5. Starting from the `queue.h` header of Exercise 1, create a file named `queueADT.h` that defines the following `Queue` type:

   ```
   typedef struct queue_type *Queue;
   ```

   `queue_type` is an incomplete structure type. Create a file named `queueADT.c` that contains the full definition of `queue_type` as well as definitions for all the functions in `queue.h`. Use a fixed-length array to store the items in a queue (see Exercise 3(a)). Create a file named `queueclient.c` (similar to the `stackclient.c` file of Section 19.4) that creates two queues and performs operations on them. Be sure to provide `create` and `destroy` functions for your ADT.

6. Modify Programming Project 5 so that the items in a queue are stored in a dynamically allocated array whose length is passed to the `create` function.

7. Modify Programming Project 5 so that the items in a queue are stored in a linked list (see Exercise 3(b)).