

```

data Ex_1;
infile "C:\Users\CBNU\Desktop\JS_SAS\Sales.txt";
input Re $ Ci $ Po Pr $ Sa $ Un Ne;
proc print data=Ex_1;
run;

```

```

data Ex_2;
input id irum $ dept $ grade $ @@;
cards;
2001030 KILDONG STAT A+
2002031 MYUNGSUK MATH B-
2001033 MUNGBO ARTH A0
2001056 BAESUK ENG A+
2002011 DAYAE FAIN A-
;
proc print data=Ex_2;
run;

```

```

data Ex_3; /* 칸수가 올바르게 않아 뒷부분이 밀린다. */
input id $7. irum $9. dept $4. grade $2.;
cards;
2001030 KILDONG STAT A+
2002031 MYUNGSUK MATH B-
2001033 MUNGBO ARTH A0
2001056 BAESUK ENG A+
2002011 DAYAE FAIN A-
;
proc print data=Ex_3;
run;

```

```

data Ex_4;
input id 7. irum $6. dept $4. grade 3.;
cards;
2002030이명수STAT100
2001031박경호MATH60
2002033홍경석ART 80
2001056배준석ENG 78
2001011이대영ECON90
;
proc print data=Ex_4;
run;

```

```

data Ex_5;
input id 1-3 x1 4-6 x2 7-9 x3 3. x4 13-15 x5 3. x6 3.;
cards;
001050060050050060070
002060050074010030070
003045026053100056078
004023056089100015045
;
proc print data=Ex_5;
run;

```

```

data Ex_6;
input id 3. (x1 x2 x3 x4) (5.1);
cards;
001 23.6 30.5 56.2 48.2
002 15.0 12.3 45.6 89.5
003 12.0 45.6 89.6 78.2
;
proc print data=Ex_6;
run;

```

```

data Ex_7;
input x1 @@;
cards;
1 2 3 4 5 6 7 8 9 0
;
proc print data=Ex_7;
run;

```

```

data Ex_8;
input x1 x2 @@;
cards;
1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
20 21 23 24 25 26 27 28 29 30
;
proc print data=Ex_8;
run;

```

```

data Ex_9;

