entered A.foo

RacingThread entered B.bar

MainThread trying to call B.last()

Inside A.last

Back in main thread

RacingThread trying to call A.last()

Inside A.last

Back in other thread

*[Signature]*  
13.02.24

Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

```
PS C:\Users\BMSCE\Desktop\1bm22cs195> Javac Deadlock.java
```

```
PS C:\Users\BMSCE\Desktop\1bm22cs195> Java Deadlock
```

```
MainThread entered A.foo
```

```
RacingThread entered B.bar
```

```
MainThread trying to call B.last()
```

```
Inside A.last
```

```
Back in main thread
```

```
RacingThread trying to call A.last()
```

```
Inside A.last
```

```
Back in other thread
```

```
PS C:\Users\BMSCE\Desktop\1bm22cs195> ^S
```