**Challenge** (qualified as extra work for 5 points, if your hex file works by March 1.

This is a task for those of you who are comfortable in writing codes for uC.

Create FW for testing FRAM wired to IoT board (see your lesson 4):

1. Upon power up the message: “Press W to write data, R - to read” - displayed.

2. Operator pressed W: Message:"Enter a hex byte (from 0x00 to 0xFF)" (from computer).

3. After receiving the hex byte the uC writes it into all FRAM memory locations from 0x0000 to 0x1FFF.

4. After recording is done, the message: "Writing finished, disconnect power" – is shown.

5. After connecting the power back, it starts from lime 0.

6. Operator pressed R: Message: "Enter expected hex byte”.

7. As soon as the byte entered, the uC sends the message: “Reading data from FRAM" and starts reading byte-by-byte the whole FRAM and comparing every read byte with expected byte.

8. If everything finishes OK, the mess age "Test Pass" displayed, if not - the message "Data 0xHH in address 0xHHHH" displayed, and the test stops.