MCM TAPE TAPE-08.TXT

TAPE LABEL/ANNOTATIONS: "TB
                        MCM
                        LIB/70
                        100"

DATE CREATED: May 1975

GROUPS:
    0   1 100 101

NAMES IN GROUP 0:
ΔPΔ ΔQΔ

ΔPΔ   [7 by 3 array of type char; element size 1 byte(s)]
 MCM
LIB/70
LISTER

ΔQΔ   [4 by 3 numeric array; element size 3 byte(s)]
750529 100 750529 0
100 100 750529 0
101 100 750528 0

NAMES IN GROUP 1:
ΔGΔ ΔSΔ ΔDΔ ΔCΔ ΔFΔ ΔNΔ ΔOΔ ΔUΔ ΔIΔ ΔAΔ ΔYΔ ΔTΔ
ΔXΔ ΔWΔ ΔJΔ ΔΔΔ Δ_Δ

    ∇ΔGΔ Δ0Δ;Δ1Δ
[1]   →0∘□'NO! FN ACTIVE'∘→2[ι1=ρ□LC
[2]   1 □XC □FN∘1 □XC □VA∘□XS 0
[3]   1 □XD Δ1Δ∘1 □XC Δ1Δ←□XN 0
[4]   1 □XD Δ1Δ←□XN 1∘1 □XD'Δ0Δ Δ9Δ'
[5]   →0×ι0=ρΔ0Δ←,Δ0Δ∘□EX Δ1Δ
[6]   →0∘□XS Δ0Δ∘→Δ9Δ[ι1≠ρΔ0Δ←ΔFΔ Δ0Δ
[7]   Δ9Δ:→0∘□'NOT FOUND'
    ∇

    ∇ΔSΔ Δ1Δ;Δ0Δ;Δ2Δ
[1]   →0∘□'NO! FN ACTIVE'∘→2[ι(1=ρ□LC)v0=□XV
[2]   →Δ9Δ[ι0=0\0ρΔ1Δ←,Δ1Δ
[3]   →Δ5Δ[ι1=1↑ρΔ0Δ←ΔYΔ Δ1Δ,(0=ρΔ1Δ)/□XV
[4]   →Δ8Δ[ι0≠¯1↑ρΔ0Δ
[5]   Δ0Δ←4++/Δ2Δ←Δ2Δ=(ιρΔ2Δ←2↓Δ_Δ[;□IO])+4-□IO
[6]   Δ2Δ←1 1,(Δ2Δ,0)v0,~Δ2Δ∘→Δ7Δ[ι99<Δ0Δ
[7]   Δ2Δ←Δ2Δι0∘ΔΔΔ←Δ2Δ⍊ΔΔΔ∘Δ_Δ←Δ2Δ⍊Δ_Δ
[8]   Δ0Δ←Δ0Δ,0,Δ_Δ[□IO;□IO],¯11,Δ2Δ
[9]   Δ_Δ[Δ2Δ;]←4↑Δ0Δ∘ΔΔΔ[Δ2Δ;]←7↑Δ1Δ,7ρ' '

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[10]    Δ5Δ:→Δ8Δ⌈ι⎕XV∧.≠0,1↑Δ0Δ←,Δ0Δ
[11]    →Δ6Δ⌈ι~2|1↑3↓Δ0Δ∘→Δ8Δ⌈ι(1↑Δ0Δ)∈0 1 2 3 100 101
[12]    →0×ι7≠8|Δ_Δ[¯1↑Δ0Δ;3+⎕IO]∘ΔJΔ Δ0Δ
[13]    →0∘⎕'UPDATE RECOMENDED'
[14]    Δ8Δ:→0∘⎕'NOT SAVED-THIS IS ',,1 0↓ΔΔΔ[1,¯1↑,ΔYΔ ⎕XV;]
[15]    Δ9Δ:→0∘⎕'ILLEGAL NAME'
[16]    Δ7Δ:→0∘⎕'NOT SAVED-DIRECTORY FULL'
[17]    Δ6Δ:→0∘⎕'NO! WS NOT ON WORKING TAPE' N
      ∇


