

APPENDIX I - EXAMPLE OF FORTRAN CODE GENERATED BY ADABAS NATIVE SQL

```

PROGRAM FEX1                                00000010
C      AN EXAMPLE OF SOFT COUPLING WITH A SEARCH CRITERION WHICH 00000020
C      CONTAINS FIELDS TAKEN FROM TWO FILES. THE FIELDS PERSONNEL-ID 00000030
C      NAME, FIRST-NAME, BIRTH AND SEX (FROM THE MAIN FILE, 00000040
C      PERSONNEL-ID) ARE PRINTED FOR RECORDS THAT SATISFY THE 00000050
C      FOLLOWING CONDITION: 00000060
C      PERSONNEL-ID BETWEEN 10000001 AND 19999999 00000070
C      MODEL-YEAR-MAKE > 00000080
C      CLASS = 'C' 00000090
CHARACTER*22 STARTS 00000100
CHARACTER*20 STARTM /'MERCEDES BENZ'/ 00000110
CHARACTER*2 STAYM /'86'/ 00000120
EQUIVALENCE (STARTS,STARTM) 00000130
EQUIVALENCE (STARTS(21:21),STAYM) 00000140
C 00000150
* 00000160
* EXEC ADABAS 00000170
* BEGIN DECLARE SECTION 00000180
* END-EXEC 00000190
* 00000200
INTEGER*2 SQLCOD /0/ ADABAS
CHARACTER* 2 SQC000 /'AS' / ADABAS
CHARACTER* 2 SQCC00 /' ' / ADABAS
CHARACTER* 4 SQCI00 /'OPEN' / ADABAS
INTEGER* 2 SQCF00 / 0 / ADABAS
INTEGER* 2 SQCR00 / 0 / ADABAS
INTEGER* 4 SQCS00 / 0 / ADABAS
INTEGER* 4 SQCL00 / 0 / ADABAS
INTEGER* 4 SQCQ00 / 0 / ADABAS
INTEGER* 2 SQC300 / 0 / ADABAS
INTEGER* 2 SQC400 / 0 / ADABAS
INTEGER* 2 SQC500 / 0 / ADABAS
INTEGER* 2 SQC600 / 0 / ADABAS
INTEGER* 2 SQC700 / 4 / ADABAS
CHARACTER* 1 SQC100 /' ' / ADABAS
CHARACTER* 1 SQC200 /' ' / ADABAS
CHARACTER* 8 SQCM00 /' ' / ADABAS
CHARACTER* 4 SQCN00 /' ' / ADABAS
CHARACTER* 8 SQCO00 /' ' / ADABAS
INTEGER* 2 SQCE00 / 0 / ADABAS
INTEGER* 2 SQCH00 / 0 / ADABAS
INTEGER* 2 SQCJ00 / 0 / ADABAS
INTEGER* 2 SQCK00 / 0 / ADABAS
INTEGER* 4 SQC800 / 0 / ADABAS
INTEGER* 4 SQCT00 / 0 / ADABAS
CHARACTER* 4 SQCU00 /'AS' / ADABAS
CHARACTER* 4 SQC900 /' ' / ADABAS
CHARACTER* 1 SQCD00 ADABAS
CHARACTER* 2 SQCV00 ADABAS
CHARACTER* 4 SQCW00 ADABAS
CHARACTER* 8 SQCP00 ADABAS
CHARACTER* 7 SQCG00 ADABAS
CHARACTER* 1 SQCZ00 ADABAS
CHARACTER* 80 SQCB00 ADABAS

```

INTEGER*	2	SQCY00		ADABAS
CHARACTER*	1	SQCA00(00080)		ADABAS
EQUIVALENCE		(SQCA00(00001),SQCB00)		ADABAS
EQUIVALENCE		(SQCA00(00001),SQC000)		ADABAS
EQUIVALENCE		(SQCA00(00003),SQCC00)		ADABAS
EQUIVALENCE		(SQCA00(00005),SQCI00)		ADABAS
EQUIVALENCE		(SQCA00(00009),SQCF00)		ADABAS
EQUIVALENCE		(SQCA00(00009),SQCD00)		ADABAS
EQUIVALENCE		(SQCA00(00011),SQCR00)		ADABAS
EQUIVALENCE		(SQCA00(00013),SQCS00)		ADABAS
EQUIVALENCE		(SQCA00(00017),SQCL00)		ADABAS
EQUIVALENCE		(SQCA00(00021),SQCQ00)		ADABAS
EQUIVALENCE		(SQCA00(00025),SQC300)		ADABAS
EQUIVALENCE		(SQCA00(00027),SQC400)		ADABAS
EQUIVALENCE		(SQCA00(00029),SQC500)		ADABAS
