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                    ;PROGRAM FOR ENCRYPTION AND DECRYPTION OF FILES
                    ;BY LUNGADE KIRAN SANJAY
                    ;BATCH:: S2
                    ;ROLL NO.:: 39
                    ;INCLUDE MACRO.ASM


DATASEG1          SEGMENT
        IFN     DB 'SAMPLE.TXT',0
        OFN     DB 'SAMPLE1.TXT',0
     IFHANDLE   DW 0
     OFHANDLE   DW 0
     IFBUFFER   DB 0
     OFBUFFER   DB 0
     KEY        DB 1


DATASEG1          ENDS
CODESEG1          SEGMENT
                  ASSUME DS:DATASEG1,CS:CODESEG1
        BEGIN:  MOV AX,DATASEG1
                MOV DS,AX

                ;1  OPEN INPUT FILE
                  MOV AH,3DH
                  MOV DX,OFFSET IFN
                  MOV AL,00H
                  INT 21H
                  MOV IFHANDLE,AX
                  JC FILE_ERROR

                ;2. OPEN OUTPUT FILE
                  MOV AH,3CH
                  MOV DX,OFFSET OFN
                  MOV CX,00H
                  INT 21H
                  MOV OFHANDLE,AX

        BACK: ;3. READ A CHARACTER
                  MOV AH,3FH
                  MOV CX,0001H
                  MOV DX,OFFSET IFBUFFER
                  MOV BX,IFHANDLE
                  INT 21H
                  JC FILE_ERROR

                ;4. ENCRYPT/DECRYPT
                  MOV AL,IFBUFFER
                  MOV OFBUFFER,AL
                  MOV AL,KEY
                  ADD OFBUFFER,AL

                ;5. DISPLAY THE CHARACTER
                  MOV AH,02H
```

```asm
                MOV DL,OFBUFFER
                INT 21H

            ;6. WRITE THE CHARACTER IN OUTPUT FILE
                MOV AH,40H
                MOV CX,0001H
                MOV BX,OFHANDLE
                MOV DX,OFFSET OFBUFFER
                INT 21H
                JC FILE_ERROR

            ;7. IF NOT END OF FILE REPEAT STEP 3
                CMP IFBUFFER,0AH
                JNZ BACK

            ;8. CLOSE INPUT FILE
                MOV AH,3EH
                MOV BX,IFHANDLE
                INT 21H

            ;9. CLOSE OUTPUT FILE
                MOV AH,3EH
                MOV BX,OFHANDLE
                INT 21H

FILE_ERROR:
                MOV AX,4C00H
                INT 21H

CODESEG1        ENDS
                END BEGIN
```

```
    ●  DOSBox 0.74, Cpu speed:    3000 cycles, Frameskip  0, Program:  DOSBOX

Z:\>MOUNT C ~
Drive C is mounted as local directory /home/exam/

Z:\>C:

C:\>CD TASM

C:\TASM>TASM MPMC4
Turbo Assembler  Version 3.2  Copyright (c) 1988, 1992 Borland International

Assembling file:    MPMC4.ASM
Error messages:     None
Warning messages:   None
Passes:             1
Remaining memory:   470k


C:\TASM>TLINK MPMC4
Turbo Link  Version 5.1 Copyright (c) 1992 Borland International
Warning: No stack

C:\TASM>MPMC4
BCDE!QRST!δ
C:\TASM>_
21
```