      ∇ΔDΔ Δ0Δ;Δ1Δ
[1]    →0∘⎕'NO! FN ACTIVE'∘→2⌈ι1=ρ⎕LC
[2]    →Δ9Δ⌈ι0=0\0ρΔ0Δ
[3]    →0×ι1≠1↑ρΔ0Δ←ΔYΔ Δ0Δ
[4]    →Δ9Δ⌈ι(1↑Δ0Δ←,Δ0Δ)∈0 100
[5]    →0×ι'Y'≠1↑⎕IO⎕'Y=>DROP ',,ΔΔΔ[¯1↑Δ0Δ;]
[6]    Δ1Δ[¯1↑Δ0Δ]←0∘Δ1Δ←(1↑ρΔ_Δ)ρ1
[7]    ΔΔΔ←Δ1Δ≠ΔΔΔ∘Δ_Δ←Δ1Δ≠Δ_Δ
[8]    ∘⍦(⎕XV=Δ0Δ←1↑Δ0Δ)/'⎕XS 0'
[9]    →0∘⎕EX ΔNΔ 2 3∘Δ0Δ ⎕XD ⎕XN Δ0Δ
[10]    Δ9Δ:→0∘⎕'INVALID NAME'
      ∇


      ∇Δ0Δ ΔCΔ Δ1Δ 1
[1]    →0×ι1≠ρΔ0Δ←ΔFΔ Δ0Δ
[2]    Δ1Δ←⎕XN Δ0Δ∘→Δ9Δ⌈ι0≠ρΔ1Δ
[3]    Δ9Δ:Δ0Δ ⎕XR Δ1Δ  0
      ∇


      ∇Δ4Δ←ΔFΔ Δ0Δ;Δ1Δ;Δ2Δ;Δ3Δ;ΔPΔ;ΔQΔ
[1]    →0×ι0=1↑ρΔ0Δ←ΔYΔ Δ0Δ∘Δ4Δ←ι0
[2]    Δ4Δ←(Δ1Δ←2|Δ0Δ[;3+⎕IO])/Δ0Δ[;⎕IO]
[3]    →0×ι0=1↑ρΔ0Δ←(~Δ1Δ)≠Δ0Δ
[4]    →Δ9Δ⌈ιv/(Δ1Δ←8|Δ0Δ[;3+⎕IO])∈2 6 ∈1
[5]    Δ7Δ:→0×ι0=Δ1Δ←|ΔTΔ-Δ0Δ[⎕IO;1+⎕IO]
[6]    Δ1Δ←Δ1Δ=Δ0Δ[;1+⎕IO]
[7]    Δ4Δ←Δ4Δ,Δ2Δ←Δ1Δ/Δ0Δ[;⎕IO]
[8]    Δ8Δ:Δ3Δ←⎕XN[1+⎕IO]1↑Δ2Δ
[9]    (1↑Δ2Δ)⎕XR[1+⎕IO]Δ3Δ←(ΔXΔ Δ3Δ)≠Δ3Δ
[10]    →Δ8Δ⌈ι0≠ρΔ2Δ←1↓Δ2Δ∘⎕EX Δ3Δ∘(1↑Δ2Δ)⎕XW Δ3Δ
[11]    Δ2Δ←Δ1Δ/Δ0Δ[;4+⎕IO]∘⎕XF[1+⎕IO]ι0
[12]    Δ_Δ[Δ2Δ;3+⎕IO]←Δ_Δ[Δ2Δ;3+⎕IO]+1
[13]    →Δ7Δ∘→0×ι0=1↑ρΔ0Δ←(~Δ1Δ)≠Δ0Δ
[14]    Δ9Δ:2 12ρ'LIB/70 ERRORGROUP ERROR '∘⎕PT←0
[15]    5 0 0⍉(Δ1Δ∈2 6)≠Δ0Δ[;,⎕IO],Δ1Δ∘.÷,2
      ∇


      ∇Δ1Δ←ΔNΔ Δ2Δ
[1]    1 ⎕XC ⎕FN∘∘→2⌈ι~3∈Δ2Δ∘1 ⎕XC ⎕XN 0
[2]    1 ⎕XC Δ2Δ←(ΔXΔ Δ2Δ)≠Δ2Δ←⎕VA∘∘→3⌈ι~2∈Δ2Δ
[3]    1 ⎕XD Δ1Δ←⎕XN 1∘1 ⎕XD ⎕XN 0
      ∇
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      ∇Δ0Δ;A
[1]    ⎕OFF
[2]    ∘32⎕'MCM/APL - LIB/70 -',ΔΔΔ[⎕IO;]
[3]    A←(8ρ1 1 0)\6 0 0⌽,1 1↑Δ_Δ
[4]    A←100⊥⍉6↓(⎕IO+13)⎕'DATE: ‾',A
[5]    Δ_Δ[⎕IO;⎕IO]←⌊1E6|A
      ∇


