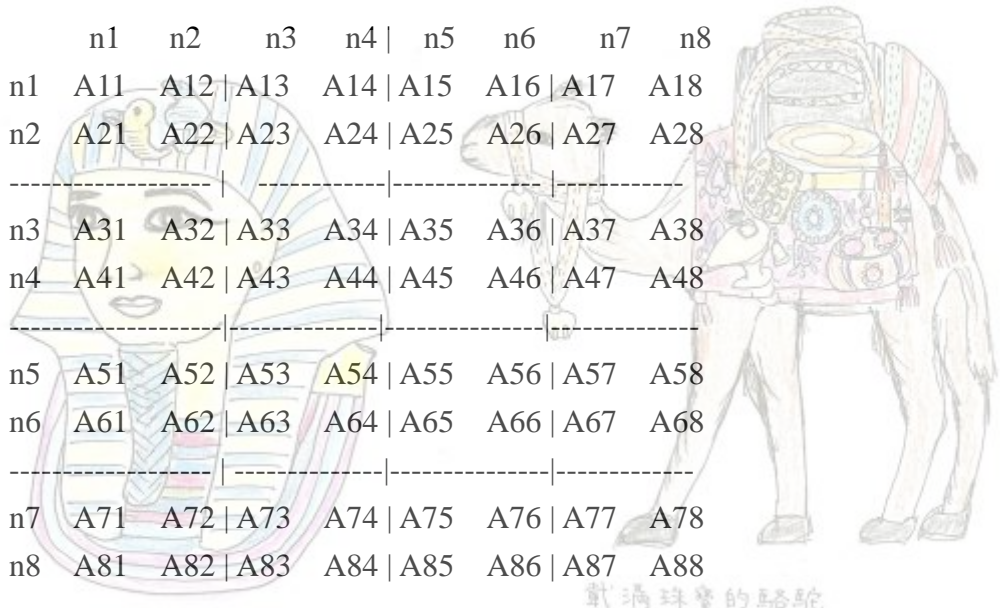


c 8 x 8 部份矩陣的逆矩陣

c		n1	n2	n3	n4	n5	n6	n7	n8
c	n1	A11	A12	A13	A14	A15	A16	A17	A18
c	n2	A21	A22	A23	A24	A25	A26	A27	A28
c	n3	A31	A32	A33	A34	A35	A36	A37	A38
c	n4	A41	A42	A43	A44	A45	A46	A47	A48
c	n5	A51	A52	A53	A54	A55	A56	A57	A58
c	n6	A61	A62	A63	A64	A65	A66	A67	A68
c	n7	A71	A72	A73	A74	A75	A76	A77	A78
c	n8	A81	A82	A83	A84	A85	A86	A87	A88

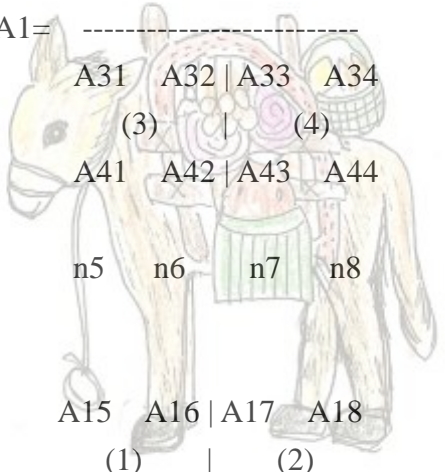


載滿珠寶的駱駝

c n1 n2 n3 n4

2011 埃及尼羅河之旅

c	n1	A11	A12	A13	A14
c		(1)		(2)	
c	n2	A21	A22	A23	A24
c	A1=	-----			
c	n3	A31	A32	A33	A34
c		(3)		(4)	
c	n4	A41	A42	A43	A44



c		n5	n6	n7	n8
c	n1	A15	A16	A17	A18
c		(1)		(2)	
c	n2	A25	A26	A27	A28
c	A2=	-----			
c	n3	A35	A36	A37	A38
c		(3)		(4)	
c	n4	A45	A46	A47	A48



阿拉丁神燈

c n5 n6 n7 n8

c n5 A51 A52 | A53 A54

c (1) | (2)

c n6 A61 A62 | A63 A64

c A3=-----

c n7 A71 A72 | A73 A74

c (3) | (4)

c n8 A81 A82 | A83 A84

c n5 n6 n7 n8

c n5 A55 A56 | A57 A58

c (1) | (2)

c n6 A65 A66 | A67 A68

c A4=-----

c n7 A75 A76 | A77 A78 埃及尼羅河之旅

c (3) | (4)

c n8 A85 A86 | A87 A88



載滿珠寶的駱駝

c

暫存工作檔 100~140

c 將(1)子矩陣數據依序存入 unit 1, 2, 3, 4 逆矩陣結果存於 17,18,19,20

c 將(2)子矩陣數據依序存入 unit 5, 6, 7, 8 逆矩陣結果存於 21,22,23,24

c 將(3)子矩陣數據依序存入 unit 9,10,11,12 逆矩陣結果存於 25,26,27,28

c 將(4)子矩陣數據依序存入 unit 13,13,15,16 逆矩陣結果存於 29,30,31,32

c 在主程式內作如下存檔工作

test=1

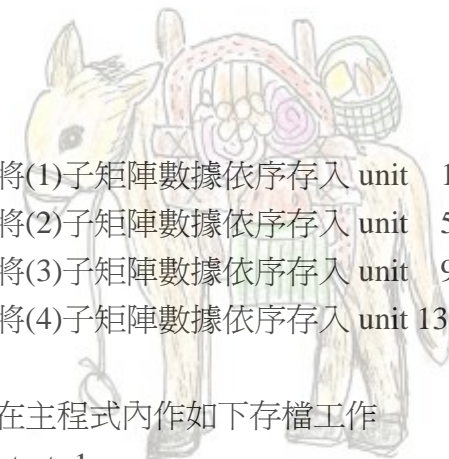
if(test.eq.1) go to 10000

REWIND 1

WRITE(1) ((A(I,J),J=1,N1),I=1,N1)

WRITE(1) ((A(I,J),J=1,N2),I=1,N1)

WRITE(1) ((A(I,J),J=1,N1),I=1,N2)



載滿寶物的驢子



阿拉丁神燈

WRITE(1) ((A(I,J),J=1,N2),I=1,N2)

REWIND 2

WRITE(2) ((A(I,J),J=1,N3),I=1,N1)

WRITE(2) ((A(I,J),J=1,N4),I=1,N1)

WRITE(2) ((A(I,J),J=1,N3),I=1,N2)

WRITE(2) ((A(I,J),J=1,N4),I=1,N2)

REWIND 3

WRITE(3) ((A(I,J),J=1,N3),I=1,N3)

WRITE(3) ((A(I,J),J=1,N4),I=1,N3)

WRITE(3) ((A(I,J),J=1,N3),I=1,N4)

WRITE(3) ((A(I,J),J=1,N4),I=1,N4)

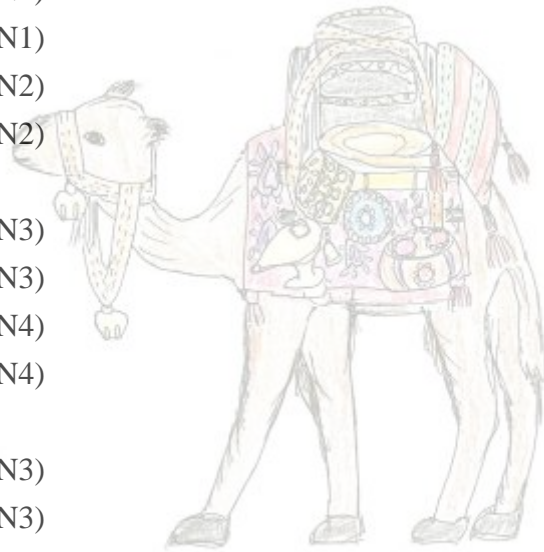
REWIND 4

WRITE(4) ((A(I,J),J=1,N3),I=1,N3)

WRITE(4) ((A(I,J),J=1,N4),I=1,N3)

WRITE(4) ((A(I,J),J=1,N3),I=1,N4)

WRITE(4) ((A(I,J),J=1,N4),I=1,N4)



載滿珠寶的駱駝

REWIND 5

WRITE(5) ((A(I,J),J=1,N5),I=1,N1) 尼羅河之旅

WRITE(5) ((A(I,J),J=1,N6),I=1,N1)

WRITE(5) ((A(I,J),J=1,N5),I=1,N2)

WRITE(5) ((A(I,J),J=1,N6),I=1,N2)

REWIND 6

WRITE(6) ((A(I,J),J=1,N7),I=1,N1)

WRITE(6) ((A(I,J),J=1,N8),I=1,N1)

WRITE(6) ((A(I,J),J=1,N7),I=1,N2)

WRITE(6) ((A(I,J),J=1,N8),I=1,N2)

REWIND 7

WRITE(7) ((A(I,J),J=1,N5),I=1,N3)

WRITE(7) ((A(I,J),J=1,N6),I=1,N3)

WRITE(7) ((A(I,J),J=1,N3),I=1,N4)

WRITE(7) ((A(I,J),J=1,N6),I=1,N4)

REWIND 8

WRITE(8) ((A(I,J),J=1,N7),I=1,N3)

WRITE(8) ((A(I,J),J=1,N8),I=1,N3)

WRITE(8) ((A(I,J),J=1,N7),I=1,N4)

WRITE(8) ((A(I,J),J=1,N8),I=1,N4)



阿拉丁神燈

REWIND 9

WRITE(9) ((A(I,J),J=1,N1),I=1,N5)

WRITE(9) ((A(I,J),J=1,N2),I=1,N5)

WRITE(9) ((A(I,J),J=1,N1),I=1,N6)

WRITE(9) ((A(I,J),J=1,N2),I=1,N6)

REWIND 10

WRITE(10) ((A(I,J),J=1,N3),I=1,N5)

WRITE(10) ((A(I,J),J=1,N4),I=1,N5)

