Program Summary - HW2A.sas

Execution Environment

Author:	u64127570
File:	/home/u64127570/sasuser.v94/HW2A.sas
SAS Platform:	Linux LIN X64 5.14.0-284.30.1.el9_2.x86_64
SAS Host:	ODAWS02-USW2-2.ODA.SAS.COM
SAS Version:	9.04.01M7P08062020
SAS Locale:	en_US
Submission Time:	2/14/2025, 12:14:53 PM
Browser Host:	147.126.10.158
User Agent:	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/132.0.0.0 Safari/537.36 Edg/132.0.0.0
Application Server:	ODAMID00-USW2-2.ODA.SAS.COM

Code: HW2A.sas

```
/* HW 2A  Hannah Brown */
```

Log: HW2A.sas

Notes (36)

```
1          OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
68
69         /* HW 2A  Hannah Brown */
70
71         Proc contents data= '/home/u64127570/sasuser.v94/employeedemographics.sas7bdat';
72         *a1: age_range(char) gender(char) position(num) race(char);
73         *a2: 30;
74

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.02 seconds
      user cpu time       0.02 seconds
      system cpu time     0.00 seconds
      memory              1876.78k
      OS Memory           29356.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        98  Switch Count  1
      Page Faults                       0
      Page Reclaims                     91
      Page Swaps                        0
      Voluntary Context Switches        12
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           16
```

```
75         Proc gchart data = '/home/u64127570/sasuser.v94/employeedemographics.sas7bdat';
76         vbar AGE_RANGE / outside = Percent;
77         run;

78         *b1b: 18-25: 4.59%, 26-30: 8.85%, 31-40: 24.51%, 41-50: 27.59%, 51-60: 27.10%, 61-70: 6.89%, >70: 0.47%;
79         * almost 80% of employees are between 31-60;
80
81         *b2;

NOTE: There were 5121 observations read from the data set /home/u64127570/sasuser.v94/employeedemographics.sas7bdat.
NOTE: PROCEDURE GCHART used (Total process time):
      real time           0.10 seconds
      user cpu time       0.10 seconds
      system cpu time     0.01 seconds
      memory              5989.59k
      OS Memory           32792.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        99  Switch Count  1
      Page Faults                       0
      Page Reclaims                     924
      Page Swaps                        0
      Voluntary Context Switches        11
      Involuntary Context Switches      5
      Block Input Operations            0
      Block Output Operations           224


82         Proc gchart data = '/home/u64127570/sasuser.v94/employeedemographics.sas7bdat';
83         vbar RACE;
84         run;

85
86         *b3;

NOTE: There were 5121 observations read from the data set /home/u64127570/sasuser.v94/employeedemographics.sas7bdat.
NOTE: PROCEDURE GCHART used (Total process time):
      real time           0.10 seconds
      user cpu time       0.10 seconds
      system cpu time     0.01 seconds
      memory              6018.09k
      OS Memory           32792.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        100  Switch Count  1
      Page Faults                       0
      Page Reclaims                     753
      Page Swaps                        0
      Voluntary Context Switches        10
      Involuntary Context Switches      3
      Block Input Operations            0
      Block Output Operations           160


87         Proc gchart data = '/home/u64127570/sasuser.v94/employeedemographics.sas7bdat';
88         hbar GENDER;
89         run;

90
91         *c;

NOTE: There were 5121 observations read from the data set /home/u64127570/sasuser.v94/employeedemographics.sas7bdat.
NOTE: PROCEDURE GCHART used (Total process time):
      real time           0.09 seconds
      user cpu time       0.09 seconds
      system cpu time     0.01 seconds
      memory              5993.09k
      OS Memory           32792.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        101  Switch Count  1
      Page Faults                       0
      Page Reclaims                     666
      Page Swaps                        0
      Voluntary Context Switches        11
      Involuntary Context Switches      3
      Block Input Operations            0
      Block Output Operations           96


92         Proc import datafile='/home/u64127570/sasuser.v94/City_Salary_Data.csv'
93         Out=salaryinfo DBMS=csv Replace;
94         Getnames=yes;
95
96         *d;

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to
```

```
WORK.PARMS.PARMS.SLIST.