EQUIVALENCE		(SQCA00(00031),SQC600)		ADABAS
EQUIVALENCE		(SQCA00(00033),SQC700)		ADABAS
EQUIVALENCE		(SQCA00(00035),SQCI00)		ADABAS
EQUIVALENCE		(SQCA00(00036),SQC200)		ADABAS
EQUIVALENCE		(SQCA00(00037),SQCM00)		ADABAS
EQUIVALENCE		(SQCA00(00037),SQCV00)		ADABAS
EQUIVALENCE		(SQCA00(00037),SQCY00)		ADABAS
EQUIVALENCE		(SQCA00(00041),SQCW00)		ADABAS
EQUIVALENCE		(SQCA00(00045),SQCN00)		ADABAS
EQUIVALENCE		(SQCA00(00049),SQCO00)		ADABAS
EQUIVALENCE		(SQCA00(00057),SQCP00)		ADABAS
EQUIVALENCE		(SQCA00(00057),SQCE00)		ADABAS
EQUIVALENCE		(SQCA00(00059),SQCH00)		ADABAS
EQUIVALENCE		(SQCA00(00061),SQCJ00)		ADABAS
EQUIVALENCE		(SQCA00(00063),SQCK00)		ADABAS
EQUIVALENCE		(SQCA00(00065),SQC800)		ADABAS
EQUIVALENCE		(SQCA00(00065),SQCZ00)		ADABAS
EQUIVALENCE		(SQCA00(00066),SQCG00)		ADABAS
EQUIVALENCE		(SQCA00(00069),SQC900)		ADABAS
EQUIVALENCE		(SQCA00(00073),SQCT00)		ADABAS
EQUIVALENCE		(SQCA00(00077),SQCU00)		ADABAS
CHARACTER*	1	SQFB00		ADABAS
CHARACTER*	1	SQSB00		ADABAS
CHARACTER*	1	SQVB00		ADABAS
CHARACTER*	1	SQDS00		ADABAS
CHARACTER*	500	SQRB00		ADABAS
CHARACTER*	10	SQDK00		ADABAS
CHARACTER*	3	SQDD00	/'030' /	ADABAS
CHARACTER*	8	SQDA00		ADABAS
CHARACTER*	40	SQDB00(00020)		ADABAS
CHARACTER*	40	SQDC00(00020)		ADABAS
CHARACTER*	7	SQDE00		ADABAS
INTEGER*	2	SQDG00		ADABAS
INTEGER*	2	SQLRSP		ADABAS
INTEGER*	4	SQMQTY		ADABAS
INTEGER*	4	SQMLSN		ADABAS
CHARACTER*	8	SQDL00		ADABAS
INTEGER*	2	SQDN00		ADABAS
INTEGER*	4	SQDO00		ADABAS
REAL*	4	SQDP00		ADABAS
REAL*	8	SQDQ00		ADABAS
CHARACTER*	1	SQDM00(00008)		ADABAS
EQUIVALENCE		(SQDM00(00001),SQDL00)		ADABAS
EQUIVALENCE		(SQDM00(00001),SQDN00)		ADABAS
EQUIVALENCE		(SQDM00(00001),SQDO00)		ADABAS
EQUIVALENCE		(SQDM00(00001),SQDP00)		ADABAS
EQUIVALENCE		(SQDM00(00001),SQDQ00)		ADABAS

INTEGER*	2	SQDR00		ADABAS
CHARACTER*	1	SQDF00		ADABAS
CHARACTER*	1	SQDT00(00002)		ADABAS
EQUIVALENCE		(SQDT00(00001),SQDR00)		ADABAS
EQUIVALENCE		(SQDT00(00002),SQDF00)		ADABAS
CHARACTER*	37	SQFB01		ADABAS
CHARACTER*	1	SQFA01(00037)		ADABAS
EQUIVALENCE		(SQFA01(00001),SQFB01)		ADABAS
CHARACTER*37		SQFC01/'AA,8,A,AE,20,A,AC,20,A,AH,6,U,AG,1,A.'/		ADABAS
EQUIVALENCE		(SQFA01(00001),SQFC01)		ADABAS
CHARACTER*	59	SQSB01		ADABAS
CHARACTER*	1	SQSA01(00059)		ADABAS
EQUIVALENCE		(SQSA01(00001),SQSB01)		ADABAS
CHARACTER*40		SQSC01/'(22,AA,24,AC)/22/AA,8,A,S,AA,8,A,D,/24/A'/		ADABAS
EQUIVALENCE		(SQSA01(00001),SQSC01)		ADABAS
CHARACTER*19		SQSD01/'O,22,A,GT,D,AH,1,A.'/		ADABAS
EQUIVALENCE		(SQSA01(00041),SQSD01)		ADABAS
EQUIVALENCE		(SQRA01(00001),SQRB01)		ADADATA
EQUIVALENCE		(SQRA01(00001),EMPLOY)		ADADATA
CHARACTER*	8	PID		ADADATA