WRITE(10) ((A(I,J),J=1,N3),I=1,N6)

WRITE(10) ((A(I,J),J=1,N4),I=1,N6)

REWIND 11

WRITE(11) ((A(I,J),J=1,N1),I=1,N7)

WRITE(11) ((A(I,J),J=1,N2),I=1,N7)

WRITE(11) ((A(I,J),J=1,N1),I=1,N8)

WRITE(11) ((A(I,J),J=1,N2),I=1,N8)

REWIND 12

WRITE(12) ((A(I,J),J=1,N3),I=1,N7)

WRITE(12) ((A(I,J),J=1,N4),I=1,N7)

WRITE(12) ((A(I,J),J=1,N5),I=1,N8) 尼羅河之旅

WRITE(12) ((A(I,J),J=1,N6),I=1,N8)

REWIND 13

WRITE(13) ((A(I,J),J=1,N5),I=1,N5)

WRITE(13) ((A(I,J),J=1,N6),I=1,N5)

WRITE(13) ((A(I,J),J=1,N5),I=1,N6)

WRITE(13) ((A(I,J),J=1,N6),I=1,N6)

REWIND 14

WRITE(14) ((A(I,J),J=1,N7),I=1,N5)

WRITE(14) ((A(I,J),J=1,N8),I=1,N5)

WRITE(14) ((A(I,J),J=1,N7),I=1,N6)

WRITE(14) ((A(I,J),J=1,N8),I=1,N6)

REWIND 15

WRITE(15) ((A(I,J),J=1,N5),I=1,N7)

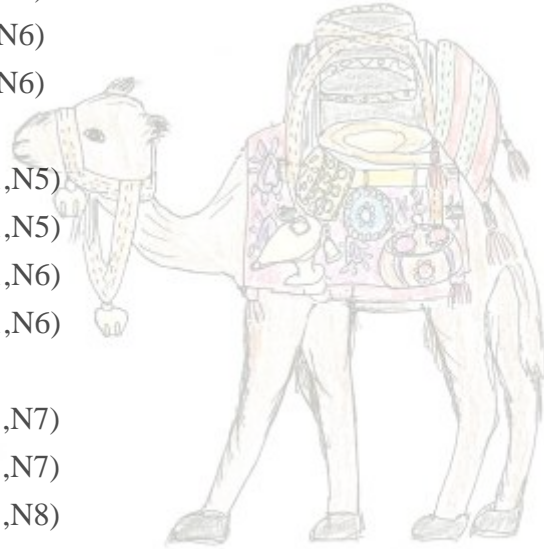
WRITE(15) ((A(I,J),J=1,N6),I=1,N7)

WRITE(15) ((A(I,J),J=1,N5),I=1,N8)

WRITE(15) ((A(I,J),J=1,N6),I=1,N8)

REWIND 16

WRITE(16) ((A(I,J),J=1,N7),I=1,N7)



載滿珠寶的駱駝



阿拉丁神燈

```
WRITE(16) ((A(I,J),J=1,N8),I=1,N7)
```

```
WRITE(16) ((A(I,J),J=1,N7),I=1,N8)
```

```
WRITE(16) ((A(I,J),J=1,N8),I=1,N8)
```

```
1000 continue
```

```
!-----
```

```
      SUBROUTINE mir8(A,B,NX,NA1,NA2,NA3,NA4,NA5,NA6,NA7,NA8,  
/          NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,  
/          NC1,NC2,NC3,NC4,NC5,NC6,NC7,NC8,  
/          L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L13,L14,L15,L16,  
/          M1,M2,M3,M4,M5,M6,M7,M8,M9,M10,M11,M12,M13,M14,M15,M16)
```

```
      REAL A(NX,NX),B(NX,NX)
```

```
OPEN(UNIT=121,FILE='121.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=122,FILE='122.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=123,FILE='123.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=124,FILE='124.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=125,FILE='125.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=126,FILE='126.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=127,FILE='127.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=128,FILE='128.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=129,FILE='129.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=130,FILE='130.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=131,FILE='131.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=132,FILE='132.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=133,FILE='133.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=134,FILE='134.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=135,FILE='135.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=136,FILE='136.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=137,FILE='137.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=138,FILE='138.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=139,FILE='139.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=140,FILE='140.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
c      D11
```

```
      CALL mir4(A,B,NX,NA5,NA6,NA7,NA8,L13,L14,L15,L16,
```

```
      / 121,122,123,124)
```

CALL mtr4(A,B,NX,NA5,NA6,NA7,NA8,NA5,NA6,NA7,NA8,
/NA1,NA2,NA3,NA4,121,122,123,124,L9,L10,L11,L12,125,126,127,128,1)

CALL mtr4(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,
/NB5,NB6,NB7,NB8,L5,L6,L7,L8,125,126,127,128,129,130,131,132,1)

CALL SA4_1(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,
/L1,L2,L3,L4,129,130,131,132,133,134,135,136)

CALL mir4(A,B,NX,NA1,NA2,NA3,NA4,133,134,135,136,M1,M2,M3,M4)

c D22

CALL mir4(A,B,NX,NA1,NA2,NA3,NA4,L1,L2,L3,L4,121,122,123,124)

CALL mtr4(A,B,NX,NA1,NA2,NA3,NA4,NA1,NA2,NA3,NA4,
/NB5,NB6,NB7,NB8,121,122,123,124,L5,L6,L7,L8,125,126,127,128,1)

CALL mtr4(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,
/NB5,NB6,NB7,NB8,L13,L14,L15,L16,125,126,127,128,129,130,131,132,1)

CALL SA4_4(A,B,NX,NA5,NA6,NA7,NA8,NB5,NB6,NB7,NB8,
/L13,L14,L15,L16,129,130,131,132,121,122,123,124)

CALL mir4(A,B,NX,NA5,NA6,NA7,NA8,121,122,123,124,
/M13,M14,M15,M16)

c D12

CALL mtr4(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,
/NB5,NB6,NB7,NB8,129,130,131,132,M13,M14,M15,M16,M5,M6,M7,M8,-1)

c D21

CALL mtr4(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,
/NB1,NB2,NB3,NB4,125,126,127,128,M1,M2,M3,M4,M9,M10,M11,M12,-1)

CLOSE(121)

CLOSE(122)

CLOSE(123)

CLOSE(124)

CLOSE(125)
 CLOSE(126)
 CLOSE(127)
 CLOSE(128)
 CLOSE(129)
 CLOSE(130)
 CLOSE(131)
 CLOSE(132)
 CLOSE(133)
 CLOSE(134)
 CLOSE(135)
 CLOSE(136)
 CLOSE(137)
 CLOSE(138)
 CLOSE(139)
 CLOSE(140)



載滿珠寶的駱駝

RETURN

2011 埃及尼羅河之旅

END

!-----

```

SUBROUTINE mtr8(A,B,NX,NA1,NA2,NA3,NA4,NA5,NA6,NA7,NA8,
/          NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
/          NC1,NC2,NC3,NC4,NC5,NC6,NC7,NC8,
/L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L13,L14,L15,L16,
/M1,M2,M3,M4,M5,M6,M7,M8,M9,M10,M11,M12,M13,M14,M15,M16,
/K1,K2,K3,K4,K5,K6,K7,K8,K9,K10,K11,K12,K13,K14,K15,K16)
REAL A(NX,NX),B(NX,NX)

```

```

CALL mtr8_1(A,B,NX,NA1,NA2,NA3,NA4,
/          NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
/          NC1,NC2,NC3,NC4,
/          L1,L2,L3,L4,L5,L6,L7,L8,
/          M1,M2,M3,M4,M9,M10,M11,M12,
/          K1,K2,K3,K4)

```

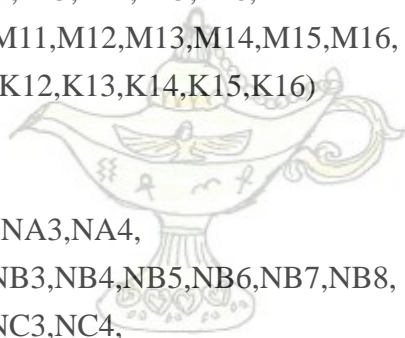
```

CALL mtr8_2(A,B,NX,NA1,NA2,NA3,NA4,
/          NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,

```



載滿貨品的驢子



阿拉伯燈

```

/          NC5,NC6,NC7,NC8,
/          L1,L2,L3,L4, L5, L6, L7, L8,
/          M5,M6,M7,M8,M13,M14,M15,M16,
/          K5,K6,K7,K8)

```



```

CALL mtr8_3(A,B,NX,NA5,NA6,NA7,NA8,
/          NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
/          NC1,NC2,NC3,NC4,
/          L9,L10,L11,L12,L13,L14,L15,L16,
/          M1,M2,M3,M4,M9,M10,M11,M12,
/          K9,K10,K11,K12)

```

```

CALL mtr8_4(A,B,NX,NA5,NA6,NA7,NA8,
/          NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
/          NC5,NC6,NC7,NC8,
/          L9,L10,L11,L12,L13,L14,L15,L16,
/          M5,M6,M7,M8,M13,M14,M15,M16,
/          K13,K14,K15,K16)

```

2011 埃及尼羅河之旅

```

RETURN
END

```

!-----

```

SUBROUTINE mtr8_1(A,B,NX,NA1,NA2,NA3,NA4,
/          NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
/          NC1,NC2,NC3,NC4,
/          L1,L2,L3,L4,L5,L6,L7,L8,
/          M1,M2,M3,M4,M9,M10,M11,M12,
/          K1,K2,K3,K4)

