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Experiment No. 4

Aim - **To transfer a block of 5 elements from data segment to extra segment using string instructions.**

software required - **emu8086**
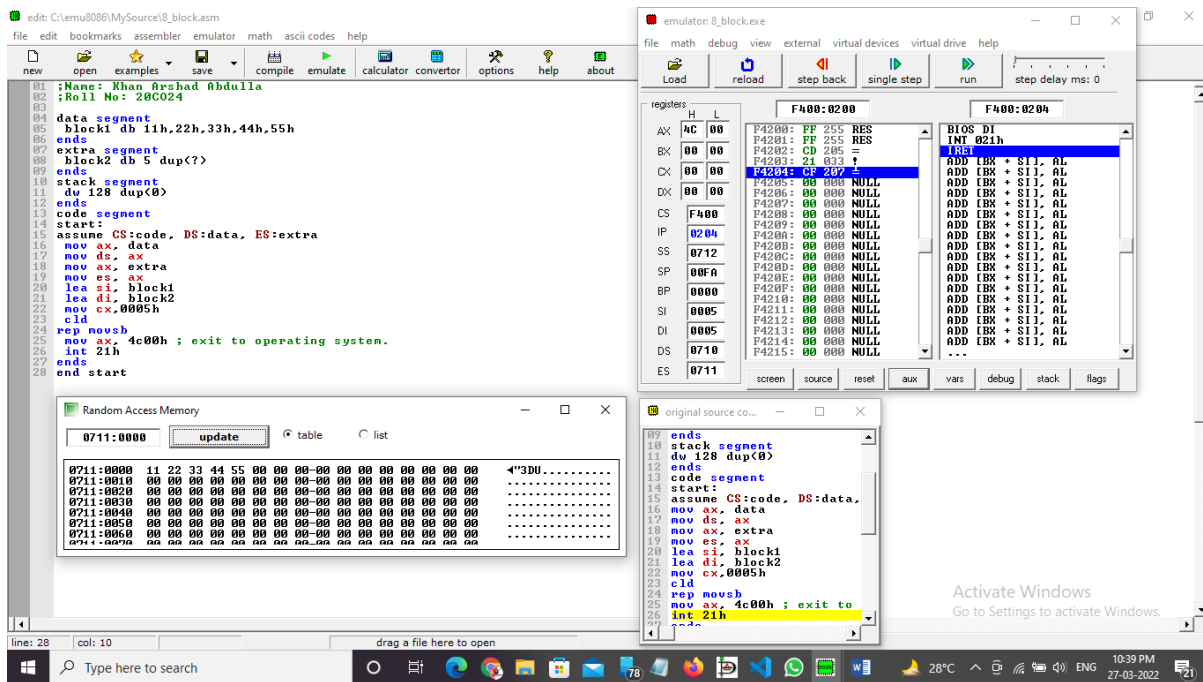

Program - 1
8-bit block transfer

```
data segment
  block1 db 11h,22h,33h,44h,55h
ends
extra segment
  block2 db 5 dup(?)
ends
stack segment
  dw  128  dup(0)
ends
code segment
start:
assume CS:code, DS:data, ES:extra
  mov ax, data
  mov ds, ax
  mov ax, extra
  mov es, ax
  lea si, block1
  lea di, block2
  mov cx,0005h
  cld
rep movsb
  mov ax, 4c00h ; exit to operating system.
  int 21h
ends

end start
```

Output =>

Data segment = 11	22	33	44	55
Extra segment = 11	22	33	44	55

Program - 2
16-bit block transfer

```
data segment
  block1 dw 1111h,2222h,3333h,4444h,5555h
ends

extra segment
  block2 dw 5 dup(?)
ends
stack segment
  dw   128  dup(0)
ends
code segment
start:
assume CS:code, DS:data, ES:extra
   mov ax, data
   mov ds, ax
   mov ax, extra
   mov es, ax
   lea si, block1
   lea di, block2
   mov cx,0005h
   cld
rep movsw
   mov ax, 4c00h
   int 21h
ends
```
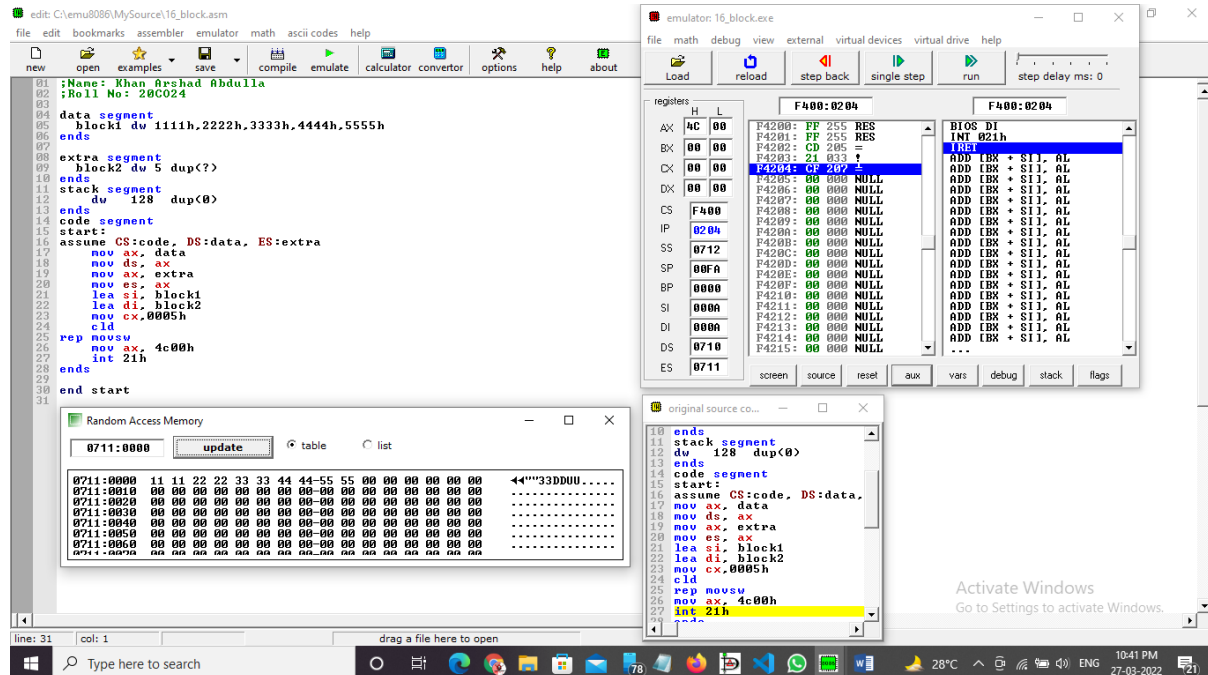
end start

Output =>

Data segment = 1111   2222   3333   4444   5555

Extra segment = 1111   2222   3333   4444   5555

Procedure –

1. **Launch emu8086 IDE** from menu.
2. **Edit** your program , save as   file_name.asm
3. **Compile** your program to check for syntax errors, rectify if any error is present. Save and recompile your program.
4. **Run** to observe output of your program.

Conclusion - To perform 8- Bit and 16-Bit Block transfer from Code Segment to Extra Segment we have to repeatedly use MOVSB and MOVSW instructions respectively.

_____END_____