97         proc means data = salaryinfo N mean median std max min maxdec=0;
98          /*************************************************************************
99          *   PRODUCT:   SAS
100         *   VERSION:   9.4
101         *   CREATOR:   External File Interface
102         *   DATE:      14FEB25
103         *   DESC:      Generated SAS Datastep Code
104         *   TEMPLATE SOURCE:  (None Specified.)
105         *************************************************************************/
106            data WORK.SALARYINFO    ;
107            %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
108            infile '/home/u64127570/sasuser.v94/City_Salary_Data.csv' delimiter = ',' MISSOVER DSD lrecl=32767 firstobs=2 ;
109               informat POSITION_NBR best32. ;
110               informat PAYGROUP $3. ;
111               informat GRADE best32. ;
112               informat STEP best32. ;
113               informat ANNUAL_RT best32. ;
114               informat JOBTITLE $16. ;
115               format POSITION_NBR best12. ;
116               format PAYGROUP $3. ;
117               format GRADE best12. ;
118               format STEP best12. ;
119               format ANNUAL_RT best12. ;
120               format JOBTITLE $16. ;
121            input
122                        POSITION_NBR
123                        PAYGROUP  $
124                        GRADE
125                        STEP
126                        ANNUAL_RT
127                        JOBTITLE  $
128            ;
129            if _ERROR_ then call symputx('_EFIERR_',1);  /* set ERROR detection macro variable */
130            run;

NOTE: The infile '/home/u64127570/sasuser.v94/City_Salary_Data.csv' is:
      Filename=/home/u64127570/sasuser.v94/City_Salary_Data.csv,
      Owner Name=u64127570,Group Name=oda,
      Access Permission=-rw-r--r--,
      Last Modified=30Jan2025:10:14:56,
      File Size (bytes)=254025

NOTE: 5121 records were read from the infile '/home/u64127570/sasuser.v94/City_Salary_Data.csv'.
      The minimum record length was 32.
      The maximum record length was 59.
NOTE: The data set WORK.SALARYINFO has 5121 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              9573.96k
      OS Memory           34332.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        102  Switch Count  2
      Page Faults                       0
      Page Reclaims                     61
      Page Swaps                        0
      Voluntary Context Switches        18
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           784


5121 rows created in WORK.SALARYINFO from /home/u64127570/sasuser.v94/City_Salary_Data.csv.



NOTE: WORK.SALARYINFO data set was successfully created.
NOTE: The data set WORK.SALARYINFO has 5121 observations and 6 variables.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           0.04 seconds
      user cpu time       0.03 seconds
      system cpu time     0.01 seconds
      memory              9573.96k
      OS Memory           34720.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        102  Switch Count  9
      Page Faults                       0
      Page Reclaims                     1477
      Page Swaps                        0
      Voluntary Context Switches        117
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           832
```

```
131        var ANNUAL_RT;
132        run;

NOTE: There were 5121 observations read from the data set WORK.SALARYINFO.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              7180.90k
      OS Memory           35916.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        103  Switch Count  1
      Page Faults                       0
      Page Reclaims                     1638
      Page Swaps                        0
      Voluntary Context Switches        25
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           0


133
134        *e;
135        proc sort data= salaryinfo;
136        BY POSITION_NBR;
137        run;

NOTE: There were 5121 observations read from the data set WORK.SALARYINFO.
NOTE: The data set WORK.SALARYINFO has 5121 observations and 6 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              1753.43k
      OS Memory           30516.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        104  Switch Count  2
      Page Faults                       0
      Page Reclaims                     177
      Page Swaps                        0
      Voluntary Context Switches        13