```

```

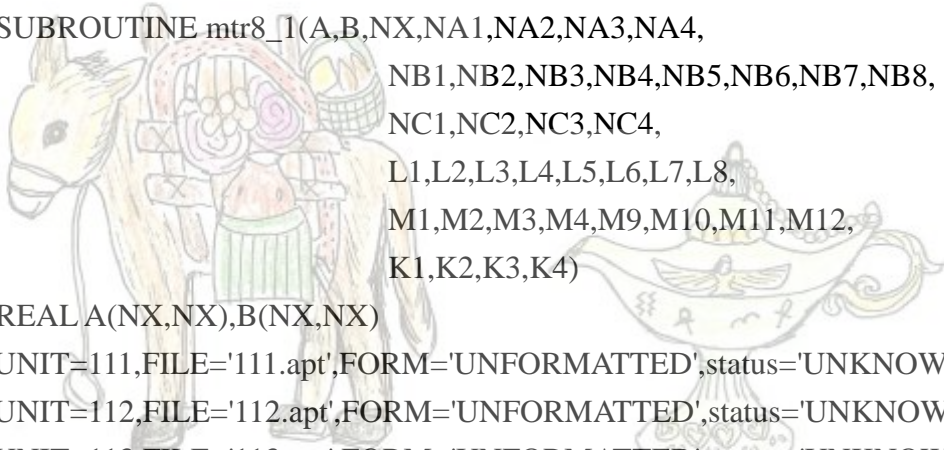
REAL A(NX,NX),B(NX,NX)

```

```

OPEN(UNIT=111,FILE='111.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=112,FILE='112.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=113,FILE='113.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=114,FILE='114.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=115,FILE='115.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=116,FILE='116.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=117,FILE='117.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=118,FILE='118.apr',FORM='UNFORMATTED',status='UNKNOWN')

```




```
CALL mtr4(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,
/ NC1,NC2,NC3,NC4,L1,L2,L3,L4,M1,M2,M3,M4,111,112,113,114)
```

```
CALL mtr4(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,
/ NC1,NC2,NC3,NC4,L5,L6,L7,L8,M9,M10,M11,M12,115,116,117,118)
```

```
CALL WA4_1(A,B,NX,NA1,NA2,NA3,NA4,NC1,NC2,NC3,NC4,
/ 111,112,113,114,115,116,117,118,K1,K2,K3,K4)
```

```
CLOSE(111)
```

```
CLOSE(112)
```

```
CLOSE(113)
```

```
CLOSE(114)
```

```
CLOSE(115)
```

```
CLOSE(116)
```

```
CLOSE(117)
```

```
CLOSE(118)
```

```
return
```

2011 埃及尼羅河之旅

```
end
```

!-----

```
SUBROUTINE mtr8_2(A,B,NX,NA1,NA2,NA3,NA4,
```

```
/ NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
```

```
/ NC5,NC6,NC7,NC8,
```

```
/ L1,L2,L3,L4, L5, L6, L7, L8,
```

```
/ M5,M6,M7,M8,M13,M14,M15,M16,
```

```
/ K5,K6,K7,K8)
```

```
REAL A(NX,NX),B(NX,NX)
```

```
OPEN(UNIT=111,FILE='111.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=112,FILE='112.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=113,FILE='113.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=114,FILE='114.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=115,FILE='115.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=116,FILE='116.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=117,FILE='117.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=118,FILE='118.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
CALL mtr4(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,
```

```
/ NC5,NC6,NC7,NC8,L1,L2,L3,L4, M5, M6, M7, M8,111,112,113,114)
```

```
CALL mtr4(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,
```

```
/ NC5,NC6,NC7,NC8,L5,L6,L7,L8,M13,M14,M15,M16,115,116,117,118)
```

```
CALL WA4_2(A,B,NX,NA1,NA2,NA3,NA4,NC5,NC6,NC7,NC8,
```

```
/ 111,112,113,114,115,116,117,118,K5,K6,K7,K8)
```

```
CLOSE(111)
```

```
CLOSE(112)
```

```
CLOSE(113)
```

```
CLOSE(114)
```

```
CLOSE(115)
```

```
CLOSE(116)
```

```
CLOSE(117)
```

```
CLOSE(118)
```

```
return
```

```
end
```

2011 埃及尼羅河之旅

!-----

```
SUBROUTINE mtr8_3(A,B,NX,NA5,NA6,NA7,NA8,
```

```
/ NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
```

```
/ NC1,NC2,NC3,NC4,
```

```
/ L9,L10,L11,L12,L13,L14,L15,L16,
```

```
/ M1,M2,M3,M4,M9,M10,M11,M12,
```

```
/ K9,K10,K11,K12)
```

```
REAL A(NX,NX),B(NX,NX)
```

```
OPEN(UNIT=111,FILE='111.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=112,FILE='112.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=113,FILE='113.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=114,FILE='114.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=115,FILE='115.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=116,FILE='116.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=117,FILE='117.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=118,FILE='118.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
CALL mtr4(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,
```

```
/ NC1,NC2,NC3,NC4,L9,L10,L11,L12,M1,M2,M3,M4,111,112,113,114)
```

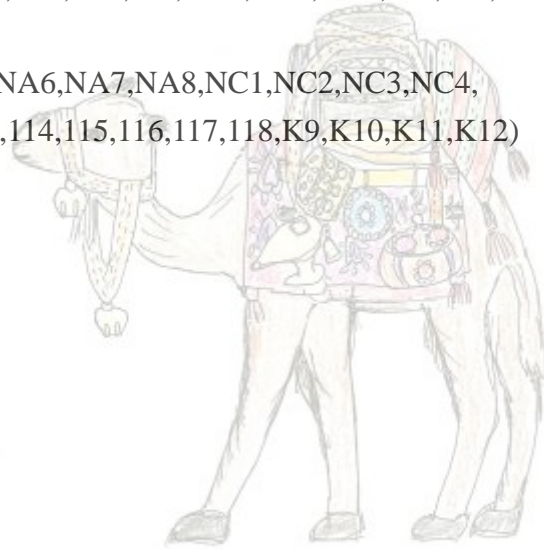


載滿珠寶的駱駝

```
CALL mtr4(A,B,NX,NA5,NA6,NA7,NA8,NB5,NB6,NB7,NB8,
/ NC1,NC2,NC3,NC4,L9,L10,L11,L12,M9,M10,M11,M12,115,116,117,118)
```

```
CALL WA4_3(A,B,NX,NA5,NA6,NA7,NA8,NC1,NC2,NC3,NC4,
/ 111,112,113,114,115,116,117,118,K9,K10,K11,K12)
```

```
CLOSE(111)
CLOSE(112)
CLOSE(113)
CLOSE(114)
CLOSE(115)
CLOSE(116)
CLOSE(117)
CLOSE(118)
```



載滿珠寶的駱駝

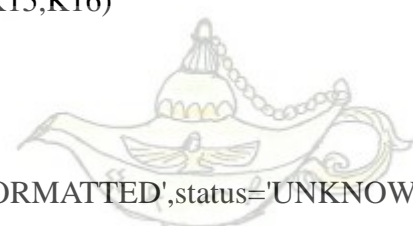
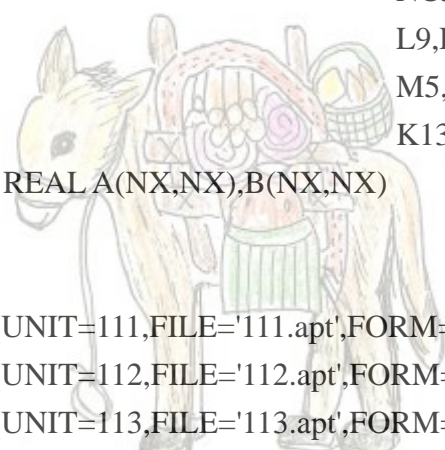
```
return
end
```

!-----2011 埃及尼羅河之旅

```
SUBROUTINE mtr8_4(A,B,NX,NA5,NA6,NA7,NA8,
/ NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
/ NC5,NC6,NC7,NC8,
/ L9,L10,L11,L12,L13,L14,L15,L16,
/ M5,M6,M7,M8,M13,M14,M15,M16,
/ K13,K14,K15,K16)
REAL A(NX,NX),B(NX,NX)
```

```
OPEN(UNIT=111,FILE='111.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=112,FILE='112.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=113,FILE='113.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=114,FILE='114.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=115,FILE='115.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=116,FILE='116.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=117,FILE='117.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=118,FILE='118.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
CALL mtr4(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,
/ NC5,NC6,NC7,NC8, L9,L10,L11,L12, M5, M6, M7, M8,111,112,113,114)
```



```
CALL mtr4(A,B,NX,NA5,NA6,NA7,NA8,NB5,NB6,NB7,NB8,
/ NC5,NC6,NC7,NC8,L13,L14,L15,L16,M13,M14,M15,M16,115,116,117,118)
```

```
CALL WA4_4(A,B,NX,NA5,NA6,NA7,NA8,NC5,NC6,NC7,NC8,
/ 111,112,113,114,115,116,117,118,K13,K14,K15,K16)
```

CLOSE(111)

CLOSE(112)

CLOSE(113)

CLOSE(114)

CLOSE(115)

CLOSE(116)

CLOSE(117)

CLOSE(118)



