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**SRN : PES1UG20CS153**

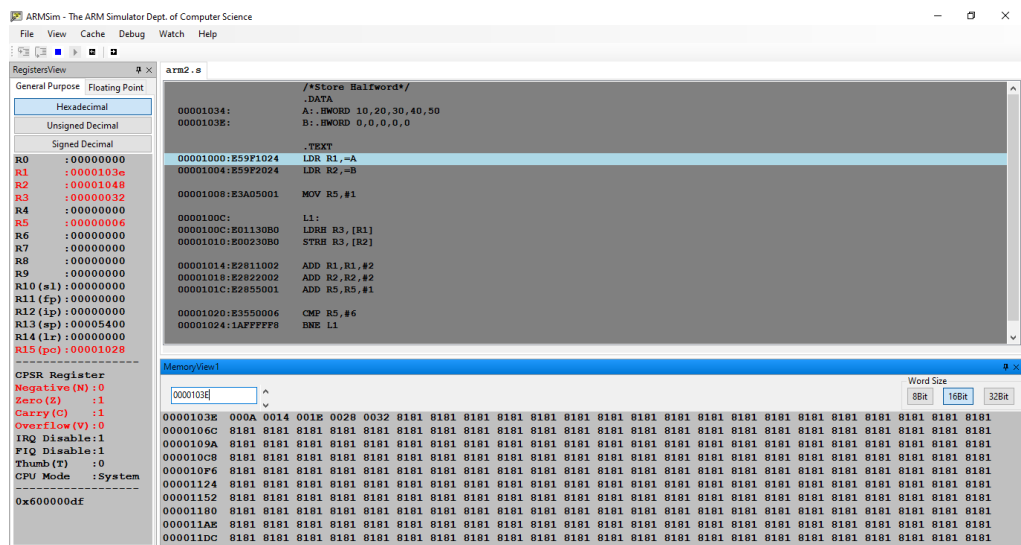
**SECTION : C**

**DATE : 28/01/2022**



**Department of Computer Science & Engineering**  
**Microprocessor & Computer Architecture**  
**MPCA-Laboratory/Assignment/Hands-on/Project**  
**UE20CS252**

Sl. No	Programs
Week No.2	<p>1. Write a program in ARM7TDMI-ISA to copy a block of N data items from Location A to Location B.</p> <p>a.Use Half word(.Hword directive)</p> <p><b>/*Store Halfword*/</b></p> <p><b>.DATA</b></p> <p><b>A:.HWORD 10,20,30,40,50</b></p> <p><b>B:.HWORD 0,0,0,0,0</b></p> <p><b>.TEXT</b></p> <p><b>LDR R1,=A</b></p> <p><b>LDR R2,=B</b></p> <p><b>MOV R5,#1</b></p> <p><b>L1:</b></p> <p><b>LDRH R3,[R1]</b></p> <p><b>STRH R3,[R2]</b></p> <p><b>ADD R1,R1,#2</b></p> <p><b>ADD R2,R2,#2</b></p> <p><b>ADD R5,R5,#1</b></p> <p><b>CMP R5,#6</b></p> <p><b>BNE L1</b></p> <p><b>SWI 0X011</b></p>