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           776


138
139        data citysalary;
140        Merge salaryinfo '/home/u64127570/sasuser.v94/employeedemographics.sas7bdat';
141        By POSITION_NBR;
142        run;

NOTE: There were 5121 observations read from the data set WORK.SALARYINFO.
NOTE: There were 5121 observations read from the data set /home/u64127570/sasuser.v94/employeedemographics.sas7bdat.
NOTE: The data set WORK.CITYSALARY has 5121 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              2212.75k
      OS Memory           30256.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        105  Switch Count  3
      Page Faults                       0
      Page Reclaims                     155
      Page Swaps                        0
      Voluntary Context Switches        19
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           1040


143
144        *f;
145        proc means data = citysalary mean median std min max skewness;
146        class "paygroup"n;
147        var ANNUAL_RT;
148        run;

NOTE: There were 5121 observations read from the data set WORK.CITYSALARY.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.02 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              9439.34k
```

```
      OS Memory           36884.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        106  Switch Count  1
      Page Faults                       0
      Page Reclaims                     1829
      Page Swaps                        0
      Voluntary Context Switches        20
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


149        /*gen shows lowest mean, over 20K lower than the other groups.
150        mgm has the largest skewness of 1.44, highly skewed.
151        gen is moderately skewed (0.52), fir (0.40) and pol (0.47) are relatively symmetric.*/
152
153        *g;
154        proc means data = citysalary mean median std min max skewness;
155        class "AGE_RANGE"n;
156        var ANNUAL_RT;
157        run;

NOTE: There were 5121 observations read from the data set WORK.CITYSALARY.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.02 seconds
      user cpu time       0.02 seconds
      system cpu time     0.01 seconds
      memory              9450.70k
      OS Memory           36884.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        107  Switch Count  1
      Page Faults                       0
      Page Reclaims                     1854
      Page Swaps                        0
      Voluntary Context Switches        25
      Involuntary Context Switches      1
      Block Input Operations            0
      Block Output Operations           0


158        /*Salary means show a curve peaking at 51-60 (salary mean= 85316.03), with the lowest mean salary for age group 18-25
158      ! (61.5k).
159        Age groups 18-25 (61.5k), 26-30 (68.8k), and >70 (69.6k) make up the lowest of the age group's salaries.
160        These groups also had the lowest skew (all moderately skewed: 18-25= 0.936, 26-30= 0.808, >70= 0.849).
161        The higest salary age groups have the largest skews, all highly skewed: 31-40= 1.679, 41-50= 1.504, 51-60= 1.137, 61-70=
161      ! 1.321.
162        The very large skew seen in the 31-40 age group is likely caused by the minimum salary, unlike all other age groups, who
162      ! had a min of around 40k, this age group had a min of 25k, making the range and distrubution less normal than the others
163        The standard deviation closely follows a curve peaking at the 61-70 age range (25,124), with 18-25 being the lowest
163      ! (13,109).*/
164
165        *h;
166        proc means data = citysalary mean median std min max skewness;
167        class "GENDER"n;
168        var ANNUAL_RT;
169        run;

NOTE: There were 5121 observations read from the data set WORK.CITYSALARY.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              9447.73k
      OS Memory           36884.00k
      Timestamp           02/14/2025 06:14:52 PM
      Step Count                        108  Switch Count  1
      Page Faults                       0
      Page Reclaims                     1854
      Page Swaps                        0
      Voluntary Context Switches        24
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           8


170        /* F mean is below the overall mean from d (79,830 > 78,340), while M is greater than the overall (79,830 < 80,485.96).