      ∇ΔUΔ;Δ0Δ;Δ1Δ;Δ2Δ;Δ3Δ;Δ4Δ;ΔPΔ;ΔQΔ
[1]    →0∘⎕'NO! FN ACTIVE'∘→2⌈ι1=1↑ρ⎕SI
[2]    →0∘⎕'NO! GROUP ACTIVE'∘→3⌈ι0=⎕XV∘Δ3Δ←0
[3]    Δ6Δ:Δ0Δ←0 0,1=8|2↓Δ_Δ[;3+⎕IO]
[4]    Δ_Δ[;3+⎕IO]←Δ_Δ[;3+⎕IO]-Δ0Δ
[5]    →Δ9Δ⌈ι0=ρΔ0Δ←Δ0Δ/Δ_Δ[;⎕IO]
[6]    →⎕LC⌈ι0≠ρΔ0Δ←1↓Δ0Δ∘(1↑Δ0Δ)⎕XD ⎕XN 1↑Δ0Δ
[7]    Δ9Δ:Δ2Δ←0 0,2↓Δ_Δ[;1+⎕IO]∘Δ1Δ←Δ_Δ[;3+⎕IO]
[8]    Δ3Δ←⌊/(Δ0Δ∧Δ2Δ>1E3|Δ3Δ)/Δ2Δ∘Δ0Δ←0≠8|Δ1Δ
[9]    →Δ5Δ⌈ι~∨/Δ2Δ←Δ2Δ=Δ3Δ
[10]    Δ1Δ←Δ2Δ∧5=8|Δ1Δ∘Δ0Δ←Δ2Δ∧3=4|Δ1Δ
[11]    Δ7Δ:→Δ8Δ⌈ι0≠ΔTΔ Δ3Δ
[12]    →Δ9Δ∘→Δ5Δ⌈ι'Y'≠1↑⎕IO⎕'Y=>NEXT TAPE'
[13]    Δ8Δ:ΔWΔ Δ0Δ/Δ_Δ[;⎕IO]
[14]    →2+⎕LC⌈ι1E3<Δ3Δ∘Δ4Δ←Δ0Δ/ιρΔ0Δ←Δ0Δ∨Δ1Δ
[15]    Δ_Δ[Δ4Δ;3+⎕IO]←(8×8≤Δ_Δ[Δ4Δ;3+⎕IO])+Δ0Δ/5-Δ1Δ
[16]    ∘⍉(1E3<Δ3Δ)/'Δ_Δ[Δ4Δ;3+⎕IO]←Δ_Δ[Δ4Δ;3+⎕IO]-4'
[17]    ΔPΔ←(1,1↓Δ2Δ)≢ΔΔΔ∘ΔQΔ←(1,1↓Δ2Δ)≢Δ_Δ
[18]    0 ⎕XW[1+⎕IO]'ΔPΔ ΔQΔ'∘ΔQΔ[⎕IO;1+⎕IO]←Δ3Δ
[19]    ∘⍉(1E3>Δ3Δ)/'ΔFΔ Δ1Δ/Δ_Δ[;⎕IO]'
[20]    Δ4Δ←(Δ4Δ=4⌈199|Δ4Δ)/Δ4Δ←⎕XN[⎕IO+1]ι0
[21]    →3+⎕LC⌈ι0=ρΔ4Δ←(~Δ4Δ∈ΔQΔ[;⎕IO])/Δ4Δ
[22]    (1↑Δ4Δ)⎕XD[1+⎕IO]⎕XN[1+⎕IO]1↑Δ4Δ
[23]    →‾1+⎕LC⌈ι0≠ρΔ4Δ←1↓Δ4Δ
[24]    ⎕XF[1+⎕IO]ι0
[25]    →Δ6Δ∘→Δ7Δ⌈ι1E3<Δ3Δ←⌊2E3|1E3+Δ3Δ
[26]    Δ5Δ:→3+⎕LC⌈ι~∨/Δ1Δ←(8|2↓Δ_Δ[;3+⎕IO])∈2 4 6
[27]    'LIB/70 ERROR'∘⎕PT←0
[28]    7 0 0⌽(1 1,Δ1Δ)≢Δ_Δ
[29]    →0×ι~∨/Δ1Δ←0=2↓Δ_Δ[;1+⎕IO]
[30]    ∘⎕'GROUPS ONLY ON TAPE 0:'
[31]    ∘⎕0 0 0⌽Δ1Δ/2↓Δ_Δ[;⎕IO]
      ∇


