

Program 11:

Demonstrate Inter process Communication and deadlock.

```
class printer{
    String str;
    printer()
    {
        str="";
    }
    synchronized void print(String str)
    {
        System.out.print "["+str);
        try {
            Thread.sleep(1000);
        } catch (InterruptedException e)
        {
            System.out.println("Error occurred");
        }
        try {
            System.out.println("]");
            Thread.sleep(1000);
        } catch (InterruptedException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }

    }
}

class SampleThread implements Runnable
{

```

```

String msg;
printer pt;
Thread t;
public SampleThread(printer pr,String message)
{
    pt=pr;
    msg=message;
    t=new Thread(this);
    t.start();
}

@Override
public void run() {
    // TODO Auto-generated method stub
    pt.print(msg);
}

}

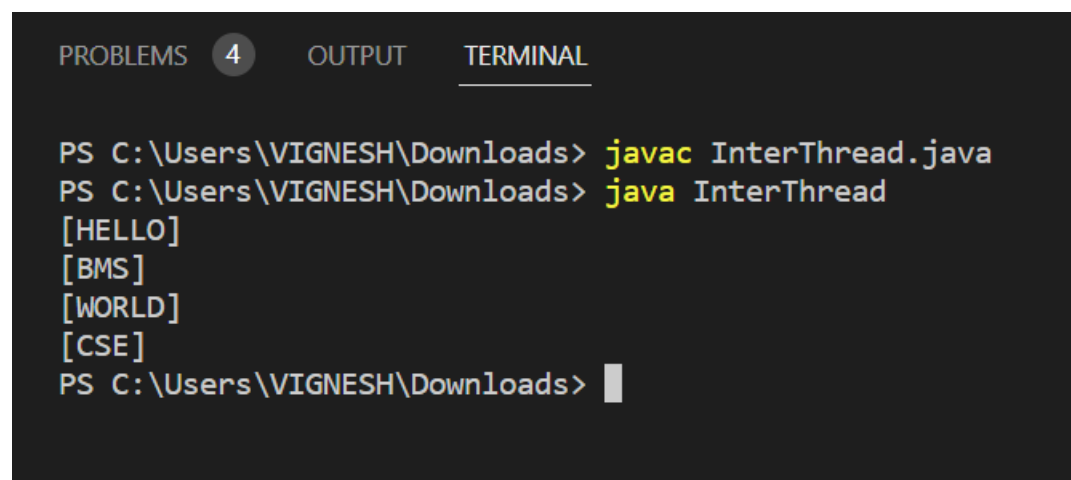
public class InterThread {
    public static void main(String[] args) {
        printer pt=new printer();
        SampleThread s1=new SampleThread(pt,"HELLO");
        SampleThread s2=new SampleThread(pt,"CSE");
        SampleThread s3=new SampleThread(pt,"WORLD");
        SampleThread s4=new SampleThread(pt,"BMS");

        try {
            s1.t.join();
            s2.t.join();
            s3.t.join();

```

```
        s4.t.join();
    } catch (InterruptedException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}
}
```

OUTPUT:



The screenshot shows an IDE interface with a dark theme. At the top, there are tabs for 'PROBLEMS', '4', 'OUTPUT', and 'TERMINAL'. The 'TERMINAL' tab is active and underlined. The terminal window displays the following commands and output:

```
PS C:\Users\VIGNESH\Downloads> javac InterThread.java
PS C:\Users\VIGNESH\Downloads> java InterThread
[HELLO]
[BMS]
[WORLD]
[CSE]
PS C:\Users\VIGNESH\Downloads> 
```