

```
1 #define N 100 /* number of slots in the buffer */  
2 int count = 0; /* number of items in the buffer */
```

```
1 void producer(){  
2     int item;  
3     while(TRUE){  
4         item = produce_item();  
5         if(count == N)  
6             sleep();  
7         insert_item(item);  
8         count++;  
9         if(count == 1)  
10             wakeup(consumer);  
11     }  
12 }
```

```
1 void consumer(){  
2     int item;  
3     while(TRUE){  
4         if(count == 0)  
5             sleep();  
6         item = rm_item();  
7         count--;  
8         if(count == N - 1)  
9             wakeup(producer);  
10        consume_item(item);  
11    }  
12 }
```