1 **import** java.util.Random;

2

3 **public** **class** Consumer **implements** Runnable

4 {

5 **private** Buffer sharedData;

6 **private** **int**[] timesConsumed = **new** int[10];

7 **private** **boolean**[] consumedData = **new** boolean[10];

8

9 **public** Consumer(Buffer sharedData)

10 {

11 **this**.sharedData = sharedData;

12 }

13

14 **public** **void** run()

15 {

16 Random delay = **new** Random();

17 **int** dataItem;

18

19 **for**(int i = 1; i <= 10; i++)

20 {

21 **try**

22 {

23 Thread.sleep(delay.nextInt(10) + 1); **//simulate data fetch**

24 }

25 **catch**(InterruptedException e)

26 {

27 }

28 dataItem = sharedData.getData();

29 System.out.println("Consumed " + dataItem + " <---");

30

31 //record consumed statistics

32 consumedData[dataItem - 1] = true;

33 timesConsumed[dataItem - 1]++;

34 }

35 outputConsumedSummary();

36 }

37

38 **private** **void** outputConsumedSummary() **//outputs final statistics**

39 {

40 **try**

40 {

42 Thread.sleep(5000);

43 }

44 **catch**(InterruptedException e)

45 {

46 }

47 System.out.print("Consumed data: ");

48 **for**(**int** i = 1; i <= 10; i++)

49 {

50 **if**(consumedData[i-1] == true)

51 {

52 System.out.print(" " + i);

53 }

54 }

55 System.out.print("\nTimes consumed:");

56 **for**(**int** i = 1; i <= 10; i++)

57 {

58 **if**(consumedData[i-1] == true)

59 {

60 System.out.print(" " + timesConsumed[i-1]);

61 }

62 }

63 }

64 }

**Figure 14.14 The class Consumer.**