EQUIVALENCE		(SQRA01(00001),PID)		ADADATA
CHARACTER*	20	NAME		ADADATA
EQUIVALENCE		(SQRA01(00009),NAME)		ADADATA
CHARACTER*	20	FIRSTN		ADADATA
EQUIVALENCE		(SQRA01(00029),FIRSTN)		ADADATA
CHARACTER*	6	BIRTH		ADADATA
EQUIVALENCE		(SQRA01(00049),BIRTH)		ADADATA
CHARACTER*	1	SEX		ADADATA
EQUIVALENCE		(SQRA01(00055),SEX)		ADADATA
CHARACTER*	55	EMPLOY		ADADATA
CHARACTER*	55	SQRB01		ADADATA
CHARACTER*	1	SQRA01(00055)		ADADATA
EQUIVALENCE		(SQVA01(00001),SQVB01)		ADABAS
CHARACTER*	8	SQVC01	/' ' /	ADABAS
EQUIVALENCE		(SQVA01(00001),SQVC01)		ADABAS
CHARACTER*	8	SQVD01	/' ' /	ADABAS
EQUIVALENCE		(SQVA01(00009),SQVD01)		ADABAS
CHARACTER*	22	SQVE01	/' ' /	ADABAS
EQUIVALENCE		(SQVA01(00017),SQVE01)		ADABAS
CHARACTER*	1	SQVF01	/' ' /	ADABAS
EQUIVALENCE		(SQVA01(00039),SQVF01)		ADABAS
CHARACTER*	39	SQVB01		ADABAS
CHARACTER*	1	SQVA01(00039)		ADABAS
INTEGER*	4	SQDS01(00001)		ADABAS
CHARACTER*	2	SQC001	/'AS' /	ADABAS
CHARACTER*	2	SQCC01	/' ' /	ADABAS
CHARACTER*	4	SQCI01	/'EMPL' /	ADABAS
INTEGER*	2	SQCF01	/ 22 /	ADABAS
INTEGER*	2	SQCR01	/ 0 /	ADABAS
INTEGER*	4	SQCS01	/ 0 /	ADABAS
INTEGER*	4	SQCL01	/ 0 /	ADABAS
INTEGER*	4	SQCQ01	/ 0 /	ADABAS
INTEGER*	2	SQC301	/ 37 /	ADABAS
INTEGER*	2	SQC401	/ 55 /	ADABAS
INTEGER*	2	SQC501	/ 59 /	ADABAS
INTEGER*	2	SQC601	/ 39 /	ADABAS
INTEGER*	2	SQC701	/ 4 /	ADABAS
CHARACTER*	1	SQC101	/' ' /	ADABAS
CHARACTER*	1	SQC201	/' ' /	ADABAS
CHARACTER*	8	SQCM01	/' ' /	ADABAS
CHARACTER*	4	SQCN01	/' ' /	ADABAS
CHARACTER*	8	SQC001	/' ' /	ADABAS

```

CHARACTER*      8  SQCP01      / ' ' /      ADABAS
INTEGER*        4  SQC801      /   0 /      ADABAS
INTEGER*        4  SQCT01      /   0 /      ADABAS
CHARACTER*      4  SQCU01      / 'AS' /      ADABAS
CHARACTER*      4  SQC901      / ' ' /      ADABAS
CHARACTER*      1  SQCD01      ADABAS
CHARACTER*      2  SQCV01      ADABAS
CHARACTER*      4  SQCW01      ADABAS
CHARACTER*      7  SQCG01      ADABAS
CHARACTER*      1  SQCZ01      ADABAS
CHARACTER*     80  SQCB01      ADABAS
INTEGER*        2  SQCY01      ADABAS
CHARACTER*      1  SQCA01(00080) ADABAS
EQUIVALENCE    (SQCA01(00001),SQCB01) ADABAS
EQUIVALENCE    (SQCA01(00001),SQC001) ADABAS
EQUIVALENCE    (SQCA01(00003),SQCC01) ADABAS
EQUIVALENCE    (SQCA01(00005),SQCI01) ADABAS
EQUIVALENCE    (SQCA01(00009),SQCF01) ADABAS
EQUIVALENCE    (SQCA01(00009),SQCD01) ADABAS
EQUIVALENCE    (SQCA01(00011),SQCR01) ADABAS
EQUIVALENCE    (SQCA01(00013),SQCS01) ADABAS
EQUIVALENCE    (SQCA01(00017),SQCL01) ADABAS
EQUIVALENCE    (SQCA01(00021),SQCQ01) ADABAS
EQUIVALENCE    (SQCA01(00025),SQC301) ADABAS
EQUIVALENCE    (SQCA01(00027),SQC401) ADABAS