載滿珠寶的駱駝

return

end

2011 埃及尼羅河之旅

!-----

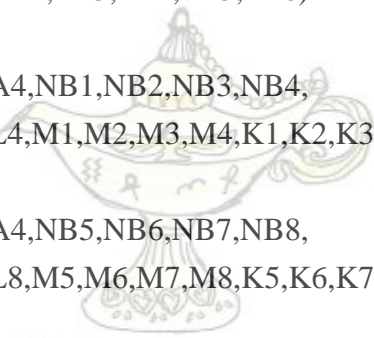
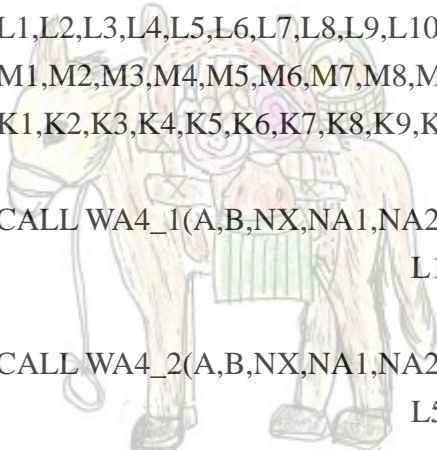
```
SUBROUTINE WA4(A,B,NX,NA1,NA2,NA3,NA4,NA5,NA6,NA7,NA8,
/ NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,
/ L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L13,L14,L15,L16,
/ M1,M2,M3,M4,M5,M6,M7,M8,M9,M10,M11,M12,M13,M14,M15,M16,
/ K1,K2,K3,K4,K5,K6,K7,K8,K9,K10,K11,K12,K13,K14,K15,K16)
```

```
CALL WA4_1(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,
/ L1,L2,L3,L4,M1,M2,M3,M4,K1,K2,K3,K4)
```

```
CALL WA4_2(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,
/ L5,L6,L7,L8,M5,M6,M7,M8,K5,K6,K7,K8)
```

```
CALL WA4_3(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,
/ L9,L10,L11,L12,M9,M10,M11,M12,K9,K10,K11,K12)
```

```
CALL WA4_4(A,B,NX,NA5,NA6,NA7,NA8,NB5,NB6,NB7,NB8,
/ L13,L14,L15,L16,M13,M14,M15,M16,K13,K14,K15,K16)
```



RETURN

END

!-----

```
SUBROUTINE SA4(A,B,NX,NA1,NA2,NA3,NA4,NA5,NA6,NA7,NA8,  
/ NB1,NB2,NB3,NB4,NB5,NB6,NB7,NB8,  
/ L1,L2,L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L13,L14,L15,L16,  
/ M1,M2,M3,M4,M5,M6,M7,M8,M9,M10,M11,M12,M13,M14,M15,M16,  
/ K1,K2,K3,K4,K5,K6,K7,K8,K9,K10,K11,K12,K13,K14,K15,K16)
```

```
CALL SA4_1(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,  
/ L1,L2,L3,L4,M1,M2,M3,M4,K1,K2,K3,K4)
```

```
CALL SA4_2(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,  
/ L5,L6,L7,L8,M5,M6,M7,M8,K5,K6,K7,K8)
```

```
CALL SA4_3(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,  
/ L9,L10,L11,L12,M9,M10,M11,M12,K9,K10,K11,K12)
```

```
CALL SA4_4(A,B,NX,NA5,NA6,NA7,NA8,NB5,NB6,NB7,NB8,  
/ L13,L14,L15,L16,M13,M14,M15,M16,K13,K14,K15,K16)
```

RETURN

END

!-----

```
SUBROUTINE WA4_1(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,  
/ L1,L2,L3,L4,M1,M2,M3,M4,K1,K2,K3,K4)
```

```
REAL A(NX,NX),B(NX,NX)
```

```
CALL WA2(A,B,NX,NA1,NA2,NB1,NB2,L1,M1,K1)
```

```
CALL WA2(A,B,NX,NA1,NA2,NB3,NB4,L2,M2,K2)
```

```
CALL WA2(A,B,NX,NA3,NA4,NB1,NB2,L3,M3,K3)
```

```
CALL WA2(A,B,NX,NA3,NA4,NB3,NB4,L4,M4,K4)
```

RETURN

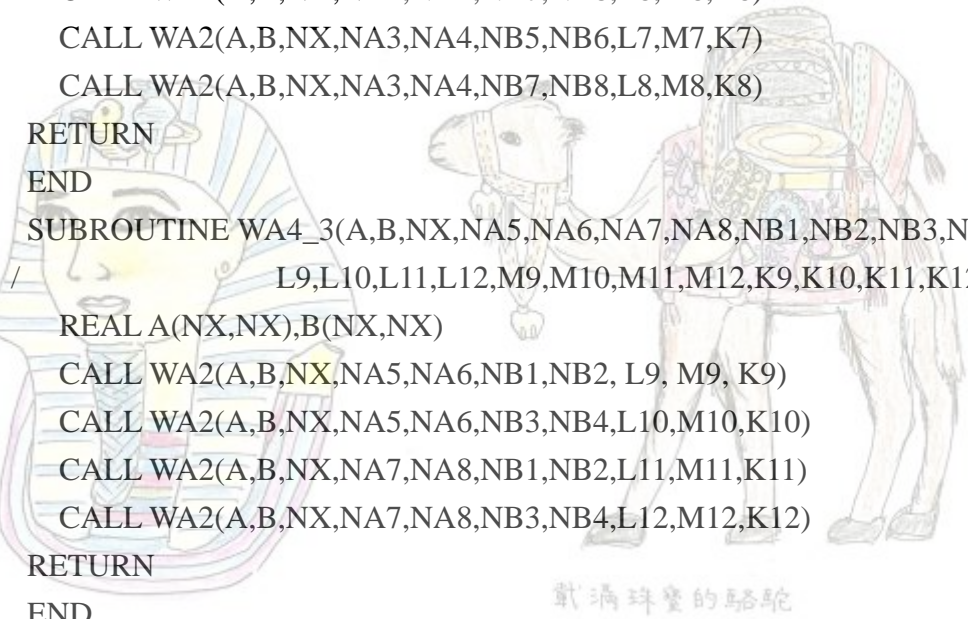
END

```
SUBROUTINE WA4_2(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,  
/ L5,L6,L7,L8,M5,M6,M7,M8,K5,K6,K7,K8)
```

```

REAL A(NX,NX),B(NX,NX)
CALL WA2(A,B,NX,NA1,NA2,NB5,NB6,L5,M5,K5)
CALL WA2(A,B,NX,NA1,NA2,NB7,NB8,L6,M6,K6)
CALL WA2(A,B,NX,NA3,NA4,NB5,NB6,L7,M7,K7)
CALL WA2(A,B,NX,NA3,NA4,NB7,NB8,L8,M8,K8)
RETURN
END
SUBROUTINE WA4_3(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,
/      L9,L10,L11,L12,M9,M10,M11,M12,K9,K10,K11,K12)
REAL A(NX,NX),B(NX,NX)
CALL WA2(A,B,NX,NA5,NA6,NB1,NB2, L9, M9, K9)
CALL WA2(A,B,NX,NA5,NA6,NB3,NB4,L10,M10,K10)
CALL WA2(A,B,NX,NA7,NA8,NB1,NB2,L11,M11,K11)
CALL WA2(A,B,NX,NA7,NA8,NB3,NB4,L12,M12,K12)
RETURN
END

```



```

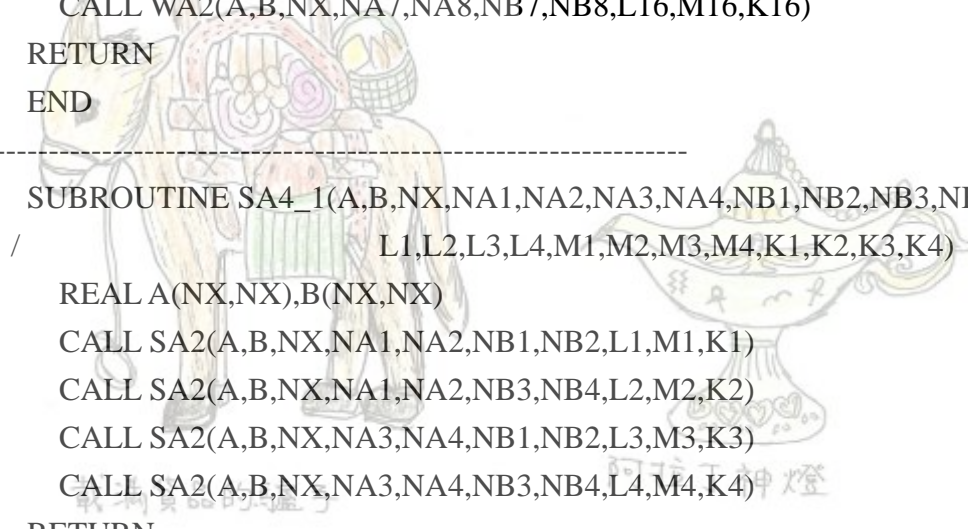
SUBROUTINE WA4_4(A,B,NX,NA5,NA6,NA7,NA8,NB5,NB6,NB7,NB8,
/      L13,L14,L15,L16,M13,M14,M15,M16,K13,K14,K15,K16)
REAL A(NX,NX),B(NX,NX)及尼羅河之旅
CALL WA2(A,B,NX,NA5,NA6,NB5,NB6,L13,M13,K13)
CALL WA2(A,B,NX,NA5,NA6,NB7,NB8,L14,M14,K14)
CALL WA2(A,B,NX,NA7,NA8,NB5,NB6,L15,M15,K15)
CALL WA2(A,B,NX,NA7,NA8,NB7,NB8,L16,M16,K16)
RETURN
END

```

```

!-----
SUBROUTINE SA4_1(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,
/      L1,L2,L3,L4,M1,M2,M3,M4,K1,K2,K3,K4)
REAL A(NX,NX),B(NX,NX)
CALL SA2(A,B,NX,NA1,NA2,NB1,NB2,L1,M1,K1)
CALL SA2(A,B,NX,NA1,NA2,NB3,NB4,L2,M2,K2)
CALL SA2(A,B,NX,NA3,NA4,NB1,NB2,L3,M3,K3)
CALL SA2(A,B,NX,NA3,NA4,NB3,NB4,L4,M4,K4)
RETURN
END
SUBROUTINE SA4_2(A,B,NX,NA1,NA2,NA3,NA4,NB5,NB6,NB7,NB8,
/      L5,L6,L7,L8,M5,M6,M7,M8,K5,K6,K7,K8)
REAL A(NX,NX),B(NX,NX)

```



CALL SA2(A,B,NX,NA1,NA2,NB5,NB6,L5,M5,K5)

CALL SA2(A,B,NX,NA1,NA2,NB7,NB8,L6,M6,K6)

CALL SA2(A,B,NX,NA3,NA4,NB5,NB6,L7,M7,K7)

CALL SA2(A,B,NX,NA3,NA4,NB7,NB8,L8,M8,K8)

