

EXP NO: 2	Test data transfer between registers and memory
DATE	

AIM:

1. To write 8051 Assembly Language Program for Test data transfer between registers and memory using Keil simulator and Execute it.

SOFTWARE REQUIRED:

S.No	Software Requirements	Quantity
1	Keilµvision5IDE	1

PROCEDURE

1. Create a new project, go to “Project” and close the current project “Close Project”.
2. Next Go to the Project New µ Vision Project and Create New Project Select Device for Target.
3. Select the device AT89C51ED2 or AT89C51 or AT89C52
4. Add Startup file next go to “File” and click “New”.
5. Write a program on the editor window and save it with .asm extension.
6. Add this source file to Group and click on “BuildTarget” or F7.
7. Go to debugging mode to see the result of simulation clicking Run or step run.

PROGRAM:

Data Transfer Programming

a. Write an assembly language program to transfer N = ____ bytes of data from location A: _____h to location B: _____h.

Let N = 05h, A: 30h B: 40h

```
mov r0,#30h //source address
mov r1,#40h //destination address
mov r7,#05h //Number of bytes to be moved
back: mov a,@r0
      mov @r1,a
      inc r0
      inc r1
      djnz r7,back //repeat till all data transferred
end
```

OUTPUT:

b. Write an assembly language program to exchange N = ____h bytes of data at location A: ____h and at location B: ____h.

Let N = 05h A: 30h B: 40h

```
mov r0,#30h //source address
mov r1,#40h //destination address
mov r7,#05h //count, the number of data to be exchanged
back: mov a,@r0
      mov r4,a
      mov a,@r1
      mov @r0,a
      mov a,r4
      mov @r1,a
      inc r0
      inc r1
      djnz r7,back
end
```

OUTPUT:

RESULT: