

# Assignment 3

## Count down timer

1. Implement a real-time count down timer program using RTAI. Your program starts by asking users to give a number of minutes to be counted. Once users enter the minute, your program starts displaying the remaining time using format: MM:SS where MM is minute digits, which is less than 59 and SS is the second digits. The program keeps counting down until 0:00 is reach then stops.

### Example:

```
Please enter timer minutes: 10 <ENTER>
10.00
9.59
9.58
9.57
.
.
.
.
.
.
.
0.02
0.01
0.00
Time Out!
```

2. Test your program under no other CPU load condition. The timing should be exactly as users specify.
3. Now you have to put stress on your machine by generating CPU load at different utilization(25%, 50%, 75% and 100%) i.e., write programs that requires lots of CPU time, then execute your timer program again under different CPU utilization. Report what you find.

### **\*\* Hint \*\***

The part of your code that deals with timing can be written as a module and loaded into the kernel while the displaying part is run as a normal application (non-realtime). See assignment #2 for an example.