RETURN

END

SUBROUTINE SA4_3(A,B,NX,NA5,NA6,NA7,NA8,NB1,NB2,NB3,NB4,
/ L9,L10,L11,L12,M9,M10,M11,M12,K9,K10,K11,K12)

REAL A(NX,NX),B(NX,NX)

CALL SA2(A,B,NX,NA5,NA6,NB1,NB2, L9, M9, K9)

CALL SA2(A,B,NX,NA5,NA6,NB3,NB4,L10,M10,K10)

CALL SA2(A,B,NX,NA7,NA8,NB1,NB2,L11,M11,K11)

CALL SA2(A,B,NX,NA7,NA8,NB3,NB4,L12,M12,K12)

RETURN

END

SUBROUTINE SA4_4(A,B,NX,NA5,NA6,NA7,NA8,NB5,NB6,NB7,NB8,
/ L13,L14,L15,L16,M13,M14,M15,M16,K13,K14,K15,K16)

REAL A(NX,NX),B(NX,NX)

CALL SA2(A,B,NX,NA5,NA6,NB5,NB6,L13,M13,K13)

CALL SA2(A,B,NX,NA5,NA6,NB7,NB8,L14,M14,K14)

CALL SA2(A,B,NX,NA7,NA8,NB5,NB6,L15,M15,K15)

CALL SA2(A,B,NX,NA7,NA8,NB7,NB8,L16,M16,K16)

RETURN

END

c*****

SUBROUTINE mtr4(A,B,NX,NA1,NA2,NA3,NA4,NB1,NB2,NB3,NB4,
/ NC1,NC2,NC3,NC4,L1,L2,L3,L4,M1,M2,M3,M4,K1,K2,K3,K4,ISIGN)

REAL A(NX,NX),B(NX,NX)

CALL mtr4_1(A,B,NX,NA1,NA2,NB1,NB2,NB3,NB4,
/ 載滿貨品的驢子 NC1,NC2,L1,L2,M1,M3,K1,ISIGN)

CALL mtr4_2(A,B,NX,NA1,NA2,NB1,NB2,NB3,NB4,
/ NC3,NC4,L1,L2,M2,M4,K2,K4,ISIGN)

CALL mtr4_3(A,B,NX,NA3,NA4,NB1,NB2,NB3,NB4,

```
/ NC1,NC2,L3,L4,M1,M3,K3,ISIGN)
```

```
CALL mtr4_4(A,B,NX,NA3,NA4,NB1,NB2,NB3,NB4,
```

```
/ NC3,NC4,L3,L4,M2,M4,K4,ISIGN)
```

```
return  
end
```

```
SUBROUTINE mtr4_1(A,B,NX,NA1,NA2,NB1,NB2,NB3,NB4,
```

```
/ NC1,NC2,L1,L2,M1,M3,K1,ISIGN)
```

```
REAL A(NX,NX),B(NX,NX)
```

```
OPEN(UNIT=105,FILE='105.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=106,FILE='106.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
CALL mtr2(A,B,NX,NA1,NA2,NB1,NB2,NC1,NC2,L1,M1,105,ISIGN)
```

```
CALL mtr2(A,B,NX,NA1,NA2,NB3,NB4,NC1,NC2,L2,M3,106,ISIGN)
```

```
CALL Wa2 (A,B,NX,NA1,NA2,NC1,NC2,105,106,K1)
```

```
CLOSE(105)
```

```
CLOSE(106)
```

```
return  
end
```

```
SUBROUTINE mtr4_2(A,B,NX,NA1,NA2,NB1,NB2,NB3,NB4,
```

```
/ NC3,NC4,L1,L2,M2,M4,K2,K4,ISIGN)
```

```
REAL A(NX,NX),B(NX,NX)
```

```
OPEN(UNIT=105,FILE='105.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
OPEN(UNIT=106,FILE='106.apr',FORM='UNFORMATTED',status='UNKNOWN')
```

```
CALL mtr2(A,B,NX,NA1,NA2,NB1,NB2,NC3,NC4,L1,M2,105,ISIGN)
```

```
CALL mtr2(A,B,NX,NA1,NA2,NB3,NB4,NC3,NC4,L2,M4,106,ISIGN)
```

```
CALL Wa2 (A,B,NX,NA1,NA2,NC3,NC4,105,106,K2)
```

```
CLOSE(105)
```


CLOSE(106)

return

end

```
      SUBROUTINE mtr4_3(A,B,NX,NA3,NA4,NB1,NB2,NB3,NB4,  
/      NC1,NC2,L3,L4,M1,M3,K3,ISIGN)  
      REAL A(NX,NX),B(NX,NX)
```

OPEN(UNIT=105,FILE='105.apr',FORM='UNFORMATTED',status='UNKNOWN')

OPEN(UNIT=106,FILE='106.apr',FORM='UNFORMATTED',status='UNKNOWN')

CALL mtr2(A,B,NX,NA3,NA4,NB1,NB2,NC1,NC2,L3,M1,105,ISIGN)

CALL mtr2(A,B,NX,NA3,NA4,NB3,NB4,NC1,NC2,L4,M3,106,ISIGN)

CALL Wa2 (A,B,NX,NA3,NA4,NC1,NC2,105,106,K3)

載滿珠寶的駱駝

CLOSE(105)

CLOSE(106)

2011 埃及尼羅河之旅

return

end

```
      SUBROUTINE mtr4_4(A,B,NX,NA3,NA4,NB1,NB2,NB3,NB4,  
/      NC3,NC4,L3,L4,M2,M4,K4,ISIGN)  
      REAL A(NX,NX),B(NX,NX)
```

OPEN(UNIT=105,FILE='105.apr',FORM='UNFORMATTED',status='UNKNOWN')

OPEN(UNIT=106,FILE='106.apr',FORM='UNFORMATTED',status='UNKNOWN')

CALL mtr2(A,B,NX,NA3,NA4,NB1,NB2,NC3,NC4,L3,M2,105,ISIGN)

CALL mtr2(A,B,NX,NA3,NA4,NB3,NB4,NC3,NC4,L4,M4,106,ISIGN)

CALL Wa2 (A,B,NX,NA3,NA4,NC3,NC4,105,106,K4)

阿拉丁神燈

CLOSE(105)

CLOSE(106)

return

end

C*****

```

SUBROUTINE mir4(A,B,NX,N1,N2,N3,N4,L1,L2,L3,L4,M1,M2,M3,M4)
REAL A(NX,NX),B(NX,NX)
OPEN(UNIT=101,FILE='101.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=102,FILE='102.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=103,FILE='103.apr',FORM='UNFORMATTED',status='UNKNOWN')
OPEN(UNIT=104,FILE='104.apr',FORM='UNFORMATTED',status='UNKNOWN')

```

```

c   D11
CALL mir2(A,B,NX,N3,N4,L4,101)
CALL mtr2(A,B,NX,N3,N4,N3,N4,N1,N2,101,L3,102,1)
CALL mtr2(A,B,NX,N1,N2,N3,N4,N1,N2,L2,102,101,1)
CALL sa2 (A,B,NX,N1,N2,N1,N2,L1,101,103)
CALL mir2(A,B,NX,N1,N2,103,M1)

```

```

c   D22
call mir2(a,b,nx,n1,n2,L1,101)
CALL mtr2(A,B,NX,N3,N4,N3,N4,N1,N2,101,L2,103,1)
CALL mtr2(A,B,NX,N1,N2,N3,N4,N1,N2,L3,103,101,1)
CALL sa2 (A,B,NX,N3,N4,N3,N4,L4,101,104)
CALL mir2(A,B,NX,N3,N4,104,M4)

```

```

c   D12
CALL mtr2(A,B,NX,N1,N2,N1,N2,N3,N4,102,M4,M2,-1)

```

```

c   D21
CALL mtr2(A,B,NX,N3,N4,N1,N2,N1,N2,103,M1,M3,-1)

```

```

CLOSE(101)
CLOSE(102)
CLOSE(103)
CLOSE(104)

```

```

return
end

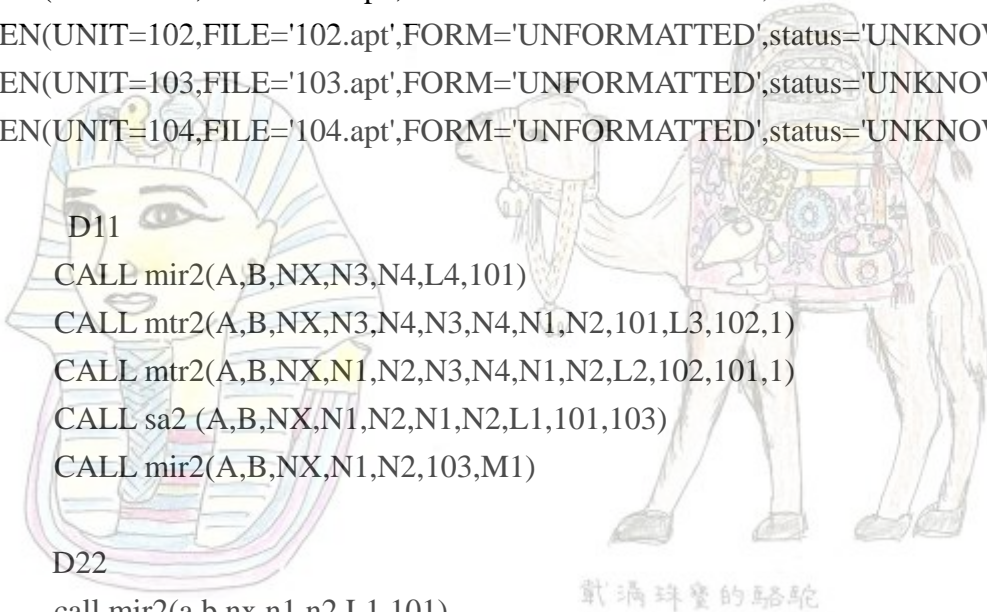
```

!-----

```

SUBROUTINE mtr2(A,B,NX,NA1,NA2,NB1,NB2,NC1,NC2,L,M,K,ISIGN)
REAL A(NX,NX),B(NX,NX)

