**ASSIGNMENT NO:06-Group B**

Name:Mrunal R Somankar

Roll No:TCOA46

import java.util.concurrent.Semaphore;

import java.util.\*;

public class ReaderWriter {

static Semaphore mutex =new Semaphore(1);

static Semaphore wrt=new Semaphore(1);

static int readCount=0;

static String message="Hello";

static Scanner SC=new Scanner(System.in);

static class Reader implements Runnable

{

public void run()

{

try{

mutex.acquire();

readCount++;

if(readCount==1){

wrt.acquire();

}

mutex.release();

System.out.println("Thread "+Thread.currentThread().getName()+" is Reading :"+message);

Thread.sleep(1500);

System.out.println("Thread "+Thread.currentThread().getName()+" has FINISHED READING");

mutex.acquire();

readCount--;

if(readCount==0){

wrt.release();

}

mutex.release();

}

catch(InterruptedException e){

System.out.println(e.getMessage());

}

}

}

static class Writer implements Runnable

{

public void run()

{

try

{

wrt.acquire();

message="Good morning";

System.out.println("Thread "+Thread.currentThread().getName()+" is Writing: "+message);

Thread.sleep(1500);

System.out.println("Thread "+Thread.currentThread().getName()+" has finished WRITING");

wrt.release();

}

catch(InterruptedException e)

{

System.out.println(e.getMessage());

}

}

}

public static void main(String []args) throws Exception{

Reader read=new Reader();

Writer write=new Writer();

Thread r1=new Thread(read);

r1.setName("Reader1");

Thread r2=new Thread(read);

r2.setName("Reader2");

Thread r3=new Thread(read);

r3.setName("Reader3");

Thread w1=new Thread(write);

w1.setName("Writer1");

Thread w2=new Thread(write);

w2.setName("Writer2");

Thread w3=new Thread(write);

w3.setName("Writer3");

w1.start();

r1.start();

w2.start();

r2.start();

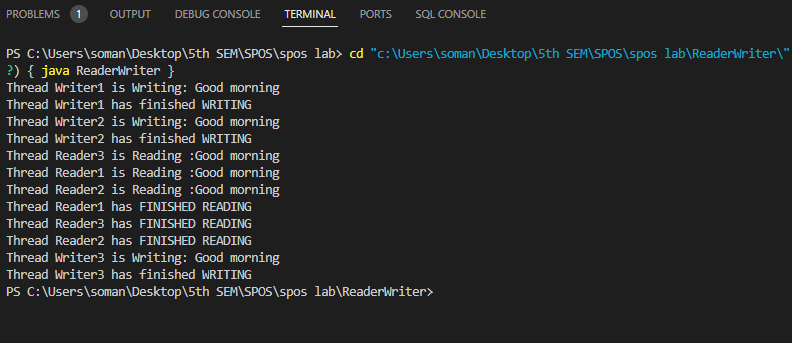
w3.start();

r3.start();

}

}

**Output:**

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