Lab 3

1. When using Step over the debugger executes the next instruction and if it is a function call, the debugger will execute the whole function at once while <u>step into</u> lets you go line by line within the function (subroutine).

2. 0x2000'7ffc

3. Yes: 0x00AC

4. 0x2000'7ff0, Stack grows downwards

5. Link register, 0x000802CB

6. 0x0008'02ca

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1. 24-bit Counter => $2^{24}-1 = 16777213$ = max value Systick counter can start counting from.

2. CTRL: 0xE000E010
   LOAD: 0xE000E014
   VAL: 0xE000E018

3. We use EQU directive to define names for register addresses.
   Ex: Systick_CTRL EQU 0xE000E010

4. load value = (Clock source · period) − 1
   12 MHz = $12 \cdot 10^6$ Hz, 2ms = $2 \cdot 10^{-3}$ s => $(12 \cdot 10^6 \cdot 2 \cdot 10^{-3}) - 1 = 23999$

5. Processor clock, external Reference Clock