```



載滿珠寶的駱駝



載滿貨品的驢子



阿拉丁神燈

! ISIGN=1 或 -1 -1 時結果變號

OPEN(UNIT=107,FILE='107.apr',FORM='UNFORMATTED',status='UNKNOWN')

REWIND L

REWIND M

READ(L) ((A(I,J),J=1,NB1),I=1,NA1)

READ(M) ((B(I,J),J=1,NC1),I=1,NB1)

CALL SEKI(A,B,NX,NA1,NB1,NC1)

REWIND 107

WRITE(107) ((A(I,J),J=1,NC1),I=1,NA1)

BACKSPACE L

READ(L) ((A(I,J),J=1,NB1),I=1,NA1)

READ(M) ((B(I,J),J=1,NC2),I=1,NB1)

CALL SEKI(A,B,NX,NA1,NB1,NC2)

WRITE(107) ((A(I,J),J=1,NC2),I=1,NA1)

READ(L) ((A(I,J),J=1,NB2),I=1,NA1)

READ(M) ((B(I,J),J=1,NC1),I=1,NB2)

CALL SEKI(A,B,NX,NA1,NB2,NC1)

REWIND 107 2011 埃及尼羅河之旅

READ(107) ((B(I,J),J=1,NC1),I=1,NA1)

CALL WA(A,B,NX,NA1,NC1)

REWIND K

IF(ISIGN.EQ.1) WRITE(K) ((B(I,J),J=1,NC1),I=1,NA1)

IF(ISIGN.EQ.-1) WRITE(K) ((-B(I,J),J=1,NC1),I=1,NA1)

READ(L) ((A(I,J),J=1,NB1),I=1,NA2)

READ(L) ((A(I,J),J=1,NB2),I=1,NA2)

REWIND L

READ(L) ((A(I,J),J=1,NB1),I=1,NA1)

READ(L) ((A(I,J),J=1,NB2),I=1,NA1)

READ(M) ((B(I,J),J=1,NC2),I=1,NB2)

CALL SEKI(A,B,NX,NA1,NB2,NC2)

READ(107) ((B(I,J),J=1,NC2),I=1,NA1)

CALL WA(A,B,NX,NA1,NC2)

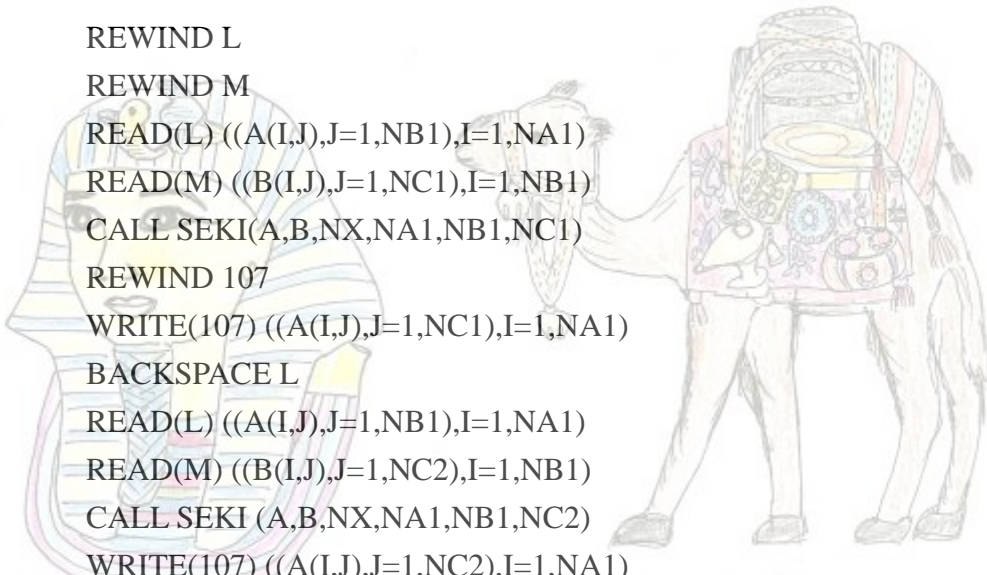
IF(ISIGN.EQ.1) WRITE(K) ((B(I,J),J=1,NC2),I=1,NA1)

IF(ISIGN.EQ.-1) WRITE(K) ((-B(I,J),J=1,NC2),I=1,NA1)

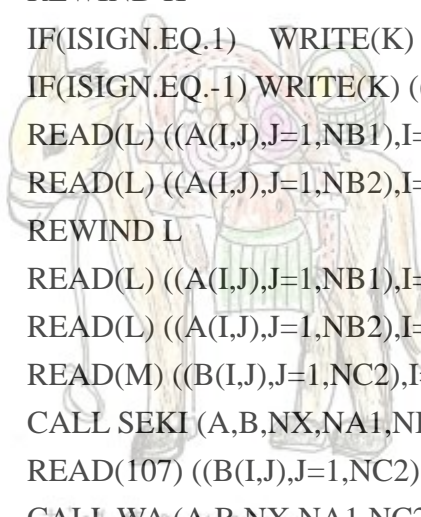
REWIND M

READ(M) ((B(I,J),J=1,NC1),I=1,NB1)

READ(L) ((A(I,J),J=1,NB1),I=1,NA2)



沙漠的駱駝



阿拉丁神燈

```

CALL SEKI (A,B,NX,NA2,NB1,NC1)
REWIND 107
WRITE(107) ((A(I,J),J=1,NC1),I=1,NA2)
READ(L) ((B(I,J),J=1,NA2),I=1,NA2)
BACKSPACE L
BACKSPACE L
READ(L) ((A(I,J),J=1,NB1),I=1,NA2)
READ(M) ((B(I,J),J=1,NC2),I=1,NB1)
CALL SEKI (A,B,NX,NA2,NB1,NC2)
WRITE(107) ((A(I,J),J=1,NC2),I=1,NA2)
READ(L) ((A(I,J),J=1,NB2),I=1,NA2)
READ(M) ((B(I,J),J=1,NC1),I=1,NB2)
CALL SEKI (A,B,NX,NA2,NB2,NC1)
REWIND 107
READ(107) ((B(I,J),J=1,NC1),I=1,NA2)
CALL WA (A,B,NX,NA2,NC1)
IF(ISIGN.EQ. 1) WRITE(K) (( B(I,J),J=1,NC1),I=1,NA2)
IF(ISIGN.EQ.-1) WRITE(K) ((-B(I,J),J=1,NC1),I=1,NA2)
BACKSPACE L
READ(L) ((A(I,J),J=1,NB2),I=1,NA2)
READ(M) ((B(I,J),J=1,NC2),I=1,NB2)
CALL SEKI (A,B,NX,NA2,NB2,NC2)
READ(107) ((B(I,J),J=1,NC2),I=1,NA2)
CALL WA (B,A,NX,NA2,NC2)
IF(ISIGN.EQ. 1) WRITE(K) (( A(I,J),J=1,NC2),I=1,NA2)
IF(ISIGN.EQ.-1) WRITE(K) ((-A(I,J),J=1,NC2),I=1,NA2)
CLOSE(107)

RETURN
END

```

C*****

```

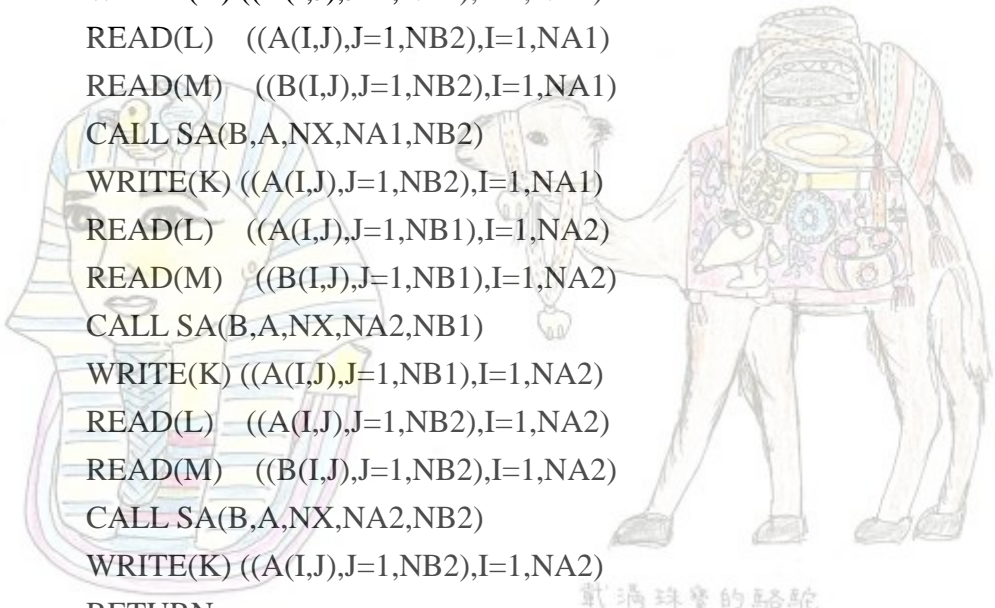
SUBROUTINE sa2(A,B,NX,NA1,NA2,NB1,NB2,L,M,K)
REAL A(NX,NX),B(NX,NX)
REWIND L
REWIND M
REWIND K
READ(L) ((A(I,J),J=1,NB1),I=1,NA1)

```

```

READ(M) ((B(I,J),J=1,NB1),I=1,NA1)
CALL SA(B,A,NX,NA1,NB1)
WRITE(K) ((A(I,J),J=1,NB1),I=1,NA1)
READ(L) ((A(I,J),J=1,NB2),I=1,NA1)
READ(M) ((B(I,J),J=1,NB2),I=1,NA1)
CALL SA(B,A,NX,NA1,NB2)
WRITE(K) ((A(I,J),J=1,NB2),I=1,NA1)
READ(L) ((A(I,J),J=1,NB1),I=1,NA2)
READ(M) ((B(I,J),J=1,NB1),I=1,NA2)
CALL SA(B,A,NX,NA2,NB1)
WRITE(K) ((A(I,J),J=1,NB1),I=1,NA2)
READ(L) ((A(I,J),J=1,NB2),I=1,NA2)
READ(M) ((B(I,J),J=1,NB2),I=1,NA2)
CALL SA(B,A,NX,NA2,NB2)
WRITE(K) ((A(I,J),J=1,NB2),I=1,NA2)
RETURN
END