170      ! From the averages, M makes ~2,000 more than F.
171        F min is 25,696.32, M min is 42,856.79: ~17,000 difference.
172        F max is greater than M max (295,341 > 237,541)
173        F skewness is 1.738, M skewness is 1.131. Both are highly skewed to the right (based on the mean, min, and max), the
173      ! extent to the F skew is much greater than that of M, indicating that the F salary distrubution is less normal than M. */
174
175        *i;
176        proc univariate data = citysalary noprint;
177        class "paygroup"n;
178        histogram annual_rt/normal midpoints= 20000 to 284000 by 24000;
```

```
179        inset mean= "Average"(6.0) std="Standard Dev"(4.0) skewness="Skew"(5.3) /pos = NW;
180        run;

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.
NOTE: PROCEDURE UNIVARIATE used (Total process time):
      real time           0.43 seconds
      user cpu time       0.17 seconds
      system cpu time     0.06 seconds
      memory              9803.09k
      OS Memory           35888.00k
      Timestamp           02/14/2025 06:14:53 PM
      Step Count                        109  Switch Count  32
      Page Faults                       0
      Page Reclaims                     4072
      Page Swaps                        0
      Voluntary Context Switches        10645
      Involuntary Context Switches      11
      Block Input Operations            0
      Block Output Operations           7256


181        /*FIR- relatively symmetrical (skew = 0.399), mean of 83257. Around 70% of this paygroup are in the 80-104k range.
182        GEN- moderately skewed (0.521), mean of 61161. Around 55% of this paygroup are in the 56-80k range.
183        MGM- highly skewed (1.441) to the right, mean of 94850. Around 40% of this paygroup are in the 80-104k range.
184        POL- relatively symmetrical (0.469), mean of 87343. Around 80% of this paygroup are in the 80-104k range. */
185
186        *j;
187        proc sort data=citysalary out=citysalary_sort;
188            by RACE;
189        run;

NOTE: There were 5121 observations read from the data set WORK.CITYSALARY.
NOTE: The data set WORK.CITYSALARY_SORT has 5121 observations and 9 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              2676.75k
      OS Memory           36284.00k
      Timestamp           02/14/2025 06:14:53 PM
      Step Count                        110  Switch Count  2
      Page Faults                       0
      Page Reclaims                     314
      Page Swaps                        0
      Voluntary Context Switches        14
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           1040


190
191        proc univariate data = citysalary_sort noprint;
192        title "Salary by Race: White, Black";
193        where RACE in ("WHITE", "BLACK");
194        by RACE;
195        histogram annual_rt/normal;
196        inset mean= "Average"(6.0) std="Standard Dev"(4.0) skewness= "Skew" (4.3) /pos = NW;
197        run;

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.
NOTE: PROCEDURE UNIVARIATE used (Total process time):
      real time           0.31 seconds
      user cpu time       0.13 seconds
      system cpu time     0.01 seconds
      memory              7876.00k
      OS Memory           40456.00k
      Timestamp           02/14/2025 06:14:53 PM
      Step Count                        111  Switch Count  48
      Page Faults                       0
      Page Reclaims                     2042
      Page Swaps                        0
      Voluntary Context Switches        1698
      Involuntary Context Switches      7
      Block Input Operations            0
      Block Output Operations           664


198        /* White: skew- 1.27, mean-83k, min-43k, max-237.5k, mode-84k, std- 22k
199           Black: skew- 1.69, mean-73k, min-26k, max-295k, mode- 80k, std- 22k
200           There does appear to be a pay difference, the peak of the Black salary normal curve is around 65-70k, while the peak
200      ! for White is aorund 80k.
201           The disparities in salary are also seen in the bin sizing for the histograms, the black histogram starts at a lower
201      ! salary, since the minimun salary is 26k, rather than the white min of 43k.
202           There are also large differences between the mean and mode.
203           All of these factor affect the skew of the graphs, oth of which are highly skewed. */
204
```

```
205
206
207
208         OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
218
```

