toled (short for toggle orange led) command for part c of the problem set.

Usage:
toled <numseconds>
Example:
toled 1
Turns on orange led if turned off and vice versa after time specified by <numseconds> in seconds.
PDB timer has been used in the implementation. In the shell command function a SVC call is made which in turn initializes PDB timer and for one shot and in PDB interrupt service routine the orange led is turned on or off depending upon its previous state.

setdate command to set time and date.

Usage:
setdate MM/dd/YYYY HH:mm:ss.zzz
Example:
setdate 11/15/2015 14:23:44.325
The date and time are required in MM/dd/YYYY HH:mm:ss.zzz format. The shell command function issues a SVC call which sets current time and date.

date command to display date and time.

Usage:
date
Displays date and time in the following format. The shell command issues a SVC call which returns system's time and date.
The time and date features have been implemented using flex timer which sends interrupt every millisecond. A global counter which represents number of milliseconds elapsed since January 1 midnight, 1900. The global counter is incremented by one in the interrupt service routine and the set timer routine sets initial value of this global counter (global to timer translation unit) and get timer routine returns current time and date based on current value of the counter.

If user has not any set date and time then date command will by default show date and time elapsed since a base date and time which is January 1 midnight, 1900. The base date and time in this case indicates the timestamp at which program started. It's just a design decision I have made instead of reporting error when date is invoked without date and time previously set by user.

The UART2 I/O implementation is interrupt driven as required by part b of the problem set.

Error handling:

Reports error if date is not provided in the prescribed format to the setdate command.