

```
*---+---1---+---2---+---3---+---4---+---5---+---6---+---;
dm "output;clear;log;clear";

Libname ia "C:\_SasCourse2006\Course1\SAS_Data";
/*    c09s2d1        */
proc freq data=ia.crew;
  tables JobCode;
  title 'Distribution of Job Code Values';
run;

/*    c09s2d1a       */
proc freq data=ia.crew nlevels;
  tables JobCode Location;
  title 'Distribution of Job Code and Location Values';
run;

/*    c09s2d1b       */
proc freq data=ia.crew nlevels;
  tables JobCode Location / noprint;
  title 'Number of Levels for Job Code and Location';
run;

proc freq data=ia.crew nlevels;
  tables _all_ / noprint;
  title 'Number of Levels for All Variables';
run;

*---+---1---+---2---+---3---+---4---+---5---+---6---+---;
/*    c09s2d2        */
proc format;
  value $codefmt
    'FLTAT1'-'FLTAT3'='Flight Attendant'
    'PILOT1'-'PILOT3'='Pilot';
run;

proc freq data=ia.crew;
  format JobCode $codefmt.;
  tables JobCode;
run;

/*    c09s2d3        */
proc format;
  value $codefmt
    'FLTAT1'-'FLTAT3'='Flight Attendant'
    'PILOT1'-'PILOT3'='Pilot';
  value money
    low-<25000 ='Less than 25,000'
    25000-50000='25,000 to 50,000'
    50000<-high='More than 50,000';
run;
```

```
proc freq data=ia.crew;
  tables JobCode*Salary;
  format JobCode $codefmt. Salary money.;
  title 'Salary Distribution by Job Codes';
run;

/* c09s2d3a */
proc freq data=ia.crew;
  tables JobCode*Location / crosslist;
  title 'Location Distribution for Job Codes';
run;

*---+---1---+---2---+---3---+---4---+---5---+---6---+---;
/* c09s2d4 */
proc means data=ia.crew;
  title 'Salary Analysis';
run;

/* c09s2d5 */
proc means data=ia.crew;
  var Salary;
  title 'Salary Analysis';
run;

/* c09s2d6 */
proc means data=ia.crew maxdec=2;
  var Salary;
  class JobCode;
  title 'Salary by Job Code';
run;

*---+---1---+---2---+---3---+---4---+---5---+---6---+---;
*** c09s2d2.sas ***;
/* c09s2d2 */
proc format;
  value $codefmt
    'FLTAT1'-'FLTAT3'='Flight Attendant'
    'PILOT1'-'PILOT3'='Pilot';
run;
proc freq data=ia.crew;
  format JobCode $codefmt.;
  tables JobCode;
run;
```

```
*-----1-----2-----3-----4-----5-----6-----+-----;
dm "output;clear;log;clear";
Libname ia "C:\_SasCourse2006\Course1\SAS_Data";

/*      c09s3d1          */
title 'Salary Analysis';
proc report data=ia.crew nowd;
  column JobCode Location Salary;
run;

/*      c09s3d2          */
proc report data=ia.crew nowd;
  column JobCode Location Salary;;
  define JobCode / width=8 'Job Code';
  define Location / 'Home Base';
  define Salary / format=dollar10.;
run;

/*      c09s3d3          */
proc report data=ia.crew nowd;
  column JobCode Location Salary;;
  define JobCode / order width=8 'Job Code';
  define Location / 'Home Base';
  define Salary / format=dollar10.;
run;

/*      c09s3d4          */
proc report data=ia.crew nowd;
  column JobCode Location Salary;;
  define JobCode / group width=8 'Job Code';
  define Location / group 'Home Base';
  define Salary / format=dollar10.;
run;

/*      c09s3d5          */
proc report data=ia.crew nowd;
  column JobCode Location Salary;
  define JobCode / group width=8 'Job Code';
  define Location / group 'Home Base';
  define Salary / format=dollar10.;
  rbreak after / summarize dol;
run;

/*      c09s3d6          */
proc report data=ia.crew nowd headline headskip;
  column JobCode Location Salary;
  define JobCode / group width=8 'Job Code';
  define Location / group 'Home Base';
  define Salary / format=dollar10.;
  rbreak after / summarize dol;
run;
```

```
