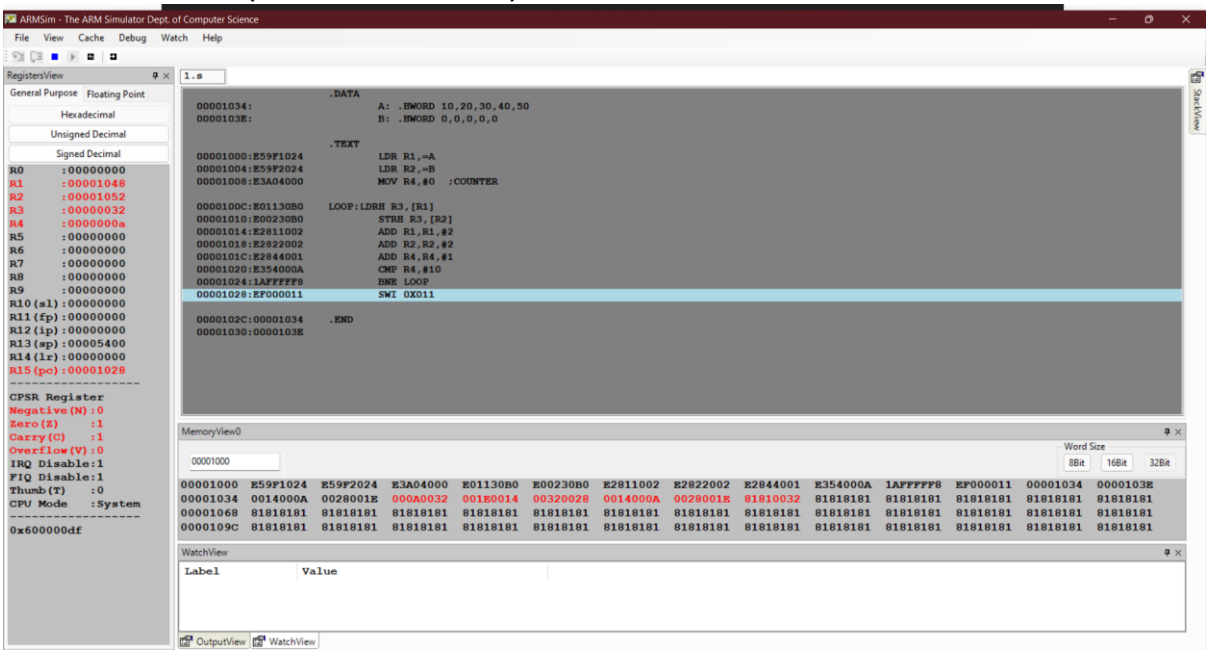
PES UNIVERSITY

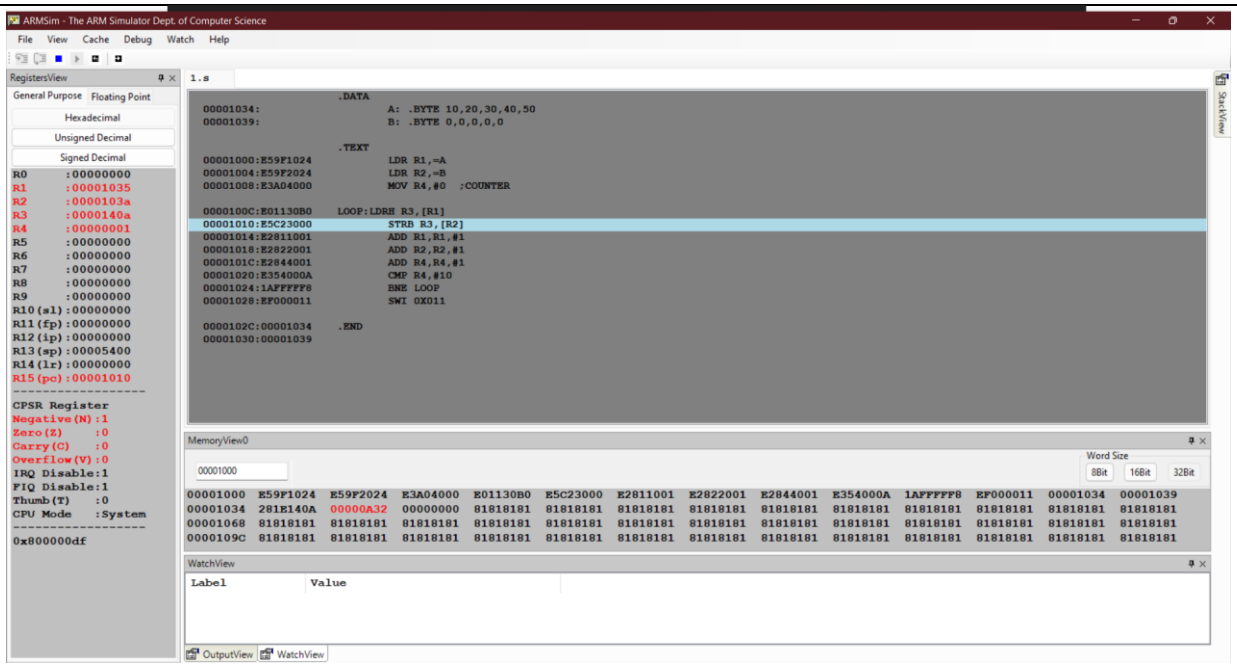
Department of Computer Science & Engineering