```

```
infile "C:\Users\CBNU\Desktop\JS_SAS\score2-9.txt";
input id name $ kor math eng;
drop kor math eng;
proc print data=Ex_9;
run;
```

```
data Ex_10;
infile "C:\Users\CBNU\Desktop\JS_SAS\score2-9.txt";
input id name $ kor math eng;
keep id name;
proc print data=Ex_10;
run;
```

```
data Ex_11;
infile "C:\Users\CBNU\Desktop\JS_SAS\score2-11.txt";
input id name $ gender $ atten report mid final;
if (mid = .) then mid = 0;
if (final = .) then final = 0;
total=atten+report+mid+final;
if (total >= 95 ) then grade = "A+";
    else if (total >= 90 ) then grade = "A0";
    else if (total >= 85 ) then grade = "B+";
    else if (total >= 80 ) then grade = "B0";
    else if (total >= 75 ) then grade = "C+";
    else if (total >= 70 ) then grade = "C0";
    else if (total >= 65 ) then grade = "D+";
    else if (total >= 60 ) then grade = "D0";
    else grade = "F";
proc print;
run;
```

```
data Ex_11_1;
set Ex_11;
if grade ="A+";
run;
proc print data=Ex_11_1;
run;
```

```
data Ex11_2;
set Ex_11;
if (mid=0 or final=0) then delete;
```

```
proc print;  
run;
```

```
data Ex12_2_male;  
set Ex_11;  
if (gender = 'F') then delete;  
proc print;  
run;
```

```
data Ex12_2_female;  
set Ex_11;  
if (gender = 'M') then delete;  
proc print;  
run;
```

```
data Ex12_1;  
set Ex12_2_male Ex12_2_female;  
proc print;  
run;
```

```
data Ex13_school;  
infile "C:\Users\CBNU\Desktop\JS_SAS\school.txt";  
input id $ name $ gender $ atten report mid fin;  
proc print;  
run;
```

```
data Ex13_student;  
infile "C:\Users\CBNU\Desktop\JS_SAS\student.txt";  
input id $ year house $ region $ age;  
proc print;  
run;
```

```
data Ex13;  
set Ex13_school;  
set Ex13_student;  
proc print;  
run;
```

```
data Ex14_1;
set Ex13_school Ex13_student;
proc print;
run;
```

```
proc sort data=Ex13_school;
by = id;
proc sort data=Ex13_student;
by = id;
data Ex_14_2;
set Ex13_school Ex13_student;
by id;
proc print;
run;
```

```
proc sort data=Ex13_school;
by = id;
proc sort data=Ex13_student;
by = id;
data Ex_15;
merge Ex13_school Ex13_student;
by id;
proc print data=Ex_15;
run;
```

```
data Ex16_1_school2;
infile "C:\Users\CBNU\Desktop\SAS 2장\school2.txt";
input id $ name $ gender $ atten report mid fin;
proc print;
run;
```

```
data Ex16_1_student2;
infile "C:\Users\CBNU\Desktop\SAS 2장\student2.txt";
input id $ year house $ region $ age;
proc print;
run;
```

```
proc sort data=Ex16_1_school2;
by id;
proc sort data=Ex16_1_student2;
```

```
by id;
data Ex_16;
merge Ex16_1_school2 Ex16_1_student2;
by id;
proc print;
run;
```

```
data Ex17_1;
infile "C:\Users\119\Desktop\2장 자료\score2-11.txt";
input id $ name $ gender $ atten report mid fin;
proc print;
run;
```

```
data Ex17;
set Ex17_1;
rename
    min = midexam
    fin = finexam;
proc print;
run;
```

```
data Ex18_1;
retain sum 0; /* 초기화 할때 = 부호를 쓰지 않는다. */
do i=1 to 100 by 1; /* 1부터 100까지 곱 */
    sum = sum + i;
end;
output; /* 마지막 결과값을 알고 싶기 때문에 end뒤에 온다.
과정값을 알고 싶으면 end전에 들어가야함 */
proc print data=Ex18_1;
var i sum; /* 출력값 변수들의 순서를 재지정해준다. */
run;
```

```
data Ex18_2;
retain sum 0;
do x=1 to 100 by 2;
    sum = sum + x;
end;
output;
proc print;
run;
```

```

data Ex18_3;
retain sum 0;
do y=5 to 100 by 5;
    sum = sum + y;
end;
output;
proc print;
run;

```

```

data Ex18_4;
retain fac 1;
do z=1 to 10 by 1;
    fac = fac * z;
end;
output;
proc print;
run;

```

```

data Ex19;
do grade=1 to 6 by 1;
    do student = 'boy' , 'girl'; /* 변수 직접 입력일땐 문자 형식으로 ', ' 사용해서 나누기 */
        input response yes @@;
        output; /* 결과 값이 아니라 중간에 과정으로 변수에 데이터 입력해야 해서 */
    end;
end;
cards;
40 17 30 11
30 21 50 13
40 20 40 20
50 30 50 21
52 30 50 20
50 30 52 15
;
proc print;
run;

```

```

data Ex20;
retain sum 0;
do i=0 to 30 by 3;
    sum = sum+i;
    output;
end;

