

## **SVC – Handler Assignment**

1. Implement a SVC handler to cater for the following requirements:

- Before calling the SVC exceptions ensure that processor is driven in un-privileged mode of operation with PSP acting as stack pointer and initialize PSP with a valid address.
- SVC 0x01 – Should drive the processor in privilege mode of operation with PSP as stack pointer when it returns back to thread mode.
- SVC 0x02 – Should drive the processor in privilege mode of operation with MSP as stack pointer when it returns back to thread mode.
- SVC 0x03 – Should disable all interrupts temporarily for carrying out critical task; again re-enable interrupts before coming out of the handler. Critical task will be to store the exception number in R0.
- SVC 0x04 - Should disable all interrupts & hard faults temporarily for carrying out error recovery related with faults, re-enable interrupts and exceptions before coming out.

Note: Observe behavior of the processor in terms of stacking, un-stacking operations, LR value and any run-time errors that you encounters while implementing the above SVC handlers. Note down your results/observations and discuss with faculty for clarifications.