

```

ASSUME CS:CODE,DS:DATA
DATA SEGMENT
NUM1 DB 04H
NUM2 DB 03H
NUM3 DB 04H
SUM DB 01H DUP(?)
CARRY DB 01H DUP(?)
DATA ENDS
CODE SEGMENT
START:MOV AX,DATA
MOV DS,AX
MOV CL,00
MOV AL,NUM1
MOV BL,NUM2
ADD AL,BL
JNC L1
INC CL
L1:MOV BL,NUM3
ADD AL,BL
JNC L2
INC CL
L2:MOV SUM,AL
MOV CARRY,CL
MOV AX,4C00H
INT 21H
CODE ENDS
END START

```

```

076B:0000  B8 6A 07 8E D8 B1 00 A0-00 00 8A 1E 01 00 02 C3  .j.....
076B:0010  73 02 FE C1 8A 1E 02 00-02 C3 73 02 FE C1 A2 03  s.....s.....
076B:0020  00 88 0E 04 00 B8 00 4C-CD 21 FC 8B 56 FE 05 0C  .....L.!..U...
076B:0030  00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04  .RP..H...P.{....
076B:0040  3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A  =..t.....^.&.G.*
076B:0050  E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83  .@P.....RP..H.
076B:0060  C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6  ..P....P..s.....
076B:0070  FA FE 81 E6 FF 00 C6 82-FB FE 00 2B C0 50 8D 86  .....+.P..
-d 076A:0000
076A:0000  04 03 04 0B 00 00 00 00-00 00 00 00 00 00 00 00  .....
076A:0010  B8 6A 07 8E D8 B1 00 A0-00 00 8A 1E 01 00 02 C3  .j.....
076A:0020  73 02 FE C1 8A 1E 02 00-02 C3 73 02 FE C1 A2 03  s.....s.....
076A:0030  00 88 0E 04 00 B8 00 4C-CD 21 FC 8B 56 FE 05 0C  .....L.!..U...
076A:0040  00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04  .RP..H...P.{....
076A:0050  3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A  =..t.....^.&.G.*
076A:0060  E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83  .@P.....RP..H.
076A:0070  C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6  ..P....P..s.....

```

```

ASSUME CS:CODE,DS:DATA
DATA SEGMENT
NUM1 DW 0A427H
NUM2 DW 0FE67H
NUM3 DW 06A27H

```

```
SUM DW 01h DUP(?)
CARRY DW 01h DUP(?)
DATA ENDS
CODE SEGMENT
```

```
START:MOV AX,DATA
      MOV DS,AX
      mov CX,0000h
      MOV AX,NUM1
      MOV BX,NUM2
      ADD AX,BX
      JNC L1
      INC CX
L1:MOV BX,NUM3
      ADD AX,BX
      JNC L2
      INC CX
L2:MOV SUM,AX
      MOV CARRY,CX
      MOV AX,4C00H
      INT 21H
      CODE ENDS
      END START
```

076B:0000	B8 6A 07 8E D8 B9 00 00-A1 00 00 8B 1E 02 00 03	.j.....
076B:0010	C3 73 01 41 8B 1E 04 00-03 C3 73 01 41 A3 06 00	.s.A.....s.A...
076B:0020	89 0E 08 00 B8 00 4C CD-21 46 FC 8B 56 FE 05 0C	.....L.!F..U...
076B:0030	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076B:0040	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076B:0050	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076B:0060	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....
076B:0070	FA FE 81 E6 FF 00 C6 82-FB FE 00 2B C0 50 8D 86	.....+.P..
-d 076A:0000		
076A:0000	27 A4 67 FE 27 6A B5 0C-02 00 00 00 00 00 00 00	' .g.' j.....
076A:0010	B8 6A 07 8E D8 B9 00 00-A1 00 00 8B 1E 02 00 03	.j.....
076A:0020	C3 73 01 41 8B 1E 04 00-03 C3 73 01 41 A3 06 00	.s.A.....s.A...
076A:0030	89 0E 08 00 B8 00 4C CD-21 46 FC 8B 56 FE 05 0C	.....L.!F..U...
076A:0040	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076A:0050	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076A:0060	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076A:0070	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....

```
-----
assume cs:code,ds:data
data segment
num1 dw 0abcfh
num2 dw 00c4h
prol dw 01h dup(?)
proh dw 01h dup(?)
data ends
code segment
start:mov ax,data
      mov ds,ax
```

```

mov ax,num1
mov bx,num2
mul bx
mov prol,ax
mov proh,dx
mov ax,4c00h
int 21h
code ends
end start