      ∇ΔIΔ Δ0Δ;Δ1Δ
[1]    →Δ9Δ⌈ι0=ρΔ0Δ←,Δ0Δ
[2]    Δ1Δ←(ΔYΔ Δ0Δ)[;4+⎕IO]
[3]    →0∘⎕←ΔΔΔ[Δ1Δ;],(4 5 8 3∘.×1 0 0)⌽Δ_Δ[Δ1Δ;]
[4]    Δ9Δ:⎕←'MCM/APL - LIB/70       ',(8ρ1 1 0)\6 0 0⌽,1 1↑Δ_Δ
[5]    ⎕←'INDEX TO LIBRARY: ',ΔΔΔ[⎕IO;]∘⎕←''
[6]    ⎕←' NAME  GROUP TAPE  DATE STATUS'∘⎕←''
[7]    ⎕←''∘⎕←(25ρ' '),'3210'
[8]    ⎕←(1 0↓ΔΔΔ),((4 5 8∘.×1 0 0)⌽1 ‾1↓Δ_Δ),(4 1ρ2 1 1 1)⌽⍟(4ρ2)⊤,1 3↓Δ_Δ 1
[9]    ⎕←'BIT          STATUS'∘⎕←''
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[10]    □←' 0  WS PRESENT ON VOL. 0'
[11]    □←' 1  LIB VERSION NOT CURRENT'
[12]    □←' 2  LIB VERSION ≠ BACK-UP VERSION'
[13]    □←' 3  WS NOT LISTED SINCE LAST SAVE'
      ∇


      ∇Δ4Δ ΔAΔ Δ0Δ;Δ1Δ;Δ2Δ;Δ3Δ
[1]    →0∘□'NO! FN ACTIVE'∘→2⌈ι1=ρ□LC
[2]    →0∘□'NO! GROUP ACTIVE'∘→3⌈ι0=□XV
[3]    →2+□LC⌈ι(ρΔ4Δ←,Δ4Δ)∨.=1,ρΔ0Δ←,Δ0Δ
[4]    →0∘□'LENGTH ERROR'
[5]    →Δ6Δ⌈ι~∨/Δ1Δ←~Δ0Δ∈□XN[1+□IO]ι0
[6]    →0∘□'GROUPS ',(⍕Δ1Δ/Δ0Δ),' MISSING'
[7]    Δ6Δ:→Δ9Δ⌈ι0≠0\0ρΔ0Δ∘→0×ι0=ρΔ0Δ
[8]    Δ2Δ←□IO∘□'ENTER WS NAMES'
[9]    Δ1Δ←((ρΔ0Δ),7)ρ' '∘Δ4Δ←(ρΔ0Δ)ρΔ4Δ
[10]   Δ8Δ:Δ1Δ[Δ2Δ;]←7↑(4↓□(3 0 0⍕Δ0Δ[Δ2Δ]),':'),7ρ' ' '
[11]   →Δ5Δ⌈ι0=+/ρΔYΔ Δ1Δ[Δ2Δ;]
[12]   →Δ8Δ∘□'DUPLICATE OR ILLEGAL NAME'
[13]   Δ5Δ:→Δ8Δ⌈ι(Δ2Δ←1+Δ2Δ)≤□IO+¯1+ρΔ0Δ
[14]   Δ7Δ:Δ2Δ←4++/Δ3Δ←Δ3Δ=(ιρΔ3Δ←2↓Δ_Δ[;□IO])+4-□IO
[15]   Δ3Δ←1 1,(Δ3Δ,0)∨0,~Δ3Δ∘→Δ5Δ⌈ι99<Δ2Δ
[16]   Δ3Δ←Δ3Δι0∘ΔΔΔ←Δ3Δ⌿ΔΔΔ∘Δ_Δ←Δ3Δ⌿Δ_Δ
[17]   Δ_Δ[Δ3Δ;]←Δ2Δ,(1↑Δ4Δ),Δ_Δ[□IO;□IO],15∘ΔΔΔ[Δ3Δ;]←,1 7↑Δ1Δ
[18]   Δ3Δ←(ΔXΔ Δ3Δ)≠Δ3Δ←□XN[1+□IO]1↑Δ0Δ∘□XS 0
[19]   □XS Δ2Δ∘Δ2Δ □XC Δ3Δ
[20]   □XS 0∘(1↑Δ0Δ)□XR[1+□IO]Δ3Δ
[21]   →Δ7Δ⌈ι0≠ρΔ0Δ←1↓Δ0Δ∘Δ1Δ←1 0↓Δ1Δ∘Δ4Δ←1↓Δ4Δ
[22]   →0∘□XF[1+□IO]ι0
[23]   Δ9Δ:→0∘□'NOT IMPLEMENTED'
[24]   Δ5Δ:→0∘□'NOT SAVED-DIRECTORY FULL'
      ∇