```



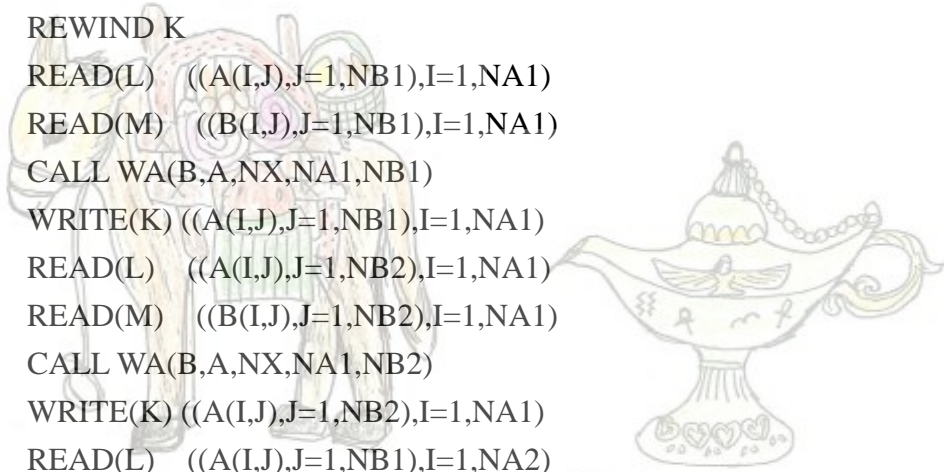
載滿珠寶的駱駝

C*****

```

SUBROUTINE Wa2(A,B,NX,NA1,NA2,NB1,NB2,L,M,K)
REAL A(NX,NX),B(NX,NX)
REWIND L
REWIND M
REWIND K
READ(L) ((A(I,J),J=1,NB1),I=1,NA1)
READ(M) ((B(I,J),J=1,NB1),I=1,NA1)
CALL WA(B,A,NX,NA1,NB1)
WRITE(K) ((A(I,J),J=1,NB1),I=1,NA1)
READ(L) ((A(I,J),J=1,NB2),I=1,NA1)
READ(M) ((B(I,J),J=1,NB2),I=1,NA1)
CALL WA(B,A,NX,NA1,NB2)
WRITE(K) ((A(I,J),J=1,NB2),I=1,NA1)
READ(L) ((A(I,J),J=1,NB1),I=1,NA2)
READ(M) ((B(I,J),J=1,NB1),I=1,NA2)
CALL WA(B,A,NX,NA2,NB1)
WRITE(K) ((A(I,J),J=1,NB1),I=1,NA2)
READ(L) ((A(I,J),J=1,NB2),I=1,NA2)
READ(M) ((B(I,J),J=1,NB2),I=1,NA2)
CALL WA(B,A,NX,NA2,NB2)

```



阿拉丁神燈

```

WRITE(K) ((A(I,J),J=1,NB2),I=1,NA2)
RETURN
END

```

C-----

```

SUBROUTINE mir2(A,B,NX,NA,NB,L,M)

```

C*****

C Calculate large matrix A(nA+NB,n+NB)'s inverse [A1]nA,nA [A2]nA,NB

C read A from unit L file, after calculating, [A3]NB,nA [A4]NB,NB

C write to unit M file with :

C [M1] = [[A1] - [A2] [A4]^ [A3]]^ , ^ means inverse

C [M3] = - [A4]^ [A3] [M1]

C [M4] = [[A4] - [A3] [A1]^ [A2]]^

C [M2] = - [A1]^ [A2] [M4]

C*****

```

REAL A(NX,NX),B(NX,NX)

```

載滿珠寶的駱駝

```

OPEN(UNIT=108,FILE='108.apr',FORM='UNFORMATTED',status='UNKNOWN')

```

2011 埃及尼羅河之旅

```

OPEN(UNIT=109,FILE='109.apr',FORM='UNFORMATTED',status='UNKNOWN')

```

```

REWIND L

```

```

READ(L) ((A(I,J),J=1,NA),I=1,NA)

```

```

READ(L) ((A(I,J),J=1,NS),I=1,NA)

```

```

READ(L) ((A(I,J),J=1,NA),I=1,NB)

```

```

READ(L) ((B(I,J),J=1,NB),I=1,NB)

```

```

CALL MINVS(B,NX,NB,1E-7,ILL)

```

```

ILLD=1

```

```

IF(ILL.NE.0) WRITE (*,10) ILLD,ILL

```

```

CALL SEKI(B,A,NX,NB,NB,NA)

```

```

REWIND 109

```

```

WRITE(109) ((B(I,J),J=1,NA),I=1,NB)

```

```

BACKSPACE L

```

```

BACKSPACE L

```

```

BACKSPACE L

```

```

READ(L) ((A(I,J),J=1,NB),I=1,NA)

```

```

CALL SEKI (A,B,NX,NA,NB,NA)

```

```

READ(L) ((B(I,J),J=1,NA),I=1,NB)

```

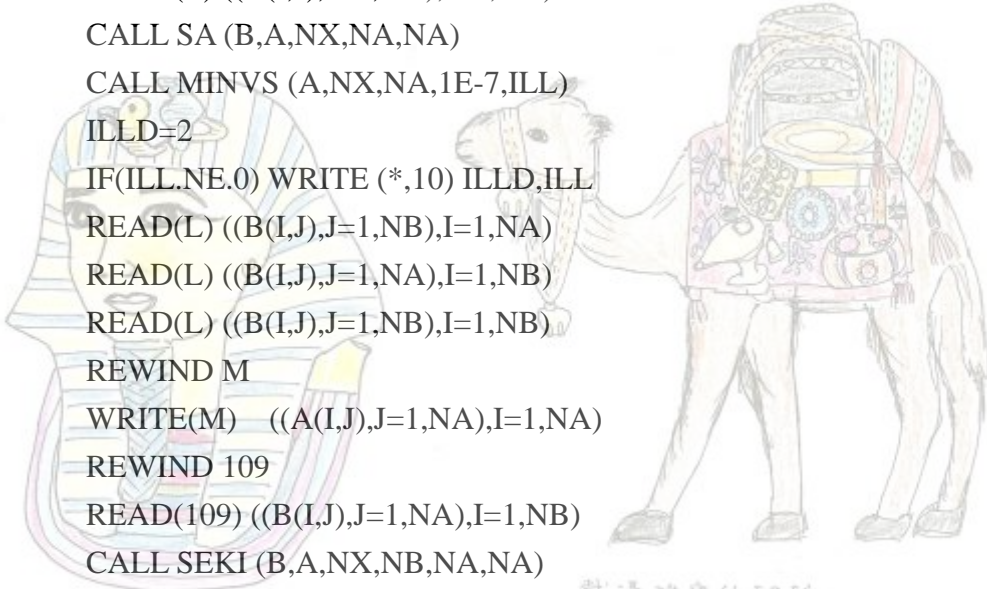


阿拉丁神燈

```

READ(L) ((B(I,J),J=1,NB),I=1,NB)
REWIND L
READ(L) ((B(I,J),J=1,NA),I=1,NA)
CALL SA (B,A,NX,NA,NA)
CALL MINVS (A,NX,NA,1E-7,ILL)
ILLD=2
IF(ILL.NE.0) WRITE (*,10) ILLD,ILL
READ(L) ((B(I,J),J=1,NB),I=1,NA)
READ(L) ((B(I,J),J=1,NA),I=1,NB)
READ(L) ((B(I,J),J=1,NB),I=1,NB)
REWIND M
WRITE(M) ((A(I,J),J=1,NA),I=1,NA)
REWIND 109
READ(109) ((B(I,J),J=1,NA),I=1,NB)
CALL SEKI (B,A,NX,NB,NA,NA)

```



載滿珠寶的駱駝

```

DO I=1,NB
DO J=1,NA
B(I,J)=-B(I,J)
end do

```

2011 埃及尼羅河之旅

```

REWIND 108
WRITE(108) ((B(I,J),J=1,NA),I=1,NB)
REWIND L
READ(L) ((A(I,J),J=1,NA),I=1,NA)
CALL MINVS (A,NX,NA,1E-7,ILL)
ILLD=3
IF(ILL.NE.0) WRITE(*,10) ILLD,ILL
READ(L) ((B(I,J),J=1,NB),I=1,NA)
CALL SEKI (A,B,NX,NA,NA,NB)
REWIND 109
WRITE(109) ((A(I,J),J=1,NB),I=1,NA)
READ(L) ((B(I,J),J=1,NA),I=1,NB)
CALL SEKI (B,A,NX,NB,NA,NB)
READ(L) ((A(I,J),J=1,NB),I=1,NB)
CALL SA (A,B,NX,NB,NB)
CALL MINVS (B,NX,NB,1E-7,ILL)
ILLD=4
IF(ILL.NE.0) WRITE(*,10) ILLD,ILL
WRITE(108) ((B(I,J),J=1,NB),I=1,NB)

