Internet of Things
Computer Science and Engineering
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TinyOS First Homework

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Summary

[*An application which responses to node id of the sender of the packet by three LED provided on the TelosB mote.*]

Description of the Implementation

In the beginning, for each mote, a timer is considered which the duration of the timer depends on the ID of the mote for each node with IDs of one, two, and three the period is 1000ms, 333ms, 200ms respectively. Then by each expiration of the timer one packet with the mote ID and the number of the packet that mote is received as a counter variable will be broadcasted to all the nodes in the range of the more's radio. In the next part, a node which received the packet from the sender will turn on the corresponding LED and then will check the counter value of the sender which was in the packet and if the counter is dividable by the ten then all the LEDs of the mote will be turned off for 2 seconds and also the counter of the node will be stopped from counting the received packets. After two seconds, a timer will bring the mote situation to a normal situation. Implementation is available in Github[1].

Finally, there is two logging option first from the COOJA simulator and the last with GDB which both can utilize by the compile option in the Makefile. Also, the project is based on the master branch of the tiny os in the Github[2] and using the other version, because of the incompatibility in the toolchain will cause compile errors or warnings.

[1] `https://github.com/rahnemoon/IoT-Projects-University`
[2] `https://github.com/tinyos/tinyos-main`