*-----1-----2-----3-----4-----5-----6-----+-----;  
dm "output;clear;log;clear";
```

```
Libname ia "C:\_SasCourse2006\Course1\SAS_Data";
```

```
/*      c09s4d1          */  
title 'Flight Attendant Counts by Location';  
proc tabulate data=ia.fltat;  
  class Location ;  
  table Location;  
run;
```

```
/*      c09s4d2          */  
proc tabulate data=ia.fltat;  
  class Location ;  
  table Location all;  
run;
```

```
/*      c09s4d3          */  
title2 'by JobCode';  
proc tabulate data=ia.fltat;  
  class Location JobCode;  
  table JobCode, Location;  
run;
```

```
/*      c09s4d4          */  
title 'Counts for Cary and Frankfurt';  
proc tabulate data=ia.fltat;  
  where Location in ('CARY', 'FRANKFURT');  
  class Location JobCode;  
  table JobCode, Location;  
run;
```

```
/*      c09s4d5          */  
proc tabulate data=ia.fltat;  
  where Location in ('CARY', 'FRANKFURT');  
  class Location JobCode;  
  table JobCode all, Location all;  
run;
```

```
/*      c09s4d6          */  
title 'Total Salary for Cary and Frankfurt';  
proc tabulate data=ia.fltat;  
  where Location in ('CARY', 'FRANKFURT');  
  class Location JobCode;  
  var Salary;  
  table JobCode, Location*Salary;  
run;
```

```
/*          c09s4d7          */
proc tabulate data=ia.fltat format=dollar12.;
  where Location in ('CARY', 'FRANKFURT');
  class Location JobCode;
  var Salary;
  table JobCode, Location*Salary;
run;

/*          c09s4d8          */
title 'Average Salary for Cary and Frankfurt';
proc tabulate data=ia.fltat format=dollar12.;
  where Location in ('CARY', 'FRANKFURT');
  class Location JobCode;
  var Salary;
  table JobCode, Location*Salary*mean;
run;

/*          c09s4d9          */
proc tabulate data=ia.fltat format=dollar12.;
  where Location in ('CARY', 'FRANKFURT');
  class Location JobCode;
  var Salary;
  table JobCode all, Location*Salary*mean all*Salary*mean;
run;

*----+----1----+----2----+----3----+----4----+----5----+----6----+----;
dm "output;clear;log;clear";

Libname ia "C:\_SasCourse2006\Course1\SAS_Data";

/*          c10s1d1          */
proc gchart data=ia.crew;
  vbar JobCode;
run;

/*          c10s1d2          */
proc gchart data=ia.crew;
  hbar JobCode;
run;

/*          c10s1d3          */
proc gchart data=ia.crew;
  pie JobCode;
run;

/*          c10s1d4          */
proc gchart data=ia.crew;
  vbar Salary;
run;
```

```

/*          c10s1d5          */
proc gchart data=ia.crew;
  vbar Salary / discrete;
run;

/*          c10s1d6          */
proc gchart data=ia.crew;
  vbar JobCode / sumvar=Salary type=mean;
run;

/*          c10s1d7          */
proc gchart data=ia.crew;
  pie JobCode / sumvar=Salary type=sum;
  format Salary dollar8.;
run;
  pie JobCode / sumvar=Salary type=sum
  fill=x;
  format Salary dollar8.;
run;
  pie JobCode / sumvar=Salary type=sum
  fill=x explode='PILOT3';
  format Salary dollar8.;
run;
quit;

*-----1-----2-----3-----4-----5-----6-----;
dm "output;clear;log;clear";

Libname ia "C:\_SasCourse2006\Course1\SAS_Data";

proc gplot data=ia.flight114;
  where date between '02mar2001'd and '08mar2001'd;
  plot Boarded*Date;
  title 'Total Passengers for Flight 114';
  title2 'between 02Mar2001 and 08Mar2001';
run;
  plot Boarded*Date;
  symbol value=square i=join;
run;
  plot Boarded*Date;
  symbol c=red w=2;
run;
  plot Boarded*Date / vaxis=100 to 200 by 25 ctext=blue;
run;
  plot Boarded*Date / vaxis=100 to 200 by 25 ctext=blue;
  label Boarded='Passengers Boarded'
  Date='Departure Date';
run;
quit;

```