```

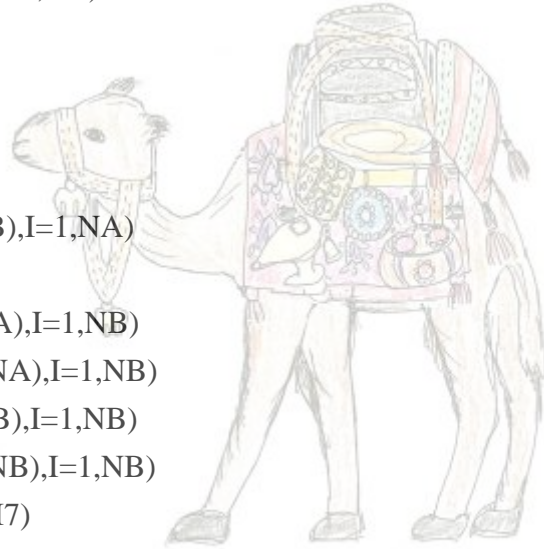
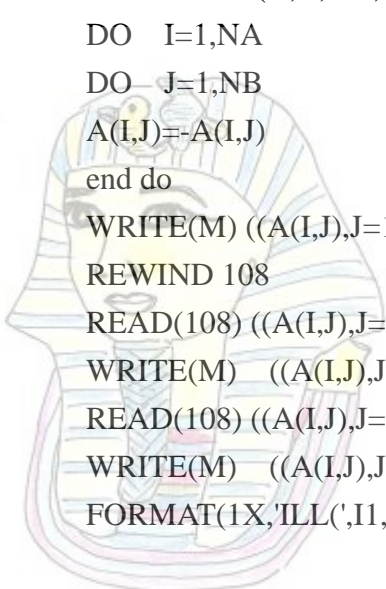


阿拉丁神燈

```

REWIND 109
READ(109) ((A(I,J),J=1,NB),I=1,NA)
CALL SEKI (A,B,NX,NA,NB,NB)
DO I=1,NA
DO J=1,NB
A(I,J)=-A(I,J)
end do
WRITE(M) ((A(I,J),J=1,NB),I=1,NA)
REWIND 108
READ(108) ((A(I,J),J=1,NA),I=1,NB)
WRITE(M) ((A(I,J),J=1,NA),I=1,NB)
READ(108) ((A(I,J),J=1,NB),I=1,NB)
WRITE(M) ((A(I,J),J=1,NB),I=1,NB)
10 FORMAT(1X,'ILL(',I1,')=' ,I7)
close(108)
close(109)

```



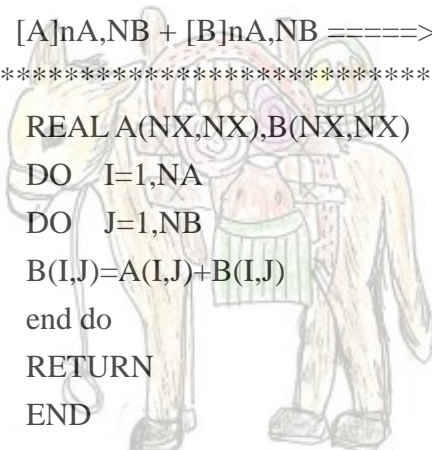
載滿珠寶的駱駝

RETURN 2011 埃及尼羅河之旅
END

```

C*****
SUBROUTINE WA(A,B,NX,NA,NB)
C [A]nA,NB + [B]nA,NB =====> [B]nA,NB
C*****
REAL A(NX,NX),B(NX,NX)
DO I=1,NA
DO J=1,NB
B(I,J)=A(I,J)+B(I,J)
end do
RETURN
END

```



```

C*****
SUBROUTINE SA(A,B,NX,NA,NB)
C*****
C [A]nA,NB - [B]nA,NB =====> [B]nA,NB
C*****
REAL A(NX,NX),B(NX,NX)
DO I=1,NA

```

阿拉丁神燈


```

DO J=1,NB
B(I,J)=A(I,J)-B(I,J)
end do
RETURN
END

```

C*****

```

SUBROUTINE SEKI(A,B,NX,NA,NB,NC)

```

```

REAL A(NX,NX),B(NX,NX),C(10000)

```

```

DO 100 I=1,NA

```

```

DO K=1,NB

```

```

C(K)=A(I,K)

```

```

end do

```

```

DO 100 J=1,NC

```

```

R=0.

```

```

DO K=1,NB

```

```

R=R+C(K)*B(K,J) 2011 埃及尼羅河之旅

```

```

end do

```

```

A(I,J)=R

```

```

100 CONTINUE

```

```

RETURN

```

```

END

```

C*****

```

SUBROUTINE MINVS(A,KO,N,EPS,ILL)

```

C*****

```

REAL A(KO,KO)

```

```

INTEGER X(10000)

```

```

LOGICAL B

```

```

ILL=0

```

```

IF((KO.GE.N).AND.(N.GE.2).AND.(N.LE.10000).AND.(EPS.GT.0.0))

```

```

/ GO TO 1

```

```

ILL=30000

```

```

RETURN

```

```

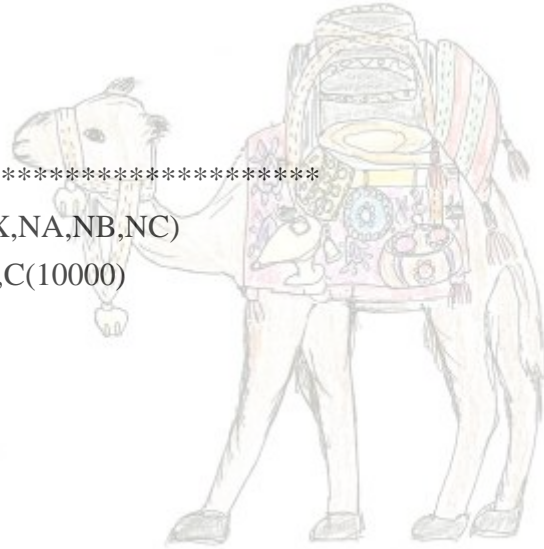
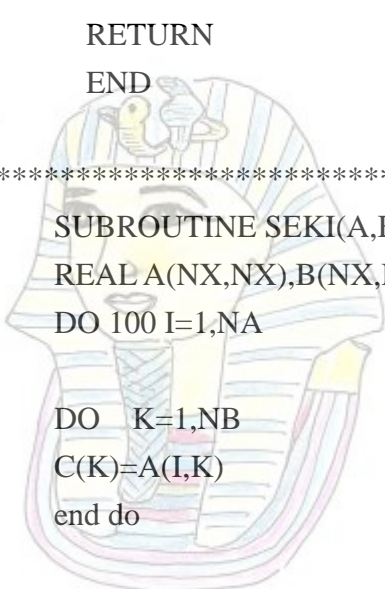
1 DO I=1,N

```

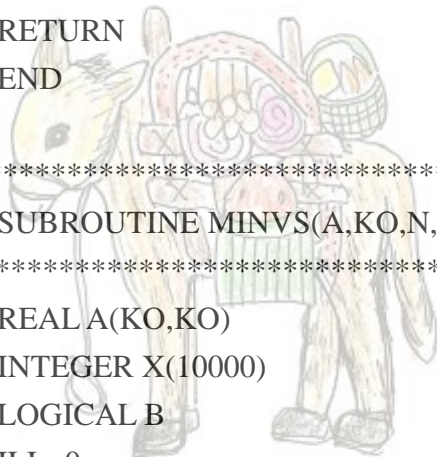
```

X(I)=I

```



載滿珠寶的駱駝



阿拉丁神燈

```

END DO
DO 110 K=1,N
M=K
W=0.0
DO 20 I=K,N
ABSA=ABS(A(I,K))
IF(ABSA.LE.W) GO TO 20
W=ABSA
M=I
20 CONTINUE
IF(M.EQ.K) GO TO 50
L=X(M)
X(M)=X(K)
X(K)=L
DO J=1,N
W=A(K,J)
A(K,J)=A(M,J)
A(M,J)=W

```

```

50 IF(ABS(A(K,K)).GE.EPS) GO TO 60
ILL=K
RETURN

```

```

60 P=1.0/A(K,K)
DO J=1,N
A(K,J)=A(K,J)*P
END DO
DO 100 I=1,N
T=-A(I,K)
B=(I.NE.K).AND.(T.NE.0.0)
IF(.NOT.B) GO TO 100
DO J=1,N
A(I,J)=A(I,J)+A(K,J)*T
END DO

```

```

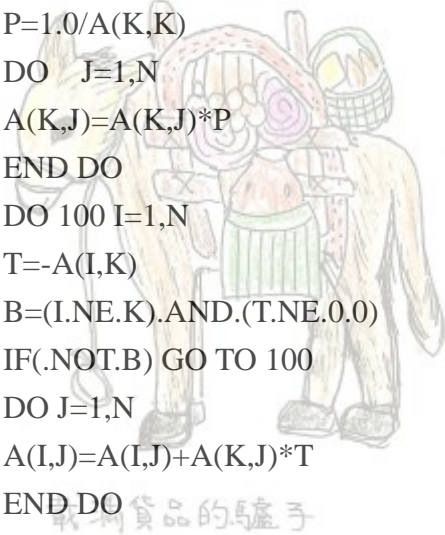
100 A(I,K)=P*T
A(K,K)=P
110 CONTINUE
DO 140 I=1,N
120 IF(X(I).EQ.I) GO TO 140

```



載滿珠寶的駱駝

2011 埃及尼羅河之旅

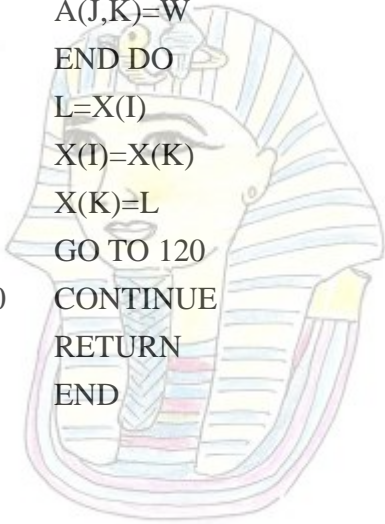


載滿貨品的驢子



阿拉丁神燈

```
K=X(I)
DO J=1,N
W=A(J,I)
A(J,I)=A(J,K)
A(J,K)=W
END DO
L=X(I)
X(I)=X(K)
X(K)=L
GO TO 120
140 CONTINUE
RETURN
END
```



載滿珠寶的駱駝

2011 埃及尼羅河之旅



載滿貨品的驢子



阿拉丁神燈