      ∇R←ΔYΔ X
[1]    →N⌈ι0=0\0ρX←,X
[2]    →E1⌈ι(4=□NC X)∨' '=1↑X←(2⌈7⌊ρX)↑X,7ρ' '
[3]    →E⌈ι0=ρR←R/ιρR←ΔΔΔ[;□IO]=1↑X
[4]    R←(ΔΔΔ[R;1+ιρX]∧.=X←1↓X)/R
[5]    →0∘R←Δ_Δ[R;],R∘.+,0∘→E⌈ι1≠ρR
[6]    E:→ρR←(0,2⌊ρR)ρ0
[7]    E1:→ρR←0 4ρ0
[8]    N:R←1+Rι(X∈R←1↓Δ_Δ[;□IO])/X
[9]    R←(1 0↓Δ_Δ[1,R;]),R∘.+,0
[10]    R←0 1ρ0∘→0×ι(ρX)=1↑ρR
      ∇


      ∇R←ΔTΔ X;O
[1]    R←4 1≥8|¯1↑□OU 201∘O←1↑□OUι0
[2]    →M⌈ι0=R←¯1 2+.×R∘□OU O
[3]    R←R×∨/(□XN[1+□IO]0)∧.='ΔPΔ '
[4]    0 □XR[1+□IO]'ΔPΔ ΔQΔ'∘→M⌈ι0=R
[5]    O←2 7ρΔΔΔ[□IO;],' MCM   '
[6]    R←R×∨/0∧.=ΔPΔ[□IO;]
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[7]     R←R×ΔQΔ[⎕IO;1+⎕IO]
[8]     M:→0×ι0≠R←R×(RΛ.=X)∨RΛ.=|X
[9]     →0×ι0=×/ρX∘⎕XF[1+⎕IO]ι0
[10]    O←(⌽|X),(X>0)/' WRITE ENABLED'
[11]    →1⌈ι'Y'=1↑⎕IO⎕'Y=>MOUNT VOL ',O
    ∇


