ARM Cortex M assembly
Assignments – 3

1. Push the contents of registers R0-R5, R14 and PSR on the stack and pop them back into the registers R7-R12, R14 and PSR respectively.

Note: before pushing setup your stack and load some values in registers do the program for both MSP and PSP stack pointers.

2. Assuming that 10 bytes of data is residing at the SRAM location 0x2000 0100 onwards add all the bytes taking into account carry propagation and store the result at 0x2000 0600 location.

3. Perform a block data transfer of 16 bytes from SRAM location 0x2000 0100 onwards into the memory region 0x2000 0200.

4. Write an assembly program for SVC handlers to do the following:

- Before calling the SVC instruction put the processor in thread unprivileged access level with PSP acting as Stack pointer.

- Inside the handler display the exception number in register R0
- Inside the handler disable all hardware interrupts
- Inside the handler re-enable privileged access of thread mode

- Observe the results and note your obervations...