**TASK1 EXPT4**

**Program 1**

Write a program to transfer a string of data from code space starting at address 200H to RAM locations starting at 40H. The data is as shown below:

0200H: DB "VIT UNIVERSITY"

Using the simulator, single-step through the program and examine the data transfer and registers.

ORG 0000H

MOV A, #00H

MOV DPTR, #0200H

MOV R1, #0EH

MOV R0, #40H

LOOP: CLR A

MOVC A,@A+DPTR

MOV @R0, A

INC DPTR

INC R0

DJNZ R1, LOOP

HERE: SJMP HERE

ORG 0200H

DB "VIT UNIVERSITY"

END

**Program 2**

Add the following subroutine to the program 1, single-step through the subroutine and examine the RAM locations. After data has been transferred from ROM space into RAM, the subroutine should copy the data from RAM locations starting at 40H to RAM locations starting at 60H.

ORG 000H

MOV DPTR, #200H

MOV R0, #40H

MOV R1, #0EH

LOOP: CLR A

MOVC A,@A+DPTR

MOV @R0, A

INC R0

INC DPTR

DJNZ R1, LOOP

MOV R0, #40H

MOV R1, #60H

MOV R3, #0EH

LOOP2: CLR A

MOV A,@R0

MOV @R1, A

INC R0

INC R1

DJNZ R3, LOOP2

HERE: SJMP HERE

ORG 200H

DB "VIT UNIVERSITY"

END