SAS 교재 연습문제 풀이

2-6.
①
```sas
DATA book2_6go;
INFILE 'C:\Users\jason\Desktop\book2.txt';
INPUT obs 1-2 city $ 3-12 name $ 13-18 age 19-20;
RUN;

PROC PRINT DATA=book2_6go;
RUN;
```

②
```sas
DATA book2_6go;
INPUT obs 1-2 city $ 3-12 name $ 13-18 age 19-20;
CARDS;
1 Monona    Steve 32
2 Milwaukee Tom   44
3 Madison   Kim   25
;
RUN;

PROC PRINT DATA=book2_6go;
RUN;
```

5-4.
```sas
DATA exam5_4;
INPUT id $ 1-3 dept $ 5-8 age 10-11 test1 13-14 test2 16-17 gender $ 19;
CARDS;
001 stat 22 9  12 m
002 law  21 10 15 f
003 econ 23 10 17 f
004 math 27 16 17 m
005 engl 21 11 12 f
;
RUN;

PROC PRINT DATA=exam5_4;
RUN;
```

5-5 + 5-6.
① 전통적인 방식 노가다
```sas
DATA exam5_5;
INPUT id 1-3 name $ 5-13 item1 15 item2 16 item3 17 item4 18 item5 19
item6 20 height 21-23 weight 24-25 age 26-27 region $ 29-37;
CARDS;
101 K.J. Kim  1111121838030 Seoul
102 D.J. Kho  3233211716725 Kyungbuk
103 W.S. Jang 5717191696140 Pusan
104 B.S. Seo  3355431756533 Kangwandp
104 M.W. Kang 5522331685927 Inchon
;
RUN;

PROC PRINT DATA=exam5_5;
RUN;
```

② item1-item6 이렇게 줄여도 되구
```sas
DATA exam5_5;
INPUT id 1-3 name $ 5-13 +1 (item1-item6) (1.) height 21-23 weight 24-25
age 26-27 region $ 29-37;
CARDS;
101 K.J. Kim  1111121838030 Seoul
102 D.J. Kho  3233211716725 Kyungbuk
103 W.S. Jang 5717191696140 Pusan
104 B.S. Seo  3355431756533 Kangwandp
104 M.W. Kang 5522331685927 Inchon
;
RUN;

PROC PRINT DATA=exam5_5;
RUN;
```

③ 이렇게 @로 나타내도 됨
```sas
DATA exam5_5;
INPUT id @1 3. name $ @5 9. +1 (item1-item6) (1.) height @21 2. weight
@24 2. age @26 2. region $ @29 9.;
CARDS;
101 K.J. Kim  1111121838030 Seoul
102 D.J. Kho  3233211716725 Kyungbuk
103 W.S. Jang 5717191696140 Pusan
```

```
104 B.S. Seo  3355431756533 Kangwandp
104 M.W. Kang 5522331685927 Inchon
;
RUN;


PROC PRINT DATA=exam5_5;
RUN;
```

④ 이게 Formatted 방식이랄까

```
DATA exam5_5;
INPUT id @1 3. name $ @5 9. +1 (item1-item6) (1.) height 2. weight 2. age
2. region $ @29 9.;
CARDS;
101 K.J. Kim  1111121838030 Seoul
102 D.J. Kho  3233211716725 Kyungbuk
103 W.S. Jang 5717191696140 Pusan
104 B.S. Seo  3355431756533 Kangwandp
104 M.W. Kang 5522331685927 Inchon
;
RUN;


PROC PRINT DATA=exam5_5;
RUN;
```

5-7. 구글링해서 찾아보기

① DLM = ',';

```
DATA exam5_7;
INFILE CARDS DLM=',';
INPUT id dept age test1 test2 gender;
CARDS;
001,stat,22,9,12,m
002,law,21,10,15,,
003,"econ",23,,17,f
004,math,27,16,17,"m"
,"engl",21,11,12,"f"
;
RUN;


PROC PRINT DATA=exam5_7;
RUN;
```

② DSD

```
DATA exam5_7;
INFILE CARDS DSD;
INPUT id dept age test1 test2 gender;
CARDS;
001,stat,22,9,12,m
002,law,21,10,15,,
003,"econ",23,,17,f
004,math,27,16,17,"m"
,"engl",21,11,12,"f"
;
RUN;


PROC PRINT DATA=exam5_7;
RUN;
```

