

Name/Semester:

Grade: /5

[1] 0.a) Exercise 1: Default program execution

- Insert break point at the Mainloop line
- Build and execute program ○ Record value of core registers when program stops at the breakpoint

R7 0x0001, R8 0x0002 R9 0x0003, R10 0x0006, SR 0x0000, NZVC 0 0 0 0**[2] 0.b) Exercise 2: Memory**

- manipulation** ○ Soft Reset the micro ○
 Insert break point at LINEB label ○
 Insert break point at LINEC label ○
 Keep the break point at Mainloop line ○
 Run the program so it stops at LINEB ○
 Record Values of the following registers:

R7 0x0000, R8 0x0000, R9 0x0000, R10 0x0000, SR 0x0000, NZVC 0 0 0 0 ○

Using the memory browser, modify the content of following memory locations by manually typing the new values over the initial values (in decimal notation):

▪ 0x0200 = **02**, 0x0202 = **03**,

0x0204 = **10** ○ Run the code, and now

it will stop at LINEC ○ Record the updated values of the registers:

R7 0x0002, R8 0x0003, R9 0x000A, R10 0x0000, SR 0x0000, NZVC 0 0 0 0 ○ Run the code, and now it will stop at Mainloop ○ Record the values again:

R7 0x0002, R8 0x0003, R9 0x000A, R10 0x000F, SR 0x0000, NZVC 0 0 0 0

[2] 0.c) **Exercise 3: Register manipulation** ○ Soft Reset the micro ○ Remove the break points at LINEB and keep the ones at LINEC and Mainloop ○ Execute program to stop at LINEC ○ Record the new values:

R7 0x0001, R8 0x0002, R9 0x0003, R10 0x0000, SR 0x0000,

NZVC 0 0 0 0 ○ Manually modify the contents of Registers as follows:

▪ R7 = **05**, R8 = **01**, R9 = **0** (decimal notation) ○ Run the code till it stops at the last breakpoint, Mainloop ○ Record the new values:

R7 0x0005, R8 0x0001, R9 0x0000, R10 0x0006, SR 0x0000, NZVC 0 0 0 0