    ∇R←ΔXΔ N
[1]     →0×ιΛ/R←N[;⎕IO+0 2]∨.≠'Δ'
[2]     R←R∨~N[;⎕IO+1]∈'0123456789',¯1↓⎕SI[;⎕IO+1]
    ∇


    ∇ΔWΔ Δ2Δ;Δ1Δ;Δ3Δ;Δ4Δ
[1]     ⎕XS 0∘Δ3Δ←⎕IO∘→0×ι0=ρΔ2Δ←(0≠Δ2Δ)/Δ2Δ
[2]     Δ9Δ:Δ1Δ←(ΔXΔ Δ1Δ)≠Δ1Δ←⎕XN Δ2Δ[Δ3Δ]
[3]     Δ4Δ←⎕IO∘⎕XS 1∘1 ⎕XC Δ1Δ∘→Δ7Δ⌈ι0=1↑ρΔ1Δ
[4]     Δ8Δ:Δ2Δ[Δ3Δ]⎕XR Δ1Δ[Δ4Δ;]
[5]     Δ2Δ[Δ3Δ]⎕XW[1+⎕IO]Δ1Δ[Δ4Δ;]
[6]     →Δ8Δ⌈ι(Δ4Δ←1+Δ4Δ)≤⎕IO+¯1+1↑ρΔ1Δ∘⎕EX Δ1Δ[Δ4Δ;]
[7]     Δ7Δ:1 ⎕XC ⎕XN[1+⎕IO]Δ2Δ[Δ3Δ]∘⎕XS 0
[8]     1 ⎕XD Δ1Δ←⎕XN 1∘1 ⎕XD Δ1Δ
[9]     Δ2Δ[Δ3Δ]⎕XD[1+⎕IO]Δ1Δ
[10]     →Δ9Δ⌈ι(Δ3Δ←1+Δ3Δ)≤⎕IO+¯1+ρΔ2Δ
    ∇


    ∇ΔJΔ Δ0Δ;Δ1Δ;Δ2Δ;ΔPΔ;ΔQΔ
[1]     Δ1Δ←(0≠⎕XV)≠(0=⎕NC Δ1Δ)≠Δ1Δ←⎕XN ⎕XV
[2]     1 ⎕XC ⎕XN ⎕XV∘1 ⎕XC ⎕FN∘1 ⎕XC ⎕VA
[3]     1 ⎕XD ⎕XN 0∘1 ⎕XC ⎕XN 0∘1 ⎕XD ⎕XN ⎕XV
[4]     Δ2Δ←(ΔXΔ Δ2Δ)≠Δ2Δ∘1 ⎕XD Δ2Δ←⎕XN 1
[5]     (1↑Δ0Δ)⎕XD Δ1Δ∘⎕XS 0∘→Δ9Δ⌈ι0=1↑(ρΔ1Δ)+ρΔ2Δ
[6]     ⎕XS 1↑Δ0Δ∘(1↑Δ0Δ)⎕XW Δ2Δ
[7]     Δ9Δ:Δ0Δ[2 3+⎕IO]←Δ_Δ[⎕IO;⎕IO],11+4×4≤8|1↑3↓Δ0Δ
[8]     Δ_Δ[¯1↑Δ0Δ;]←1 4ρΔ0Δ
[9]     ΔWΔ 1↑Δ0Δ∘→Δ8Δ⌈ι1 1E3=.>Δ1Δ←ΔTΔι0
[10]     Δ0Δ[1+⎕IO]←Δ1Δ
[11]     Δ2Δ←1,(1↑Δ0Δ)≠1↓ΔQΔ[;⎕IO]
[12]     ΔPΔ←Δ2Δ≠ΔPΔ∘ΔQΔ←Δ2Δ≠ΔQΔ
[13]     ΔQΔ←ΔQΔ÷1 4ρΔ0Δ∘Δ0Δ[3+⎕IO]←13
[14]     ΔPΔ←ΔPΔ÷ΔΔΔ[¯1↑Δ0Δ;]∘ΔPΔ[⎕IO;]←ΔΔΔ[⎕IO;]
[15]     0 ⎕XW[1+⎕IO]'ΔPΔ ΔQΔ'
[16]     Δ_Δ[¯1↑Δ0Δ;]←1 4ρΔ0Δ
[17]     Δ8Δ:⎕XS 1↑Δ0Δ∘⎕XF[1+⎕IO]ι0
    ∇


ΔΔΔ    [7 by 4 array of type char; element size 1 byte(s)]
 MCM
CLEAR
LIB/70
LISTER
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Δ_Δ    [4 by 4 numeric array; element size 3 byte(s)]
750529 0 750530 0
0 0 750529 1
100 100 750529 0
101 100 750528 0




NAMES IN GROUP 100:
IWT  ILT


     ∇IWT;NMS
[1]    ∘⎕'COPYRIGHT - MCM 1975'
[2]    →0∘⎕'WRONG PROCEDURE'∘→3[ι0=ρ,⎕XV
[3]    (ι0)⎕XI 0
[4]    0 ⎕XC NMS←⎕XN[1+⎕IO]1
[5]    1 ⎕XR[1+⎕IO]NMS∘⎕XS 0
[6]    L1:NMS←6↑(10↓(10+⎕IO)⎕'LIB NAME:|      |||'),6ρ' '
[7]    →L1∘⎕'ILLEGAL NAME'∘→L2[ιNMSv.≠'MCM   '
[8]    L2:ΔΔΔ[⎕IO;]←' ',NMS 1
[9]    Δ_Δ[⎕IO;⎕IO]←⌊1E6|100⊥6↓(6+⎕IO)⎕'DATE: YY MM DD'
[10]    ∘⎕'DO ⎕WC'∘⎕XFι0∘⎕XF[1+⎕IO]ι0
     ∇


