13/2/24

Quick Work
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M T W T F S S

Lab 10 (B)

Demonstrate Deadlock.

```
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 Interrup
                               ted");
        }
        System.out.println(name + " trying
                           to call B.last()");
        b.last();
    }
    System.out.println(name + "finished
                       executing A.foo");
}
synchronized 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();
  }
  System.out.println(name + " finished
                executing B.bar");
}
```

```
synchronized 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,
            "Racing Thread");
        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[])
{
    new Deadlock();
}
}
```

O/p:

```
MainThread entered A.foo
RacingThread entered B.bar
RacingThread trying to call A.last()
MainThread trying to call B.last()
Inside A.last
Back in mainThread
RacingThread trying to call A.last()
Inside A.last
Back in Other thread.
```

13/2/2024