Test case 1: Schedule and delete

The program displays *«Please enter "s" (schedule), "l" (list), "c" (cancel), "x" (exit)»* to the user. When the user enters **s**, the program prompts them to set an alarm via *«Schedule alarm at which date and time?»*. The user then adds another alarm at a different time. The user wants to delete an alarm, so they first press **l** to list all alarms, and see that their alarm is alarm 0. They then press **c** to cancel an alarm. When asked which alarm to cancel, they answer 0. The program prints *«Remaining alarms»* followed by the list of alarms, which now only shows the second alarm. Then the program returns to the menu. They then press **s** to schedule an alarm in 10 minutes. After 10 minutes pass, only the last alarm goes off, which is the correct behavior.

Test case 2: Schedule and list

First type **s** to schedule. Type in a time (in the near future). Then do the same again, but with a later time. Then type l list alarms, and confirm that two alarms are listed with the correct times. Then wait for the first alarm to go off. You should hear an alarm sound, as well as see the word *«RING»* being printed to the screen. Then you use l again to list, and there should be only 1 element, the latest alarm.

Test case 3: Schedule and exit

First type **s** to schedule. Type in a time (in the near future). Then type **x** to exit the program. Use the ps command to verify that there is still an alarm process running. Wait for the time you scheduled the alarm, and verify that *«RING»* is printed while the alarm sound is played. Then run ps again to verify that the alarm is now killed (no zombies).

Test case 4: Schedule in the past

First type **s** to schedule an alarm, then try to put in a time in the past. The program will disallow this, and print *«Cannot set alarms in the past!»*. Then type **l** to confirm that no alarms have been added. The program should not print, and return to the menu.