Freescale MQX RTOS Example Guide

Lwlog example

This document explains lwlog example. What to expect from the example and a brief introduction to the API

The example

The application example creates just one task. The task creates lightweight log and logs ten keystroke entries in a lightweight log, then prints out the log.

Running example

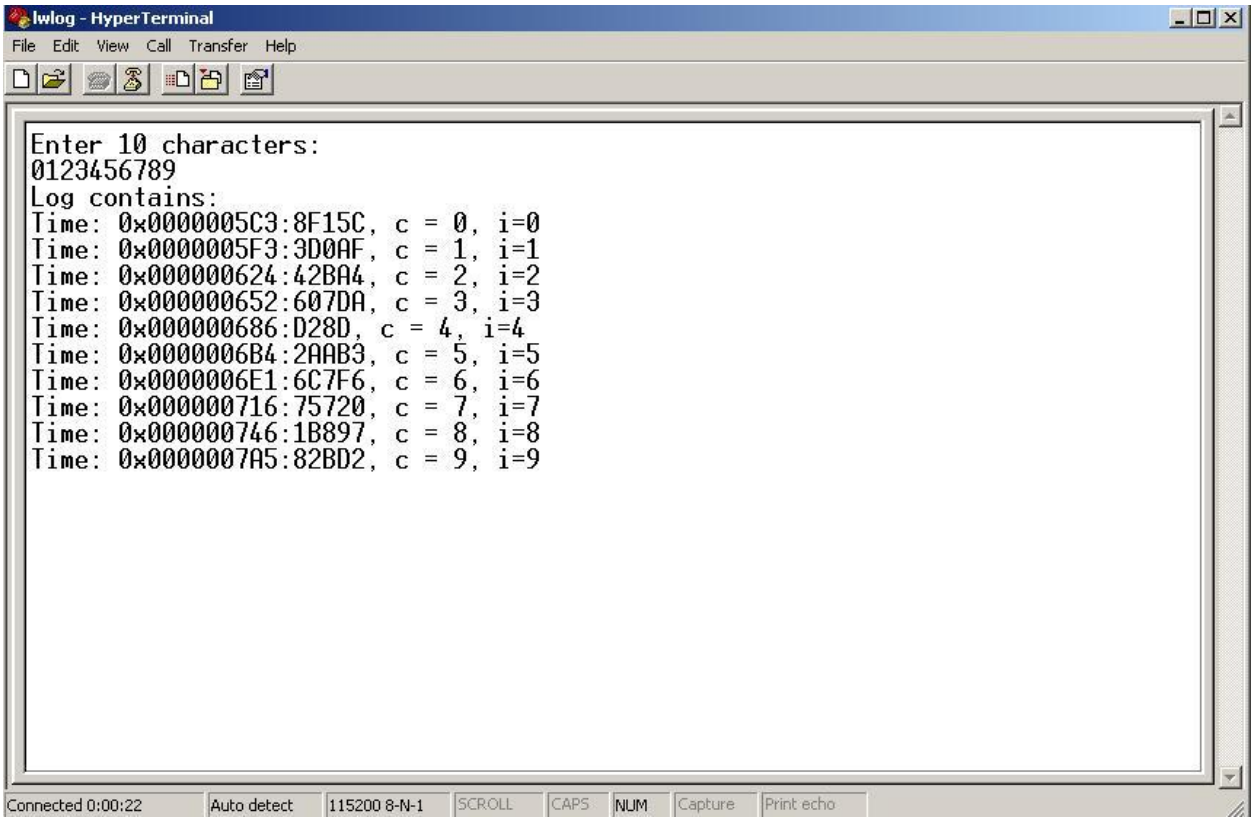
The user only needs to do compilation of MQX libraries, ksdk library and the example without any further step.

To run the example the corresponding IDE, compiler, debugger and a terminal program are needed.

Start a terminal application on your PC and set the serial connection for 115200 baud, 8 data bits, 1 stop bit, no parity and no flow control.

Type 10 characters from keyboard and the terminal will print out the log which consists of log time, characters with respective sequence number.

Example of expected result



Explaining example

The application example creates just one main_task.

The task creates a lightweight log with location which is chosen by MQX.

Then task goes to a for_loop and waits ten characters which are entered by user. Each character will be log with repectively time and sequence number by calling function.

```
_lwlog_write(MY_LOG, (_mqx_max_type)c,(_mqx_max_type)i, 0, 0, 0, 0, 0);
```

After logging ten characters, task goes to a while loop to read and print out the log.

If MQX is not configured at compile time to time stamp in tick, Log time will be print out with format of SECOND, MILISECOND and MICROSECOND by calling following function.

