

## **ARM Cortex M assembly Assignments - 1**

- 1) Write a program to do 64 -bit unsigned addition using register combination.
- 2) Write a program to do 64- bit unsigned subtraction using register combination.
- 3) Write a program to do 32- bit signed additions and 32 bit signed subtraction and take care if there are overflows.
- 4) Write a program to call two separate subroutines for doing unsigned 32 bit additions & subtraction. Initially load the parameters in registers R0 and R1 before calling subroutine, in subroutines store the result in general purpose register.
- 5) Write a program to call two separate subroutines for doing signed 32 bit additions & subtraction. Initially load the parameters in registers R0 and R1 before calling subroutine, in subroutines store the result in general purpose register.
  
- 6) Write a program to add, subtract, multiply, divide two 32 bit numbers stored in the memory
- 7) Write a program to store a string and convert from lowercase to uppercase
- 8) Write a program to reverse the bytes of word and store into other two registers.  
i.e R0=0x12345678 have to stored as 0x78560000 into R1 and 0x00002143 into R2.
- 9) Write a program to drive the thread mode into unprivileged access level with PSP acting as SP and repeat assignment -1 problem statement.
- 10) Write a program to set 7th bit of memory location 0x20000000 to 1 (make use of alias regionaddress)
  
- 11) Write a program to demonstrate conditional execution using IF- THEN instructions.