```

076B:0000	B8 6A 07 8E D8 A1 00 00-8B 1E 02 00 F7 E3 A3 04	.j.....
076B:0010	00 89 16 06 00 B8 00 4C-CD 21 C4 04 3D FF FF 74	.....L?!...=..t
076B:0020	03 E9 11 01 B8 2F 00 50-8B 46 FC 8B 56 FE 05 0C	...../.P.F..U...
076B:0030	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076B:0040	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076B:0050	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076B:0060	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....
076B:0070	FA FE 81 E6 FF 00 C6 82-FB FE 00 2B C0 50 8D 86	.....+.P..
-d 076A:0000		
076A:0000	CF AB C4 00 7C 8A 83 00-00 00 00 00 00 00 00 00	....i.....
076A:0010	B8 6A 07 8E D8 A1 00 00-8B 1E 02 00 F7 E3 A3 04	.j.....
076A:0020	00 89 16 06 00 B8 00 4C-CD 21 C4 04 3D FF FF 74	.....L?!...=..t
076A:0030	03 E9 11 01 B8 2F 00 50-8B 46 FC 8B 56 FE 05 0C	...../.P.F..U...
076A:0040	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076A:0050	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076A:0060	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076A:0070	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....

```

-----
ASSUME CS:CODE,DS:DATA
DATA SEGMENT
div1 DW 7004H
div2 DW 01c1H
dvr dw 020ch
quo1 dw 01h dup(?)
quo2 dw 01h dup(?)
DATA ENDS
CODE SEGMENT

```

```

START:MOV AX,DATA
      MOV DS,AX
      MOV AX,div1
      mov DX,div2
      mov bx,dvr
      div BX
      mov quo1,ax
      mov quo2,dx
      MOV AX,4C00H
      INT 21H
      CODE ENDS
      END START

```

076B:0000	B8 6A 07 8E D8 A1 00 00-8B 16 02 00 8B 1E 04 00	.j.....
076B:0010	F7 F3 A3 06 00 89 16 08-00 B8 00 4C CD 21 FF 74	.....L!.t
076B:0020	03 E9 11 01 B8 2F 00 50-8B 46 FC 8B 56 FE 05 0C	...../P.F..U...
076B:0030	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076B:0040	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076B:0050	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076B:0060	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....
076B:0070	FA FE 81 E6 FF 00 C6 82-FB FE 00 2B C0 50 8D 86	.....+.P..
-d 076A:0000		
076A:0000	04 70 C1 01 0C 02 92 DB-2C 01 00 00 00 00 00 00	.p.....
076A:0010	B8 6A 07 8E D8 A1 00 00-8B 16 02 00 8B 1E 04 00	.j.....
076A:0020	F7 F3 A3 06 00 89 16 08-00 B8 00 4C CD 21 FF 74	.....L!.t
076A:0030	03 E9 11 01 B8 2F 00 50-8B 46 FC 8B 56 FE 05 0C	...../P.F..U...
076A:0040	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076A:0050	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076A:0060	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076A:0070	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....

```

-----
assume cs:code,ds:data
data segment
arr dw 25h,43h,0aah,12h,10h
len dw $-arr
lar dw 1 dup(?)
sma dw 1 dup(?)
data ends
code segment
start:mov ax,data
      mov ds,ax
      lea si,arr
      mov cx,len
      shr cx,1
      mov ax,0000h
      mov bx,arr[si]
l1:cmp ax,arr[si]
    jnc l2
      mov ax,arr[si]
l2:cmp bx,arr[si]
    jnc l3
      mov bx,arr[si]
l3:inc si
    inc si
    loop l1
    mov lar,ax
    mov sma,bx
    mov ah,4ch
    int 21h
code ends
end start

