JAVA LAB PROGRAM-10

Demonstrate Inter process Communication and deadlock.

Code:

```
class A {
        synchronized void foo(B b) {
                String name = Thread.currentThread().getName();
                System.out.println(name + " entered A.foo");
                try {
                        Thread.sleep(1000);
                }
                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(1000);
                }
                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 B.last");
        }
}
class Deadlock implements Runnable {
        A a = new A();
        B b = new B();
        Deadlock() {
                Thread.currentThread().setName("MainThread");
                Thread t = new Thread(this, "RacingThread");
                t.start();
                a.foo(b);
                System.out.println("Back in main thread");
        }
        public void run() {
                b.bar(a);
                System.out.println("Back in other thread");
        }
        public static void main(String args[]) {
                System.out.println("Name: Akshay S, USN: 1BM23CS022");
                new Deadlock();
        }
}
```

Output:

```
D:\2nd year\Java>javac Deadlock.java

D:\2nd year\Java>java Deadlock
Name: Akshay S, USN: 1BM23CS022
MainThread entered A.foo
RacingThread entered B.bar
MainThread trying to call B.last()
Inside B.last
Back in main thread
RacingThread trying to call A.last()
Inside A.last
Back in other thread
```