Microprocessor & Computer Architecture

MPCA-Laboratory/Assignment/Hands-on/Project

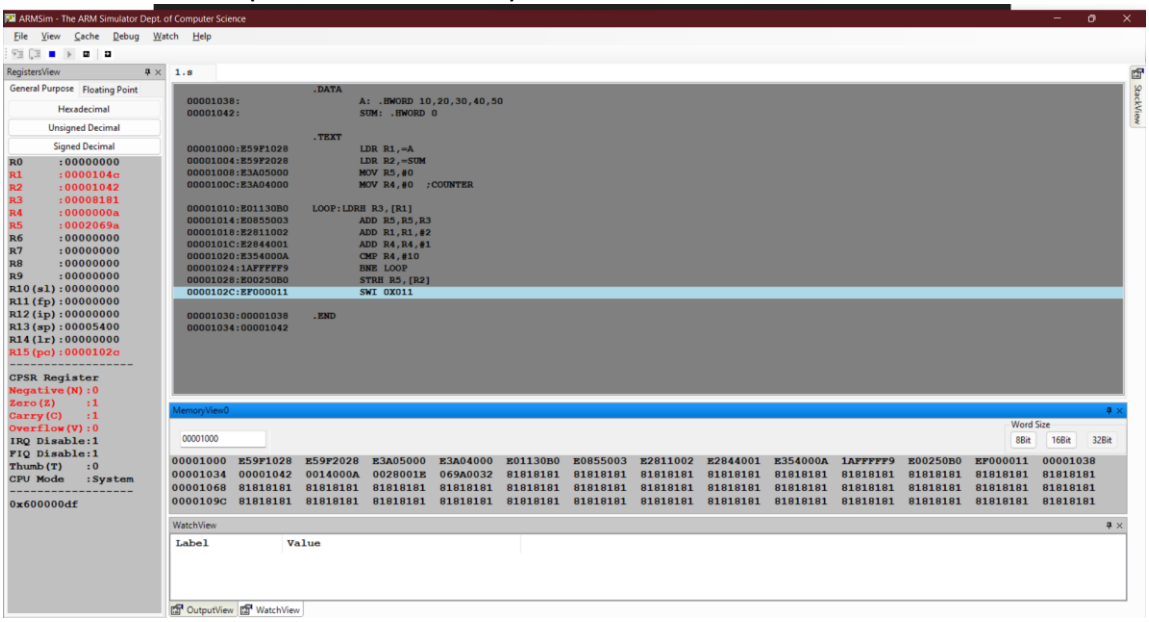
UE20CS252

Sl. No	Programs
Week No.2	1. Write a program in ARM7TDMI-ISA to copy a block of N data items from Location A to Location B. a.Use Half word(.Hword directive)  b.Use Byte wise (.Byte directive)