EQUIVALENCE    (SQCA01(00029),SQC501) ADABAS
EQUIVALENCE    (SQCA01(00031),SQC601) ADABAS
EQUIVALENCE    (SQCA01(00033),SQC701) ADABAS
EQUIVALENCE    (SQCA01(00035),SQC101) ADABAS
EQUIVALENCE    (SQCA01(00036),SQC201) ADABAS
EQUIVALENCE    (SQCA01(00037),SQCM01) ADABAS
EQUIVALENCE    (SQCA01(00037),SQCV01) ADABAS
EQUIVALENCE    (SQCA01(00037),SQCY01) ADABAS
EQUIVALENCE    (SQCA01(00041),SQCW01) ADABAS
EQUIVALENCE    (SQCA01(00045),SQCN01) ADABAS
EQUIVALENCE    (SQCA01(00049),SQCO01) ADABAS
EQUIVALENCE    (SQCA01(00057),SQCP01) ADABAS
EQUIVALENCE    (SQCA01(00065),SQC801) ADABAS
EQUIVALENCE    (SQCA01(00065),SQCZ01) ADABAS
EQUIVALENCE    (SQCA01(00066),SQCG01) ADABAS
EQUIVALENCE    (SQCA01(00069),SQC901) ADABAS
EQUIVALENCE    (SQCA01(00073),SQCT01) ADABAS
EQUIVALENCE    (SQCA01(00077),SQCU01) ADABAS
INTEGER*        4  SQDH01      ADABAS
INTEGER*        4  SQDJ01      ADABAS
INTEGER*        2  SQDI01      ADABAS
LOGICAL*        1  SQEF01      / .FALSE. / ADABAS
INTEGER*        2  SQDR01      ADABAS
CHARACTER*      1  SQDF01      ADABAS
CHARACTER*      1  SQDT01(00002) ADABAS
EQUIVALENCE    (SQDT01(00001),SQDR01) ADABAS
EQUIVALENCE    (SQDT01(00002),SQDF01) ADABAS
C
*
*      EXEC ADABAS
*
*      DECLARE EMPL CURSOR FOR
*      SELECT PERSONNEL-ID, NAME, FIRST-NAME, BIRTH, SEX
*      FROM EMPLOYEES, VEHICLES
*      WHERE EMPLOYEES.PERSONNEL-ID = VEHICLES.PERSONNEL-ID
*      AND PERSONNEL-ID BETWEEN '10000001' AND '19999999'
*      AND VEHICLES.MODEL-YEAR-MAKE > :STARTS
*      AND VEHICLES.CLASS = 'C'

```

```

*          END-EXEC                                00000310
*
C          WRITE (6,10)                            00000320
*
*          EXEC ADABAS                              00000330
*          OPEN EMPL                                00000340
*          END-EXEC                                  00000350
*
*          SQVC01 = '10000001'                      00000360
*          SQVD01 = '19999999'                      00000370
*          SQVE01 = STARTS                           00000380
*          SQVF01 = 'C'                              00000390
*
*          SQDA00='00000400'                         00000400
*          SQDB00(01)='          EXEC ADABAS         '
*          SQDC00(01)='          '
*          SQDB00(02)='          OPEN EMPL           '
*          SQDC00(02)='          '
*          SQDB00(03)='          END-EXEC            '
*          SQDC00(03)='          '
*          SQDG00=03
*          SQDH01=SQC701 / 4
*          SQDI01=1
*          SQCL01=0
*          SQCQ01=0
*          SQC201=' '
*          SQC101=' '
