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PROJECT DETAILS
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NOTE: Refer the "Code-Explanation.doc" for details. Furthermore, the specification.txt must always end with a newline for the code to work.

SETUP OF GALILEO
https://www.dropbox.com/sh/hc7rnxa9pi0gg7n/AACiApOcF4uxnXeLa-H1Mb77a?dl=0&preview=Setting-Up_Galileo_Gen2_2017.pdf
Please refer the following document to setup the Galileo Board, SDK and Serial / Ethernet communiction.

For introduction to Galileo board, refer
https://www.dropbox.com/referrer_cleansing_redirect?hmac=L34fEv3drX5P9quw3zGmY6Wj5k6NNsCdAhFt1j91qE4%3D&url=https%3A%2F%2Fsoftware.intel.com%2Fen-us%2Fget-started-galileo-linux-step1

STEPS TO EXECUTE
1. Please update the xxxxxx.c file with the mouse event no (Line no 7 of the file) by using the following command on your PC.
" cat /proc/bus/input/devices.
Make sure the access to the directory is available to user which is running the code.
Else use "sudo chown -cR username ./dev" to change ownership.

2. Please update the filename of the specification (In this case Specification.txt) on line 449.
2. Execute the code by running the make file.
3. Upon execution, it will give option to choose between PI enabled or not.
4. After the choice has been made, the code runs on its own.
5. Please press Left and Right mouse to test the Aperiodic task threads. It will show "Left click" or "Right click" when ever clicked. This will be followed by "Busy Loop" to show that it is executing the task body as well.
6. For periodic threads, once that "STARTING THREADS" has been shown, the printing of task being done in task body is successful execution.

OUTPUTS TO UNDERSTAND EXECUTION
1. First it creates a LinkedList of struct node as defined on line 41 of the code and prints each line of the thread to confirm that the Linkedlist has been created successfully.
2. Immediately prior to broadcast signal to all threads (line 544) it prints the following
      "-------STARTING THREADS WITH TOTAL PERIOD: %d----------\n", task_period
3. After this it shows the execution of all threads as its done. This is done to track execution order.
4. While the periodic tasks are running, please press Mouse buttons to trigger Aperiodic tasks.
5. Once the Given "task_period" expires, it shows
      "TASK TIME COMPLETE: TERMINATING"
and passes termination command in ToExit() function.
6. Once all threads have ended it shows
      "ALL THREADS TERMINATED"
7. Post this it executes destroy function to free all used memory.

CITATION

TERMINATING TASKS:
https://stackoverflow.com/questions/32079899/linux-c-terminate-multple-threads-after-some-seconds-timer

Refered this code for the termination of threads task. Understood the concept and successfully implemented in my code.

APERIODIC THEADS SIMULTANEOUS EXECUTION
https://wiki.sei.cmu.edu/confluence/display/c/VOID+POS54-C.+Notify+all+POSIX+threads+waiting+on+a+condition+variable+instead+of+a+single+thread