```

076B:0000	B8 6A 07 8E D8 8D 36 00-00 8B 0E 0A 00 D1 E9 B8	.j....6.....
076B:0010	00 00 8B 9C 00 00 3B 84-00 00 73 04 8B 84 00 00	.....;...s.....
076B:0020	3B 9C 00 00 73 04 8B 9C-00 00 46 46 E2 E8 A3 0C	;...s.....FF....
076B:0030	00 89 1E 0E 00 B4 4C CD-21 50 E8 7B 0E 83 C4 04	.....L.!P.{....
076B:0040	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076B:0050	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076B:0060	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....
076B:0070	FA FE 81 E6 FF 00 C6 82-FB FE 00 2B C0 50 8D 86	.....+.P..
-d 076A:0000		
076A:0000	25 00 43 00 AA 00 12 00-10 00 0A 00 AA 00 AA 00	%C.....
076A:0010	B8 6A 07 8E D8 8D 36 00-00 8B 0E 0A 00 D1 E9 B8	.j....6.....
076A:0020	00 00 8B 9C 00 00 3B 84-00 00 73 04 8B 84 00 00	.....;...s.....
076A:0030	3B 9C 00 00 73 04 8B 9C-00 00 46 46 E2 E8 A3 0C	;...s.....FF....
076A:0040	00 89 1E 0E 00 B4 4C CD-21 50 E8 7B 0E 83 C4 04	.....L.!P.{....
076A:0050	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076A:0060	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076A:0070	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....

```

-----
assume cs:code,ds:data
data segment
arr db 99h,12h,56h
len dw $-arr
ev dw 1 dup(?)
data ends
code segment
start:mov ax,data
      mov ds,ax
      lea si,arr
      mov cx,len
      mov bx,0000h
l1:mov al,arr[si]
    and al,01h
    cmp al,00h
    jnz l2
    mov ah,00h
    mov al,arr[si]
    add bx,ax
l2:inc si
loop l1
mov ev,bx
mov ah,4ch
int 21h
code ends
end start

```

076B:0000	B8 6A 07 8E D8 B1 00 A0-00 00 8A 1E 01 00 02 C3	.j.....
076B:0010	73 02 FE C1 8A 1E 02 00-02 C3 73 02 FE C1 A2 03	s.....s.....
076B:0020	00 88 0E 04 00 B8 00 4C-CD 21 FC 8B 56 FE 05 0C	.....L?!..U...
076B:0030	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076B:0040	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076B:0050	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076B:0060	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....
076B:0070	FA FE 81 E6 FF 00 C6 82-FB FE 00 2B C0 50 8D 86	.....+.P..
-d 076A:0000		
076A:0000	04 03 04 0B 00 00 00 00-00 00 00 00 00 00 00 00	.....
076A:0010	B8 6A 07 8E D8 B1 00 A0-00 00 8A 1E 01 00 02 C3	.j.....
076A:0020	73 02 FE C1 8A 1E 02 00-02 C3 73 02 FE C1 A2 03	s.....s.....
076A:0030	00 88 0E 04 00 B8 00 4C-CD 21 FC 8B 56 FE 05 0C	.....L?!..U...
076A:0040	00 52 50 E8 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.RP..H...P.{....
076A:0050	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076A:0060	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076A:0070	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....

```

-----
assume cs:code,ds:data
data segment
arr db 99h,7ah,0b1h,33h,23h,52h
len dw $-arr
data ends
code segment
start:mov ax,data
      mov ds,ax
      lea si,arr
      mov ax,len
l1:mov di,si
   inc di
   mov cx,ax
   dec cx
l2:mov bh,arr[si]
   mov bl,arr[di]
   cmp bh,bl
   jc l3
   mov arr[si],bl
   mov arr[di],bh
l3:inc di
   loop l2
   inc si
   dec ax
   cmp ax,0001h
   jnz l1
   mov ah,4ch
   int 21h
code ends
end start