     ∇ILT;Δ0Δ;Δ1Δ;ΔPΔ;ΔQΔ
[1]    ∘⎕'COPYRIGHT MCM 1975'
[2]    →0∘⎕'WRONG PROCEDURE'∘→3[ι2=⎕NC'ΔΔΔ'
[3]    Δ1Δ←1+⌈/(Δ1Δ<100)/Δ1Δ←Δ_Δ[;1+⎕IO]
[4]    Δ7Δ:∘⎕'MOUNT TAPE'
[5]    ∘⎕OU Δ0Δ∘→Δ8Δ[ι1<8|¯1↑⎕OU 201∘Δ0Δ←1↑⎕OUι0
[6]    Δ0Δ←⍤8↓(12+⎕IO)⎕'TAPE NO.',5 0 0⍕Δ1Δ
[7]    →Δ9Δ[ι(0≠1|Δ0Δ)v99<1E3|Δ0Δ
[8]    →Δ9Δ[ι(9099<Δ0Δ)v1≠×/ρΔ0Δ
[9]    ΔQΔ[⎕IO;1+⎕IO]←Δ0Δ∘ΔQΔ←1 4↑Δ_Δ
[10]    ΔPΔ←1 7↑ΔΔΔ
[11]    (ι0)⎕XI[1+⎕IO]0∘⎕XF[1+⎕IO]ι0
[12]    0 ⎕XW[1+⎕IO]'ΔPΔ ΔQΔ'
[13]    →Δ7Δ[ι1E3<Δ1Δ←2E3|1E3+Δ1Δ∘⎕XF[1+⎕IO]ι0
[14]    Δ9Δ:→0∘⎕'INVALID TAPE NO.'
[15]    Δ8Δ:→0∘⎕'NO TAPE'∘⎕OU Δ0Δ
     ∇




NAMES IN GROUP 101:
EJΔ  RLΔ  MMΔ  PPΔ  HQ   ΔLΔ  PRΔ  DIΔ


     ∇EJΔCT
[1]    PLΔ[⎕IO]←0∘⎕←((PSΔ[1+⎕IO]-1↑PLΔ),1)ρ' '
     ∇
```

```apl
     ∇RLΔ N
[1]    →NT⌈ι0≠1↑PLΔ
[2]    PT:⎕←TTΔ,((ρTTΔ)-⎕PW)↑(⎕PWρ' '),' PAGE ',0 0 0⍕1↓PLΔ
[3]    PLΔ←PLΔ+2 1∘⎕←''
[4]    NT:→(PSΔ[⎕IO]<N+2,1↑PLΔ)/0,NP
[5]     →0∘PLΔ←PLΔ+N,0
[6]    NP:→PT∘N←0∘PLΔ[⎕IO]←N∘EJΔCT
     ∇


     ∇R←MMΔ X
[1]     →TE⌈ι2=ρρR←X
[2]     R←((×/¯1↓ρX),¯1↑1,ρX)ρX
[3]    TE:→0×ι0≠¯1↑ρR
[4]     R←R,0\0ρX
     ∇


     ∇N PPΔ X;I;M;NR;P
[1]     I←0∘N←1↑N∘M←¯1↑N∘P←1↑PSΔ
[2]    LP:→0×ι0=NR←(N-I)⌊⌊(P-P|1↑PLΔ)÷M
[3]     ⎕←X[I+ιNR;]∘RLΔ NR×M
[4]     →LP∘I←I+NR 4]
     ∇