```

```
end;  
proc print;  
    var i sum; /* 출력 변수의 순서를 바꿔줌 */  
run;
```

```
data Ex21;  
/* 배열은 수업을 안함. 건너뛴. */
```

```
data Ex22;  
set Ex17_1;  
if (mid = .) then mid = 0;  
if (fin = .) then fin = 0;  
total = atten + report + mid + fin;  
label /* 변수의 출력 이름을 바꿀수 있다. ;은 마지막에만 붙임 */  
id = '학번'  
name = '이름'  
gender = '성별'  
atten = '출석점수'  
report = '보고서점수'  
mid = '중간점수'  
fin = '기말점수'  
total = '총점*(출석+보고서*+중간+기말) '  
;  
proc print data=Ex22 label split='*';  
/* 꼭 label을 붙여야 하며, split은 줄나눔을 할때 붙여준다. */  
run;
```

```
data Ex23_1;  
set Ex22;  
proc print;  
    format total 5.1 atten 5.1 report 5.1 mid 5.1 fin 5.1;  
/* format 문은 어디든 들어갈 수 있다. */  
run;
```

```
data Ex23_2;  
input id $ @5 buy @12 sale @19 cost;  
cards;  
001 180123 180310 5000  
002 180125 180215 15000  
003 190211 190302 6000  
004 191212 200506 175000
```



```

;
proc print;
run;

data Ex23;
input id $ @5 buy yymmdd6. @12 sale yymmdd6. @19 cost;
/* 입출력 EORMAT문은 @** 등 버퍼단위로 읽게 해준다 */
format buy yymmdd8. sale yymmdd8. cost comma10.0;
/* 출력에는 년달월 분리 표시가 필요하기 때문에 2개의 칸을 더 늘려준다.
comma10.0 천단위로 콤마를 찍어준다. */
cards;
001 180123 180310 5000
002 180125 180215 15000
003 190211 190302 6000
004 191212 200506 175000
;
proc print;
run;

```

```

/* INFORMAT 은 건너뛴 */

```

```

/* LENGTH 는 건너뛴 */

```

```

data Ex24;
array a[4];
x = 1;
y = 2;
z = 3;
s = 'abc';
a[4] = 99;
put x 3.0 +2 y 3.0 +2 z 3.0 +2 s $4. +2 a[4] 3.0 ;
/* 형식 중요, +2 : 띄어쓰기 두칸 , _._ : 소수점 사용하기 등*/
run;

```

```

data Ex25;
/* FILE 넘어감 */

```

```

data Ex26;
input idno name $ weidht;

```

```

cards;
032 David 180
049 Amelia 145
219 Alan 210
;

proc print;
title1 '학생들의 몸무게 (파운드)';
title2 '3명 학생들의 평균 몸무게 (파운드)';
/* 타이틀을 여러개 할려면 번호를 매겨줘야 한다. */
footnote '3명의 평균은 해석할 때 주의할 것';
run;

data Ex27;
set Ex19;
proc sort data=Ex27 out=Ex27_1;
by descending grade;
/* descending 은 내림차순, 따로 입력하지 않으면 올림차순 (ascending) 이다. */
proc print data=Ex27_1;
run;

data Ex28;
set Ex22;
proc sort data=Ex28 out=Ex28_1;
by name;
proc sort data=Ex28 out=Ex28_2;
by descending total;
proc print data=Ex28_1;
proc print data=Ex28_2;
run;

data Ex28_3;
set Ex22;
proc sort data=Ex28_3 out=Ex28_4;
by gender; /* 올림정렬에 기준으로 성별이 된다. */
proc print;
by gender; /* 기준을 성별로 하는 것으로 출력이 따로 된다. */
run;

data Ex29;
input id $ x y z ;
cards;

```

```

001 102 234 354
002 324 362 235
003 252 333 555
001 254 222 111
004 153 321 345

;
proc sort data=Ex29 nodupkey; /* nodupkey 중복제거 키워드 */
by id;
proc print;
title '중복제거';
run;


data Ex30;
set Ex22;
proc rank data=Ex30 out=Ex30_1 ;
var mid fin total;
ranks mid_g fin_g total_g;
/* VAR를 순위매길 변수를, RANKS를 그 결과값을 저장할 변수이름을 적는다. */
proc print data=Ex30_1 ;
run;
/* FORMAT 프로시저 넘어감 */

```