

Test 1: Input is a bad message input check. This test shows the program accepting a message until it is the right command input. The following input is a Message Type input.

```
cc new_alarm_cond.c -D_POSIX_PTHREAD_SEMANTICS -lpthread
./a.out
Alarm> Bad command
Bad command
Alarm> WHat ever this is
Bad command
Alarm> Message(1) whatever
Bad command
Alarm> 3 Message(1)
Bad command
Alarm> 3 Message(1) This is the message
Alarm> DISPLAY THREAD CREATED FOR: Message (1) This is the message
Message(1) This is the message
Message(1) This is the message
Message(1) This is the message
█
```

Test 2: The following test shows the cancel message valid input checking and what happens if cancel message is entered when the list is empty. In this case nothing happens.

```
cc new_alarm_cond.c -D_POSIX_PTHREAD_SEMANTICS -lpthread
./a.out
Alarm> Caneel message()
Bad command
Alarm> Cancel:
Bad command
Alarm> Cancel: Message(1)
Alarm>
```

Test 3: Extended above input. Enter a valid Message type with a message. Then the message is deleted as the Cancel message with the right ID is entered. Also, another Cancel message is entered for a non existing message ID, which does nothing.

```
cc new_alarm_cond.c -D_POSIX_PTHREAD_SEMANTICS -lpthread
./a.out
Alarm> Caneel message()
Bad command
Alarm> Cancel:
Bad command
Alarm> Cancel: Message(1)
Alarm> 3 Message(1) This is about to be deleted
Alarm> DISPLAY THREAD CREATED FOR: Message (1) This is about to be deleted
Message(1) This is about to be deleted
Message(1) This is about to be deleted
Message(1) This is about to be deleted

Alarm> Cancel: Message(1)
Alarm> CANCEL: Message(1)
DISPLAY THREAD EXITING: Message(1) This is about to be deleted

Alarm> Cancel: Message(23)
Alarm>
```

Test 4: Message is replaced with a new message.

```
cc new_alarm_cond.c -D_POSIX_PTHREAD_SEMANTICS -lpthread
./a.out
Alarm> 3 Message(1) Message to be replaced
Alarm> DISPLAY THREAD CREATED FOR: Message (1) Message to be replaced
Message(1) Message to be replaced
Message(1) Message to be replaced
Message(1) Message to be replaced

Alarm> 2 Message(1) Replaced with new message
Alarm> MESSAGE CHANGED: Message (1) Replaced with new message
Message (1) Replaced with new message
Message (1) Replaced with new message

Alarm>
```

Test 5: Replaced message is deleted.

```
cc new_alarm_cond.c -D_POSIX_PTHREAD_SEMANTICS -lpthread
./a.out
Alarm> 3 Message(1) Message to be replaced
Alarm> DISPLAY THREAD CREATED FOR: Message (1) Message to be replaced
Message(1) Message to be replaced
Message(1) Message to be replaced
Message(1) Message to be replaced

Alarm> 2 Message(1) Replaced with new message
Alarm> MESSAGE CHANGED: Message (1) Replaced with new message
Message (1) Replaced with new message
Message (1) Replaced with new message

Alarm> Cancel: Message(1)
Alarm> CANCEL: Message(1)
DISPLAY THREAD EXITING: Message(1) Replaced with new message
█
```

Test 6: Supporting a large amount of messages, replacing message 2 and canceling message 1.

```
cc new_alarm_cond.c -D_POSIX_PTHREAD_SEMANTICS -lpthread
./a.out
Alarm> 3 Message(1) Message 1
Alarm> DISPLAY THREAD CREATED FOR: Message (1) Message 1
Message(1) Message 1
Message(1) Message 1
Message(1) Message 1

Alarm> 2 Message(3) Message 3
Alarm> DISPLAY THREAD CREATED FOR: Message (3) Message 3
Message(3) Message 3
Message(3) Message 3

Alarm> 4 Message(4) message 3
Alarm> DISPLAY THREAD CREATED FOR: Message (4) message 3
Message(4) message 3
Message(4) message 3
Message(4) message 3
Message(4) message 3

Alarm> 3 Message(3) Message 3 replaced
Alarm> MESSAGE CHANGED: Message (3) Message 3 replaced
Message (3) Message 3 replaced
Message (3) Message 3 replaced
Message (3) Message 3 replaced

Alarm> Cancel: Message(1)
Alarm> CANCEL: Message(1)
DISPLAY THREAD EXITING: Message(1) Message 1
█
```

Test 6: Everything in one.

```
sachith@sachith-VirtualBox:~/Documents$ make start
cc new_alarm_cond.c -D_POSIX_PTHREAD_SEMANTICS -lpthread
./a.out
Alarm> 3 Meswe werwe
Bad command
Alarm> Cancela ejqwe
Bad command
Alarm> Cancel: qoweiqe
Bad command
Alarm> Cancel: Message(1)
Alarm> 3 Message(1)
Bad command
Alarm> 3 Message(1) This is the message
Alarm> DISPLAY THREAD CREATED FOR: Message (1) This is the message
Message(1) This is the message
Message(1) This is the message
Message(1) This is the message

Alarm> 2 Message(1) This si the message 1 replaced
Alarm> MESSAGE CHANGED: Message (1) THis si the message 1 replaced
Message (1) THis si the message 1 replaced
Message (1) THis si the message 1 replaced

Alarm> 3 Message(2) Another message
Alarm> DISPLAY THREAD CREATED FOR: Message (2) Another message
Message(2) Another message
Message(2) Another message
Message(2) Another message

Alarm> Cancel: Message(1)
Alarm> CANCEL: Message(1)
DISPLAY THREAD EXITING: Message(1) THis si the message 1 replaced

Alarm> Cancel: Message(2)
Alarm> CANCEL: Message(2)
DISPLAY THREAD EXITING: Message(2) Another message
```