```
#include "queue2.h"
#include <stdlib.h>
#include <assert.h>

struct queue
{
  void *element;
  queue next;
};

queue
queue_create(void)
{
  return NULL;
}

queue
queue_enq(queue q, void *element)
{
  if(q == NULL)
    {
      queue temp = malloc(sizeof(struct queue));
      temp -> element = element;
      temp -> next = NULL;
      return temp;
    }
  else
    {
      queue temp = malloc(sizeof(struct queue));
      temp -> element = q -> element;
      temp -> next = queue_enq(q -> next, element);
      return temp;
    }
}
```

```
int
queue_empty(queue q)
{
  return q == NULL;
}

void *
queue_front(queue q)
{
  assert(!queue_empty(q));
  return q -> element;
}

queue
queue_deq(queue q)
{
  assert(!queue_empty(q));
  return q -> next;
}
```