

Mar 17, 09 1:08

**BarberShop.java**

Page 1/1

```

/*****
/
/   filename:  BarberShop.java
/
/   description: This program creates a BarberShop class that solves the Sleepin
g
/               Barber synchronization problem using semaphores.
/
/   author:   Paladino, Zac
/   login id: cps346-01.16
/
/   class:    CPS 346
/   instructor: Perugini
/   assignment: Homework #5
/
/   assigned: March 10, 2009
/   due:      March 17, 2009
/
/*****/

import java.util.concurrent.Semaphore;

class BarberShop {

    Semaphore empty;
    Semaphore mutex;
    int chr;

    BarberShop( int chairs ) {
        mutex = new Semaphore(1);
        empty = new Semaphore(chairs);
        chr = chairs;
    }

    void customerEnters(int id) {
        if(empty.availablePermits() > 0){
            try{empty.acquire();} catch(InterruptedException e) { }
            try {mutex.acquire(); } catch (InterruptedException e) { }
            empty.release();
            service(id);
            mutex.release();
        }
        else{
            System.out.println("Customer " + id + " left");
        }
    }

    private void service(int id) {
        System.out.println ("Customer " + id + " is being serviced.");
        SleepUtilities.nap();
        System.out.println ("Customer " + id + " is done being serviced.");
    }
}

```