     ∇R←HQ
[1]    R←1
[2]    LP:→OK⌈ι66=1↑1↓⎕OU R
[3]    →0∘⎕OU 0∘→LP⌈ι0≠R←10|R+1
[4]    OK:∘⎕OU R,16
     ∇


     ∇RΔ←ΔLΔ GNΔ;EΔ;GΔ;IΔ;MΔ;NΔ;NMΔ;PLΔ;PSΔ;TTΔ
[1]    GNΔ←GNΔ,(0=×/ρGNΔ)/(8≤2↓Δ_Δ[;3+⎕IO])/2↓Δ_Δ[;⎕IO]
[2]    →EXΔ⌈ι0=ρGNΔ←ΔFΔ GNΔ
[3]    →0×ι0=IΔ←HQ
[4]    →0×ι~2|¯1↑⎕OU IΔ,64∘⎕BO 120
[5]     'POSITION PAPER'∘⎕PT←200∘PSΔ←48 51,⎕PW←80
[6]    LGΔ:NΔ←×/ρNMΔ←⎕XN GΔ←1↑GNΔ∘PLΔ←0 1
[7]    TTΔ←6 0 0⍕Δ_Δ[MΔ←''ρϕΔYΔ GΔ;2+⎕IO]
[8]    TTΔ←' (',(⍕GΔ),')  SAVED:',(9ρ0 1 1)\TTΔ
[9]    TTΔ←'GROUP: ',ΔΔΔ[⎕IO;],' ',ΔΔΔ[MΔ;],TTΔ
[10]    IΔ←⎕IO∘'CONTENTS:'PRΔNT(1,NΔ)ρNMΔ
[11]   LNΔ:EΔ←(~GΔ∈0,⎕XV)/NΔ←NMΔ[IΔ;]
[12]    →DNΔ⌈ι(⎕NC EΔ)∈0 4
[13]    →ENΔ∘(NΔ,':')PRΔNT '∗∗∗ CONFLICT ∗∗∗'
[14]   DNΔ:⎕EX EΔ∘DIΔSP NΔ∘GΔ ⎕XR EΔ
[15]   ENΔ:→LNΔ⌈ι(⎕IO+1↑ρNMΔ)>IΔ←IΔ+1
[16]   Δ_Δ[MΔ;3+⎕IO]←8|Δ_Δ[MΔ;3+⎕IO]
[17]    →LGΔ⌈ι0<ρGNΔ←1↓GNΔ∘EJΔCT
[18]   EXΔ:RΔ←'END OF LIST'
[19]   ⎕PT←0∘⎕OU(1↑⎕OUι0),7×32
     ∇
```

```
      ∇P1 PR∆NT P2;N;R1;R2
[1]      R1←⌈(ρP1←MM∆ P1)÷1,⎕PW
[2]      R2←⌈(ρP2←MM∆ P2)÷1,⎕PW SP
[3]      →SP[ιPS∆[⎕IO]<N←1+(×/R1)+×/R2
[4]      →0∘⎕←''∘⎕←P2∘⎕←P1∘RL∆ N
[5]    SP:RL∆ ¯5∘RL∆ 5
[6]      R2 PP∆ P2∘R1 PP∆ P1
[7]       ⎕←''∘RL∆ 1
     ∇



      ∇DI∆SP X∆;D∆;N∆;T∆
[1]       →ER∆[ι1≠¯1↑1,¯1↓ρX∆
[2]       →(NV∆,VA∆,VA∆,FN∆,ER∆,A2∆)[⎕IO+⎕NC X∆]
[3]     ER∆:+'INVALID NAME'
[4]     NV∆:→0∘(X∆,':') PR∆NT '** NO VALUE **'
[5]     A2∆:→0∘(X∆,':') PR∆NT '** α2 **'
[6]     VA∆:T∆←'(',(⍕ρD∆),((0≠0\0ρD∆←⍕X∆)/',''),')'
[7]       →0∘(X∆,T∆,':') PR∆NT D∆←⍕D∆
[8]     FN∆:N∆←1↑ρD∆←⎕CR X∆
[9]       T∆[;⎕IO]←']'∘T∆←5 0 0⍕(ιN∆)∘.-,⎕IO
[10]      T∆[;⎕IO]←'['∘T∆←(5-(T∆≠' ')⊥1)⌽T∆
[11]      T∆[⎕IO;]←'     ∇'∘D∆[⎕IO;⎕IO]←' '
[12]     ∘⍕N∆←'T∆←(1 0×ρD∆)ρ''''∘D∆←T∆,D∆'
[13]    D∆ PR∆NT '     ∇ '
     ∇
```