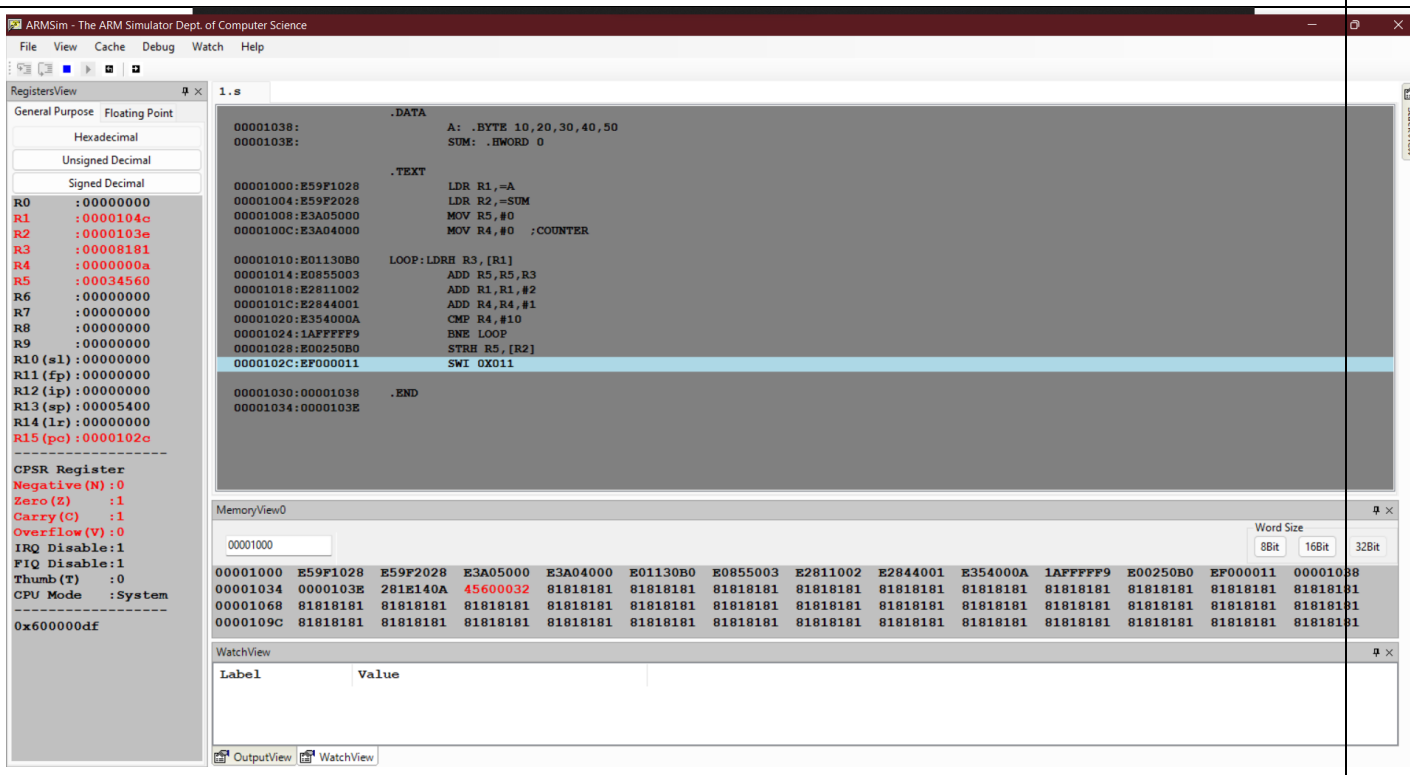


2. Write a program in ARM7TDMI-ISA to find the sum of N data items in the memory. Store the result in the memory location.

a.Use Half word(.Hword directive)



b. Use Byte wise (.Byte directive)


ARMSim - The ARM Simulator Dept. of Computer Science
File View Cache Debug Watch Help
RegistersView
General Purpose Floating Point
Hexadecimal
Unsigned Decimal
Signed Decimal
R0 :00000000
R1 :0000104c
R2 :0000103e
R3 :00008181
R4 :0000000a
R5 :00034560
R6 :00000000
R7 :00000000
R8 :00000000
R9 :00000000
R10(sl):00000000
R11(fp):00000000
R12(ip):00000000
R13(sp):00005400
R14(lr):00000000
R15(pc):0000102c
CPSR Register
Negative(N):0
Zero(Z) :1
Carry(C) :1
Overflow(V):0
IRQ Disable:1
FIQ Disable:1
Thumb(T) :0
CPU Mode :System
0x600000df
1.s
.DATA
00001038: A: .BYTE 10,20,30,40,50
0000103E: SUM: .HWORD 0
.TEXT
00001000:E59F1028 LDR R1,=A
00001004:E59F2028 LDR R2,=SUM
00001008:E3A05000 MOV R5,#0
0000100C:E3A04000 MOV R4,#0 ;COUNTER
00001010:E01130B0 LOOP:LDRH R3,[R1]
00001014:E0855003 ADD R5,R5,R3
00001018:E2811002 ADD R1,R1,#2
0000101C:E2844001 ADD R4,R4,#1
00001020:E354000A CMP R4,#10
00001024:1AFFFFF9 BNE LOOP
00001028:E00250B0 STRH R5,[R2]
0000102C:EF000011 SWI 0X011
00001030:00001038 .END
00001034:0000103E
MemoryView0
00001000
Word Size
8Bit 16Bit 32Bit
00001000 E59F1028 E59F2028 E3A05000 E3A04000 E01130B0 E0855003 E2811002 E2844001 E354000A 1AFFFFF9 E00250B0 EF000011 00001038
00001034 0000103E 281E140A 45600032 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181
00001068 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181
0000109C 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181 81818181
WatchView
Label Value
OutputView WatchView