import java.io.PrintWriter;

import java.util.concurrent.locks.Condition;

import java.util.concurrent.locks.Lock;

import java.util.concurrent.locks.ReentrantLock;

public class Buffer {

PrintWriter out1;

private int Dstore [];

private String Cstore[];

private int[] storage;

private int fill;

private int bsize;

private static Lock lockstrclr = new ReentrantLock();

private static Condition infostorage = lockstrclr.newCondition();

//Constructor

public Buffer(PrintWriter x) {

out1=x;

fill =0;

storage = new int[30];

Dstore = new int[30];

Cstore = new String[30];

for(int i = 0; i <=29; i++) {

storage[i] = 0;

Dstore[i] = 0;

Cstore[i] = "Blank";

}

}

// return fill

public int getfill() { return fill;}

//print data

public void printdata() {

for(int i = 0; i<=29;i++) {

System.out.println(Cstore[i]+" ["+i+"] = "+Dstore[i]+" ");

}

System.out.flush();

}

//Store Data

public void storedata(String computer, int amt, int value) {

lockstrclr.lock();

try{

while((fill+amt-1)>29)infostorage.await();

out1.println("in storedata amt "+amt+" value "+value+" fill "+fill);

System.out.flush();

out1.flush();

for(int i =fill; i<=fill+amt-1;i++){ Dstore[i] = value; Cstore[i] = computer;}

fill = fill+amt;

System.out.println("\*Addition Done\*");

for(int i =0; i<=fill-1;i++)System.out.println(Cstore[i]+" ["+i+"] ="+Dstore[i]);

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.out.flush();

}

catch(InterruptedException ex){

System.out.println("trouble in cacth in storedata");

ex.printStackTrace();

}

finally{

infostorage.signalAll();

lockstrclr.unlock();

}

}

//Clear Data

public void clearData(String computer,int amt) {

lockstrclr.lock();

try {

System.out.flush();

while(fill<1) infostorage.await();

if(fill-amt-1<0) {

int ifmt=fill-1;

System.out.flush();

for(int i=fill-1;i>=0;i--) {

System.out.flush();

Dstore[i] = 0;

System.out.flush();

}

fill = 0;

}

else {

int ifmt = fill-amt;

int ifmt2=fill-1;

System.out.flush();

for(int i =fill-1;i>=fill-amt;i--) {

System.out.flush();

Dstore[i] =0;

System.out.flush();

}

fill = fill-amt;

System.out.flush();

}

System.out.flush();

}

catch(InterruptedException ex) {

System.out.println("trouble in catch in cleardata");

ex.printStackTrace();

}

finally {

infostorage.signalAll();

lockstrclr.unlock();

}

}

}