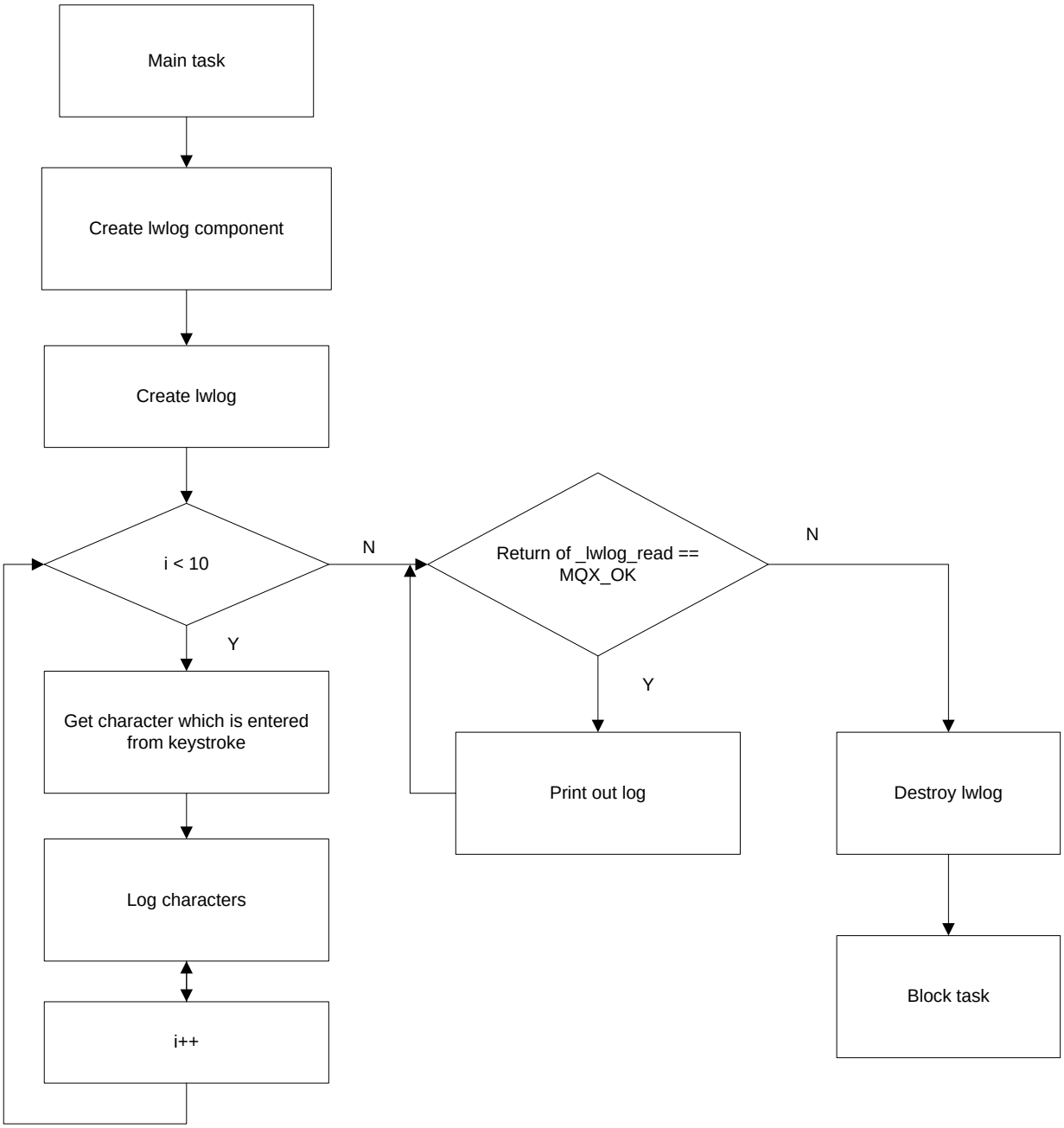
```
printf("%ld.%03ld%03ld", entry.SECONDS, entry.MILLISECONDS,

        entry.MICROSECONDS);
```

If MQX is configured at compile time to time stamp in tick, Log time will be print out with format of tick time.

```
_psp_print_ticks((PSP_TICK_STRUCT_PTR)&entry.TIMESTAMP);
```

Finally, Task destroys the lightweight log and is blocked.

Flow chart


Main task
Create lwlog component
Create lwlog
i < 10
N
Y
Get character which is entered from keystroke
Log characters
i++
Return of _lwlog_read == MQX_OK
N
Y
Print out log
Destroy lwlog
Block task