

## 15.8 Exercise: Implementing Pipes with Message Queues

Formulate a specification of a software pipe implementation in terms of message queues. Implement the following functions.

```
pipe_t *pipe_open(void);  
int pipe_read(pipe_t *p, char *buf, int chars);  
int pipe_write(pipe_t *p, char *buf, int chars);  
int pipe_close(pipe_t *p);
```

Design a pipe\_t structure to fit the implementation. Test the implementation as described in Section 15.7.