*          SQC701=0
*          SQDR01=188
*          SQCD01=SQDF01
*          SQCC01='S1'
*          CALL ADABAS (
1  SQCB01,SQFB01,SQRB01,SQSB01,SQVB01,
1  SQDS01
*          SQLRSP=SQCR01
*          SQLQTY=SQCQ01
*          SQLISN=SQCS01
*          IF (SQCR01 .NE. 0
1  ) THEN
*          CALL RESPF (
1  SQCB01,SQDD00,SQDA00,SQFB01,SQRB01,SQSB01,
1  SQVB01,SQDB00,SQDC00,SQDE00,SQDG00)
*          END IF
*          SQDJ01=SQCQ01
*          IF (SQDJ01 .GT. 0) THEN
*          SQEF01=.FALSE.
*          ELSE
*          SQEF01=.TRUE.
*          END IF
*          IF (SQDJ01 .LT. SQDH01) SQDH01=SQDJ01
*          SQDI01=0
C
*          EXEC ADABAS                                00000410
*          FETCH EMPL                                00000420
*          END-EXEC                                  00000430
*
*          SQDA00='00000460'                         00000440
*          SQDB00(01)='          EXEC ADABAS         '
*          SQDC00(01)='          '
*          SQDB00(02)='          FETCH EMPL          '
*          ADABAS

```

```

SQDC00(02)=' ' ADABAS
SQDB00(03)=' END-EXEC ' ADABAS
SQDC00(03)=' ' ADABAS
SQDG00=03 ADABAS
IF (SQDI01 .EQ. SQDJ01) SQEF01=.TRUE. ADABAS
IF (.NOT. SQEF01) THEN ADABAS
SQEF01=.FALSE. ADABAS
SQC201='N' ADABAS
SQC101=' ' ADABAS
SQDR01=188 ADABAS
SQCD01=SQDF01 ADABAS
SQCC01='L1' ADABAS
CALL ADABAS ( ADABAS
1 SQCB01,SQFB01,SQRB01,SQSB01,SQVB01, ADABAS
1 SQDS01 ) ADABAS
SQLRSP=SQCR01 ADABAS
SQLQTY=SQCQ01 ADABAS
SQLISN=SQCS01 ADABAS
IF (SQCR01 .EQ. 3) THEN ADABAS
SQEF01=.TRUE. ADABAS
ELSE ADABAS
1IF (SQCR01 .NE. 0 ADABAS
1 ) THEN ADABAS
CALL RESPF ( ADABAS
1 SQCB01,SQDD00,SQDA00,SQFB01,SQRB01,SQSB01, ADABAS
1 SQVB01,SQDB00,SQDC00,SQDE00,SQDG00) ADABAS
END IF ADABAS
IF (SQEF01) THEN ADABAS
SQLCOD=003 ADABAS
ELSE ADABAS
SQLCOD=0 ADABAS
END IF ADABAS
C 00000470
1 IF (SQLCOD .EQ. 3) GOTO 2 00000480
C 00000490
WRITE (6,20) PID,NAME,FNAME,BIRTH,SEX 00000500
C 00000510
* 00000520
* EXEC ADABAS 00000530
* FETCH EMPL 00000540
* END-EXEC 00000550
* 00000560
SQDA00='00000560' ADABAS
SQDB00(01)=' EXEC ADABAS ' ADABAS
SQDC00(01)=' ' ADABAS
SQDB00(02)=' FETCH EMPL ' ADABAS
SQDC00(02)=' ' ADABAS
SQDB00(03)=' END-EXEC ' ADABAS
SQDC00(03)=' ' ADABAS
SQDG00=03 ADABAS
IF (SQDI01 .EQ. SQDJ01) SQEF01=.TRUE. ADABAS
IF (.NOT. SQEF01) THEN ADABAS
SQEF01=.FALSE. ADABAS
SQC201='N' ADABAS
SQC101=' ' ADABAS
SQDR01=188 ADABAS
SQCD01=SQDF01 ADABAS
SQCC01='L1' ADABAS
CALL ADABAS ( ADABAS
1 SQCB01,SQFB01,SQRB01,SQSB01,SQVB01, ADABAS
1 SQDS01 ) ADABAS

```

```

SQLRSP=SQCR01
SQLQTY=SQCQ01
SQLISN=SQCS01
IF (SQCR01 .EQ. 3) THEN
  SQEF01=.TRUE.