5-8. 다시 해보기 – 아래가 정답임!

```
DATA exam5_8;
INPUT name $ 1-8 machine $ 30-31 @;
IF machine="sm" THEN INPUT gender $ 9 sales 10-14 region $ 20-24;
IF machine="c" THEN INPUT region $ 10-14 sales 16-20 gender $ 21 age
22-23;
CARDS;
young   m22969     east      sm
stride  f27253     east      sm
topin   east  86432m33      c
greco   m18523     west      sm
thalman  south 94320f25     c
moore   m25718     south     sm
wilson   north 97214m45     c
;
RUN;


PROC PRINT DATA=exam5_8;
RUN;


5-9.
DATA exam5_9;
INPUT last $ first $ gender $ math engl @@;
CARDS;
LEE SEULGI F 58.9 77.8 PARK SOEUN F 91.0 82.6 CHAE YOUNSIK M 67.7 45.9
```

```
KIM EUNYOUNG F 63.5 78.1 CHO MINJI M 34.2 67.8 PARK INSOO M 45.6 53.4
;
RUN;

PROC PRINT DATA=exam5_9;
RUN;

6-1.
DATA temper1;
    DO obs=1 TO 10;
        fahren=INT(RANUNI(0)*181+32);
        OUTPUT;
    END;
    DROP obs;
RUN;

DATA temper2;
SET temper1;
celsius = (fahren - 32) * 5 / 9;
RUN;

PROC PRINT DATA=temper2;
RUN;

6-2.
DATA exam6;
INPUT id $ 1-3 +1 (q1-q6)(1. +1);
CARDS;
001 3 2 5 4 4 3
002 . 2 1 2 1 2
003 5 3 4 4 . 5
;
RUN;

DATA exam6_2;
SET exam6;
small = MIN(q1, q2, q3, q4, q5, q6);
big = MAX(q1, q2, q3, q4, q5, q66);
total = SUM(q1, q2, q3, q4, q5, q6);
mean = MEAN(q1, q2, q3, q4, q5, q6);
DROP q66;
```

```
RUN;

PROC PRINT DATA=exam6_2;
RUN;


6-3.
DATA exam6;
INPUT id $ 1-3 +1 (q1-q6)(1. +1);
CARDS;
001 3 2 5 4 4 3
002 . 2 1 2 1 2
003 5 3 4 4 . 5
;
RUN;


DATA exam6_2;
SET exam6;
small = MIN(q1, q2, q3, q4, q5, q6);
big = MAX(q1, q2, q3, q4, q5, q66);
total = SUM(q1, q2, q3, q4, q5, q6);
mean = MEAN(q1, q2, q3, q4, q5, q6);
IF q6 >= mean THEN group = 'gtmean';
ELSE group = 'ltmean';
DROP q66;
RUN;


PROC PRINT DATA=exam6_2;
RUN;


6-4.
DATA exam6_4;
INPUT id x1 x2 x3;
RETAIN oldid 0;
IF id = oldid THEN DELETE;
oldid = id;
DROP oldid;
CARDS;
2 21 22 23
5 51 52 53
5 51 52 53
1 11 12 13
```

```
3 31 32 33
3 31 32 33
4 41 42 43
;
RUN;

PROC SORT DATA=exam6_4;
BY ID;
RUN;

PROC PRINT DATA=exam6_4;
RUN;

6-5.
DATA exam6_5;
INPUT x1-x5 a b c d y1-y5 z1-z3;
ARRAY a1[5] x1-x5;
DO b1 = 1 TO 5;
IF a1[b1] = 9 THEN a1[b1]=.;
END;

ARRAY a2[4] a b c d;
DO b2 = 1 TO 4;
IF a2[b2] = 99 THEN a2[b2]=.;
END;

ARRAY a3[5] y1-y5;
DO b3=1 TO 5;
IF a3[b3] = 999 THEN a3[b3]=.;
END;

ARRAY a4[3] z1-z3;
DO b4=1 TO 3;
IF a4[b4] = 999 THEN a4[b4]=.;
END;
DROP b1 b2 b3 b4;
CARDS;
1 0 1 0 1 2 2 2 2 1 2 3 4 5 3 3 3
9 0 0 0 9 99 99 99 7 999 999 4 5 6 999 999 999
;
RUN;
```

```
PROC PRINT DATA=exam6_5;
RUN;


6-8.
DATA exam6_81;
INPUT Project_ID StartDate DATE9. @15 EndDate DATE9.;
CARDS;
398 17mar2007 02nov2007
942 22jan2008 11jul2008
167 15aug2009 15feb2010
250 04jan2011 11dec2011
;
RUN;


DATA exam6_82;
SET exam6_81;
Interval = EndDate - StartDate;
;
RUN;


PROC PRINT DATA=exam6_82;
RUN;


6-9.
DATA exam6_9;
INPUT x1 x2 x3 x4 x5;
ARRAY a[5] x1-x5;
DO b=1 TO 5;
IF a[b] =. THEN a[b] = 0;
END;
DROP b;
CARDS;
9 8 7 8 .
8 7 6 . 9
. . 9 7 6
;
RUN;


PROC PRINT DATA=exam6_9;
RUN;
```