```

076B:0000	B8 6A 07 8E D8 8D 36 00-00 A1 06 00 8B FE 47 8B	.j....6.....G.
076B:0010	C8 49 8A BC 00 00 8A 9D-00 00 3A FB 72 08 88 9C	.I.....:r...
076B:0020	00 00 88 BD 00 00 47 E2-E9 46 48 3D 01 00 75 DC	.....G..FH=.u.
076B:0030	B4 4C CD 21 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.L!.H...P.{....
076B:0040	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076B:0050	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076B:0060	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....
076B:0070	FA FE 81 E6 FF 00 C6 82-FB FE 00 2B C0 50 8D 86	.....+.P...
-d 076A:0000		
076A:0000	23 33 52 7A 99 B1 06 00-00 00 00 00 00 00 00 00	#3Rz.....
076A:0010	B8 6A 07 8E D8 8D 36 00-00 A1 06 00 8B FE 47 8B	.j....6.....G.
076A:0020	C8 49 8A BC 00 00 8A 9D-00 00 3A FB 72 08 88 9C	.I.....:r...
076A:0030	00 00 88 BD 00 00 47 E2-E9 46 48 3D 01 00 75 DC	.....G..FH=.u.
076A:0040	B4 4C CD 21 EA 48 83 C4-04 50 E8 7B 0E 83 C4 04	.L!.H...P.{....
076A:0050	3D FF FF 74 03 E9 ED 00-C4 5E FC 26 8A 47 0C 2A	=..t.....^.&.G.*
076A:0060	E4 40 50 8B C3 8C C2 05-0C 00 52 50 E8 C1 48 83	.@P.....RP..H.
076A:0070	C4 04 50 8D 86 FA FE 50-E8 17 73 83 C4 06 8B B6	..P....P..s.....

```

-----
ASSUME CS: CODE, DS: DATA
DATA SEGMENT
STR DB 100 dup('$')
LEN DW 0000H
CAPITAL DB 1 DUP(?)
SMALL DB 1 DUP(?)
MSG1 DB 0DH, 0AH, "Capital letters: ", "$"
MSG2 DB 0DH, 0AH, "Small letters: ", "$"
DATA ENDS

```

```

CODE SEGMENT
START:MOV AX, DATA
      MOV DS, AX

      LEA SI, STR
INPUT:  MOV AH, 1H
      INT 21H
      CMP AL, 13
      JE L0
      MOV [SI], AL
      INC SI
      INC LEN
      JMP INPUT

L0:
      MOV DL, 00
      MOV DH, 00
      LEA SI, STR
      MOV CX, LEN
L1:    MOV AL, STR [SI]
      CMP AL, "a"
      JNC L2
      CMP AL, "A"
      JNC L3
      JC L6

```

```

L2: CMP AL, "z"
    JC L4
    JNC L6
L3: CMP AL, "Z"
    JC L5
    JNC L6
L4: INC DL
    JMP L6
L5: INC DH
L6: INC SI
    LOOP L1
    MOV CAPITAL, DH
    MOV SMALL, DL
    MOV DX, OFFSET MSG1
    MOV AH, 09H
    INT 21H
    MOV DL, CAPITAL
    MOV AH, 02H
    MOV BL, 30H
    ADD BL, DL
    MOV DL, BL
    INT 21H
    MOV DX, OFFSET MSG2
    MOV AH, 09H
    INT 21H
    MOV DL, SMALL
    MOV AH, 02H
    MOV BL, 30H
    ADD BL, DL
    MOV DL, BL
    INT 21H
    MOV AH, 4CH
    INT 21H
CODE ENDS
END START

```

```

C:\>pgm8.exe
MynameJohn

```

```

ASSUME CS: CODE, DS: DATA
DATA SEGMENT
STR DB 100 dup('$')
LEN DW $-STR
MSG1 DB 0DH, 0AH, "Pallindrome", "$"
MSG2 DB 0DH, 0AH, "Not Pallindrome", "$"
DATA ENDS

CODE SEGMENT
START: MOV AX, DATA
      MOV DS, AX
      LEA SI, STR
INPUT:  MOV AH, 1H

```



```

        INT 21H
        CMP AL,13
        JE L1
        MOV [SI], AL
        INC SI
        JMP INPUT
L1:     MOV DI,OFFSET STR
        DEC SI
L2:     CMP SI,DI
        JL L4
        MOV AL,STR[SI]
        MOV BL,STR[DI]
        CMP AL,BL
        JNE L3
        DEC SI
        INC DI
        JMP L2
L3:     MOV DX,OFFSET MSG2
        MOV AH,09H
        INT 21H
        JMP L5
L4:     MOV DX,OFFSET MSG1
        MOV AH,09H
        INT 21H
L5:     MOV AH, 4CH
        INT 21H
CODE ENDS
        END START

```

```

C:\>pgm9.exe
malayalam
Pallindrome

```