b. Use Byte wise (.Byte directive)  
**/\*Store Byte\*/**

**.DATA**  
**A:.BYTE 10,20,30,40,50**  
**B:.BYTE 0,0,0,0,0**

**.TEXT**  
**LDR R1,=A**  
**LDR R2,=B**

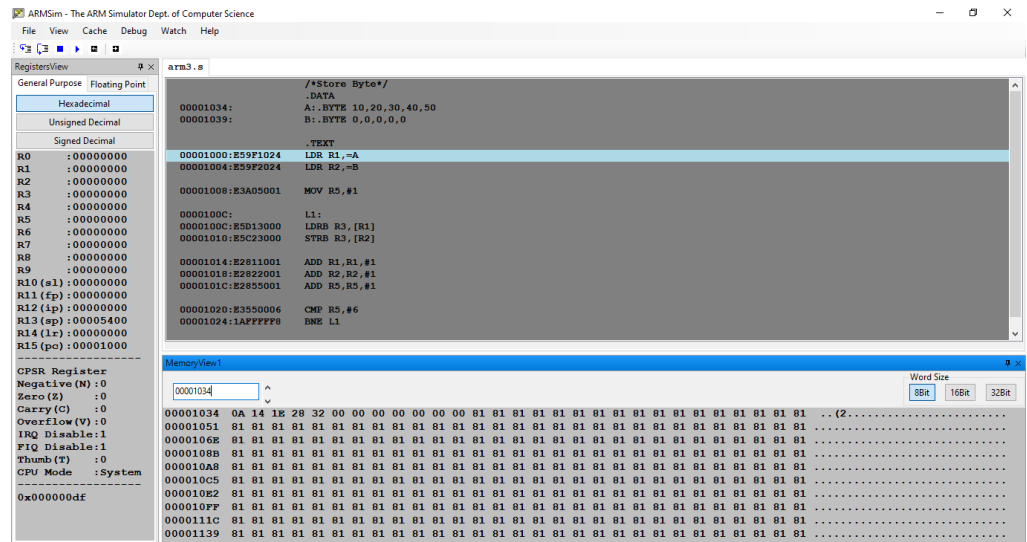
**MOV R5,#1**

**L1:**  
**LDRB R3,[R1]**  
**STRB R3,[R2]**

**ADD R1,R1,#1**  
**ADD R2,R2,#1**  
**ADD R5,R5,#1**

**CMP R5,#6**  
**BNE L1**

**SWI 0X011**

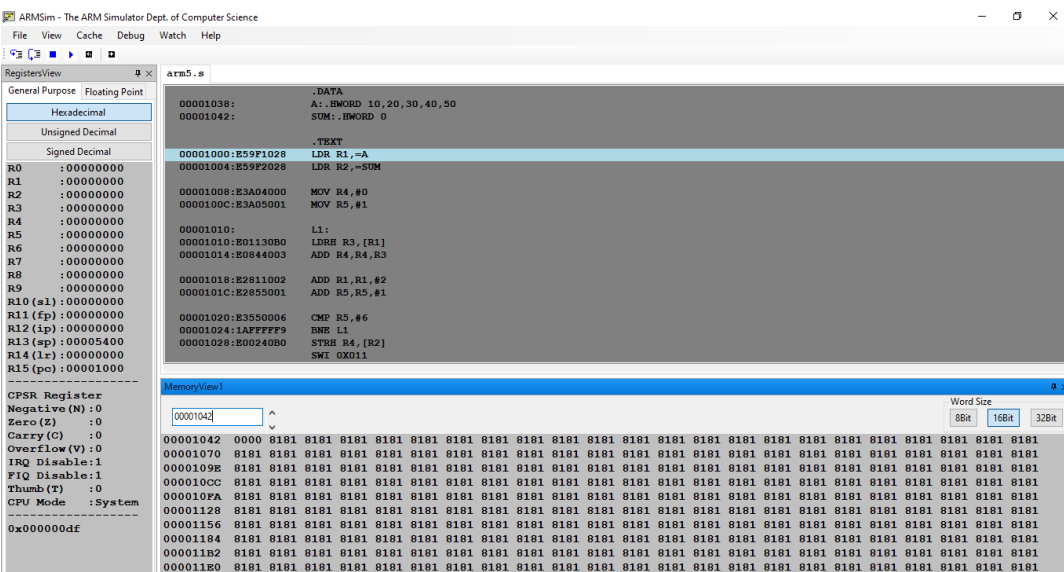
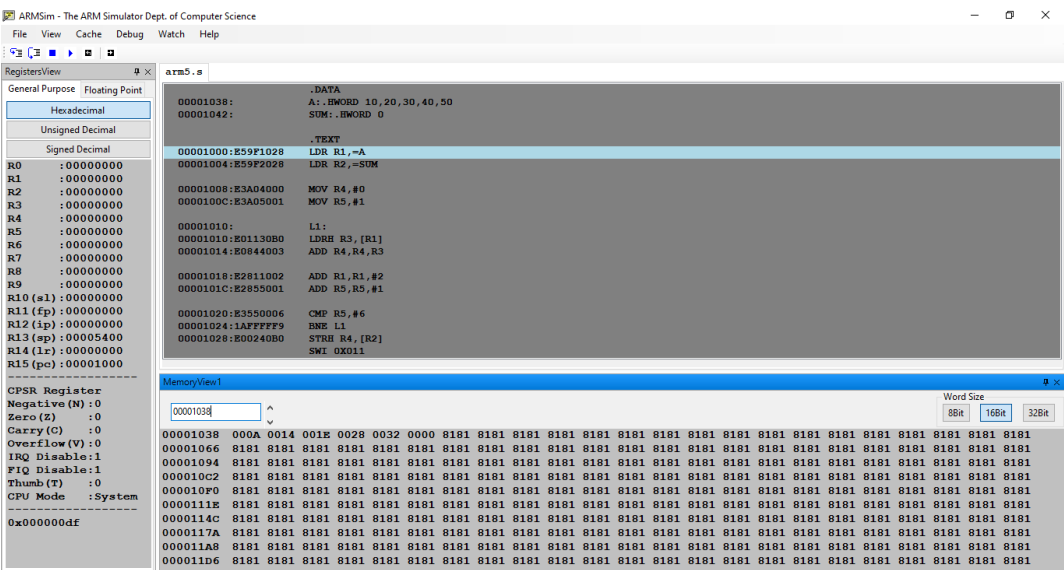