ELSE
1IF (SQCR01 .NE. 0
1 ) THEN
  CALL RESPF (
1  SQCB01,SQDD00,SQDA00,SQFB01,SQRB01,SQSB01,
1  SQVB01,SQDB00,SQDC00,SQDE00,SQDG00)
  END IF
END IF
IF (SQEF01) THEN
  SQLCOD=003
ELSE
  SQLCOD=0
END IF
C
GOTO 1
C
2 CONTINUE
C
*
*   EXEC ADABAS
*   CLOSE EMPL
*   END-EXEC
*
SQDA00='00000660'
SQDB00(01)='          EXEC ADABAS          '
SQDC00(01)='          '
SQDB00(02)='          CLOSE EMPL          '
SQDC00(02)='          '
SQDB00(03)='          END-EXEC            '
SQDC00(03)='          '
SQDG00=03
SQC101='I'
SQC201='S'
SQDR01=188
SQCD01=SQDF01
SQCC01='RC'
CALL ADABAS (
1  SQCB01,SQFB01,SQRB01,SQSB01,SQVB01,
1  SQDS01
SQLRSP=SQCR01
SQLQTY=SQCQ01
SQLISN=SQCS01
IF (SQCR01 .NE. 0
1 ) THEN
  CALL RESPF (
1  SQCB01,SQDD00,SQDA00,SQFB01,SQRB01,SQSB01,
1  SQVB01,SQDB00,SQDC00,SQDE00,SQDG00)
  END IF
C
*
*   EXEC ADABAS
*   DBCLOSE
*   END-EXEC
*
SQDA00='00000720'
SQDB00(01)='          EXEC ADABAS          '
SQDC00(01)='          '

```

```

SQDB00(02)='          DBCLOSE          '          ADABAS
SQDC00(02)='          '          ADABAS
SQDB00(03)='          END-EXEC          '          ADABAS
SQDC00(03)='          '          ADABAS
SQDG00=03          ADABAS
SQC400=0500          ADABAS
SQC200=' '          ADABAS
SQDR00=188          ADABAS
SQCD00=SQDF00          ADABAS
SQCC00='CL'          ADABAS
CALL ADABAS (          ADABAS
1  SQCB00,SQFB00,SQRB00,SQSB00,SQVB00,          ADABAS
1  SQDS00          )          ADABAS
IF (SQCR00 .NE. 0          ADABAS
1 ) THEN          ADABAS
CALL RESPF (          ADABAS
1  SQCB00,SQDD00,SQDA00,SQFB00,SQRB00,SQSB00,          ADABAS
1  SQVB00,SQDB00,SQDC00,SQDE00,SQDG00)          ADABAS
END IF          ADABAS
C          00000730
10 FORMAT ('1PERSONNEL-ID',8X,'NAME',13X,'FIRST-NAME',8X,          00000740
*          'BIRTH',1X,'SEX' / 1X,64('*') / )          00000750
20 FORMAT (3X,A8,3X,A20,1X,A20,1X,A6,1X,A1)          00000760
C          00000770
END          00000780

```