Results: HW2A.sas

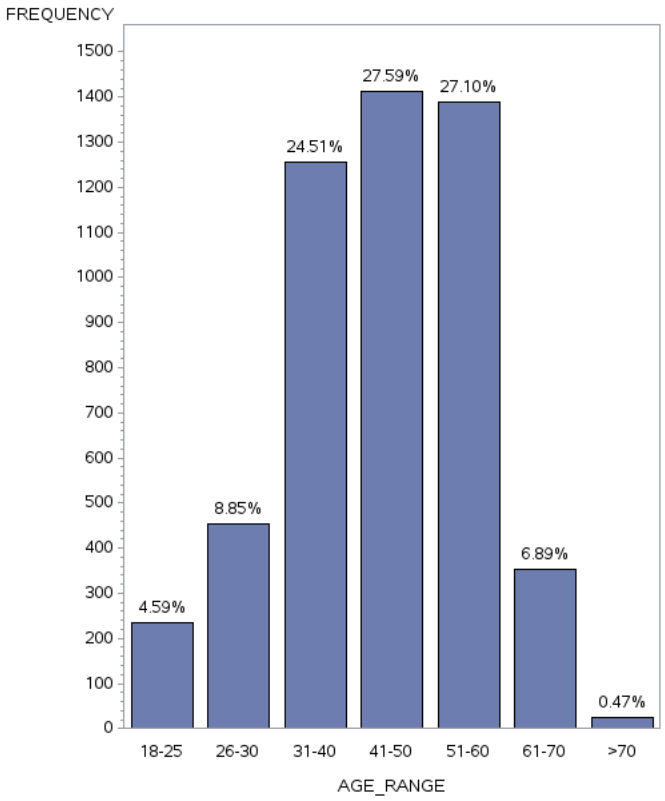
The CONTENTS Procedure

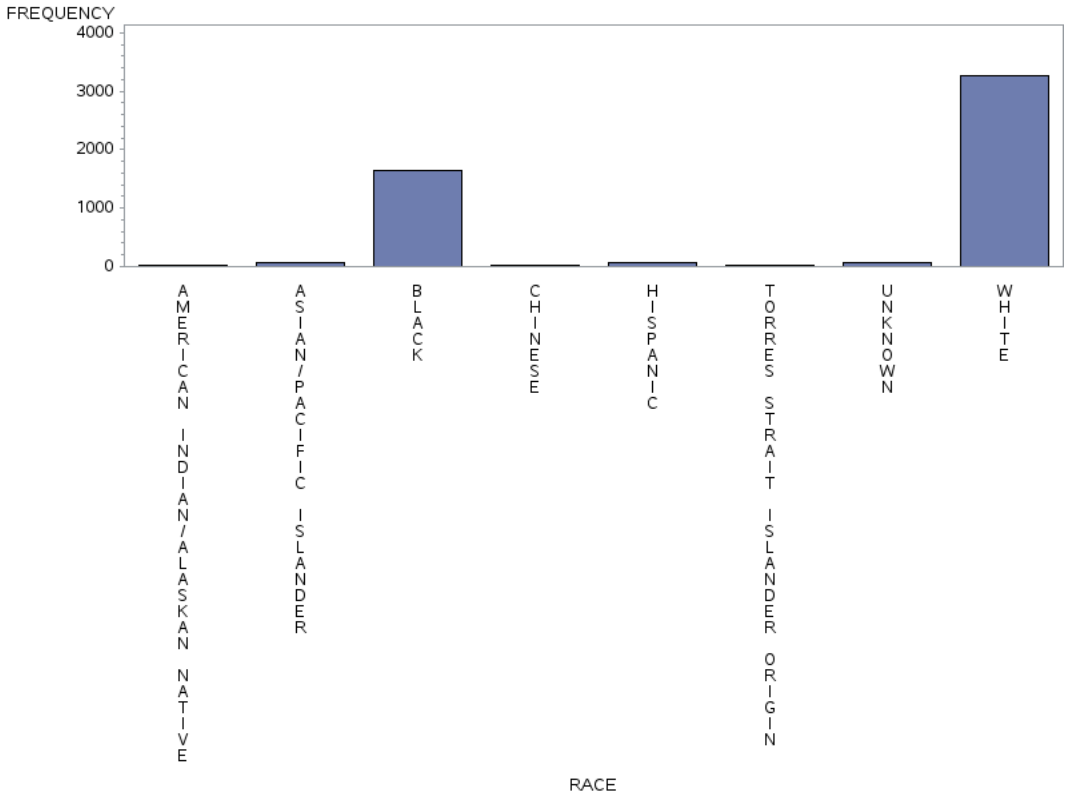
Data Set Name	/home/u64127570/sasuser.v94/employeedemographics.sas7bdat	**Observations**	5121
Member Type	DATA	**Variables**	4
Engine	V9	**Indexes**	0
Created	09/14/2023 14:19:40	**Observation Length**	48
Last Modified	09/14/2023 14:19:40	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