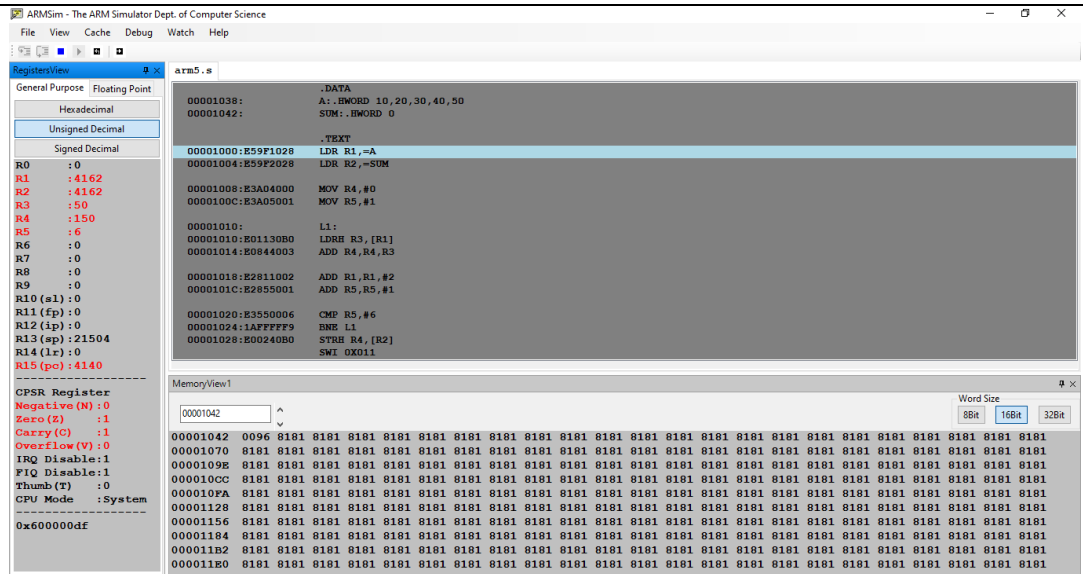


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L1:
LDRH R3,[R1]
ADD R4,R4,R3
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ADD R1,R1,#2
ADD R5,R5,#1
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```
CMP R5,#6
BNE L1
STRH R4,[R2]
SWI 0X011
```





b. Use Byte wise (.Byte directive)

**.DATA**

**A: .BYTE 10,20,30,40,50**

**SUM: .BYTE 0**

**.TEXT**

**LDR R1,=A**

**LDR R2,=SUM**

**MOV R4,#0**

**MOV R5,#1**

**L1:**

**LDRB R3,[R1]**

**ADD R4,R4,R3**

**ADD R1,R1,#1**

**ADD R5,R5,#1**

**CMP R5,#6**

**BNE L1**

**STRB R4,[R2]**

**SWI 0X011**

