Task: Simple Motion tracking

Goals:

1. To wake up the controller on motion
2. To wake up the controller 1 time in every 5 minutes
3. When woken up pack and store the real-time and Accelerometer values in the RAM
4. Draw the electronics schematics

* Atmel AT89LP3240/6440 or any 8bit controller
* Extreme Low Power RTC Module RV-3028-C7
* 3-Axis Low-g Accelerometer FXLS8962AF

Hand-drawn schematics are enough.

No need to design the power supply unit.

Please add any passive components necessary and substantiate.

1. Develop the firmware in assembler

Define and substantiate controller configurations

Define and substantiate the scheduling

Estimate the memory overflow considering the motion-wakeup occurs on an average 10 times per day.

No need to have a fully working/ tested firmware.

Please use block diagrams/ flow diagram to explain.

Note:

1. Please find the datasheets along with the task.
2. Not mandatory but preferred to have the questions & answers packed and send via git versioning.

Thank you very much for interest.

Wish you good luck.