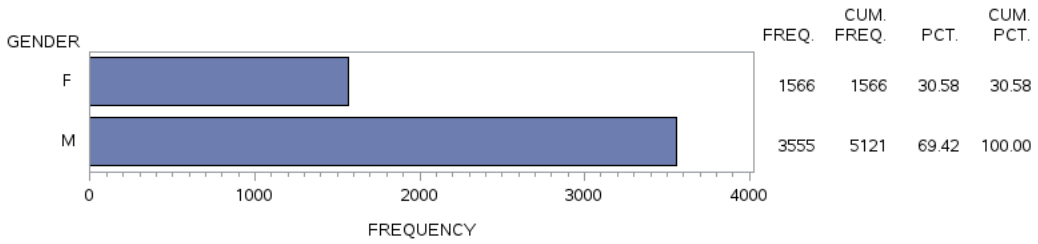
Engine/Host Dependent Information	
Data Set Page Size	131072
Number of Data Set Pages	2
First Data Page	1
Max Obs per Page	2722
Obs in First Data Page	2674
Number of Data Set Repairs	0
Filename	/home/u64127570/sasuser.v94/employeedemographics.sas7bdat
Release Created	9.0401M7
Host Created	Linux
Inode Number	20607058699
Access Permission	rw-r--r--
Owner Name	u64127570
File Size	384KB
File Size (bytes)	393216

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat
1	AGE_RANGE	Char	5	$5.	$5.
2	GENDER	Char	1	$1.	$1.
4	POSITION_NBR	Num	8	BEST12.	BEST32.
3	RACE	Char	30	$30.	$30.







	FREQ.	CUM. FREQ.	PCT.	CUM. PCT.
F	1566	1566	30.58	30.58
M	3555	5121	69.42	100.00

The MEANS Procedure

Analysis Variable : ANNUAL_RT					
N	Mean	Median	Std Dev	Maximum	Minimum
5121	79830	80192	22867	295341	25696

The MEANS Procedure

Analysis Variable : ANNUAL_RT							
PAYGROUP	N Obs	Mean	Median	Std Dev	Minimum	Maximum	Skewness
FIR	858	83257.36	80191.72	14875.82	48062.04	145198.26	0.3987044
GEN	1772	61160.56	59439.42	10471.46	25696.32	95301.49	0.5213072
MGM	1522	94849.85	89329.26	27009.68	44805.00	295341.18	1.4406030
POL	969	87342.85	86077.30	12777.96	53560.00	153642.00	0.4685923

