Mutual Exclusion Without Busy Waiting

Sleep & Wakeup

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

```c
void producer(){                    void consumer(){
  int item;                           int item;
  while(TRUE){                         while(TRUE){
    item = produce_item();               if(count == 0)
    if(count == N)                         sleep();
      sleep();                           item = rm_item();
    insert_item(item);                   count--;
    count++;                             if(count == N - 1)
    if(count == 1)                         wakeup(producer);
      wakeup(consumer);                  consume_item(item);
  }                                   }
}                                   }
```