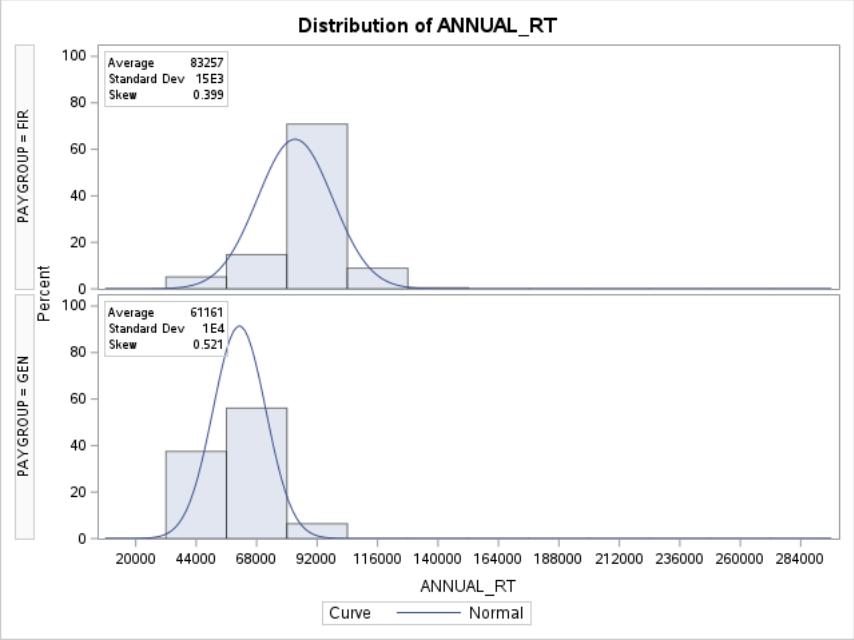
The MEANS Procedure

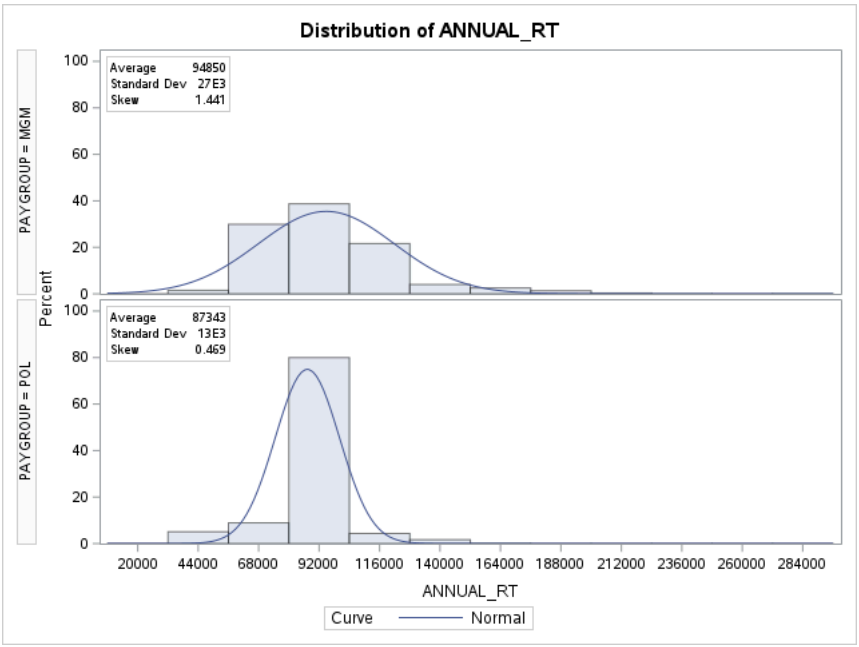
Analysis Variable : ANNUAL_RT							
AGE_RANGE	N Obs	Mean	Median	Std Dev	Minimum	Maximum	Skewness
18-25	235	61529.30	58030.86	13109.31	42856.79	132648.00	0.9363465
26-30	453	68758.11	69030.01	15293.40	40685.00	155765.00	0.8079054
31-40	1255	76830.18	77693.88	21300.50	25696.32	211787.69	1.6792992
41-50	1413	83768.52	84389.52	23372.54	42856.79	295341.18	1.5041783
51-60	1388	85316.03	86077.30	23167.33	42856.79	212774.07	1.1371656
61-70	353	80242.59	74992.91	25124.10	42856.79	199630.92	1.3210975
>70	24	69588.69	59443.12	23401.96	45499.95	115516.77	0.8494010

The MEANS Procedure

Analysis Variable : ANNUAL_RT							
GENDER	N Obs	Mean	Median	Std Dev	Minimum	Maximum	Skewness
F	1566	78340.00	74672.50	25925.96	25696.32	295341.18	1.7382086
M	3555	80485.96	80191.72	21352.16	42856.79	237541.89	1.1314518

The UNIVARIATE Procedure





The UNIVARIATE Procedure
PAYGROUP = FIR
Fitted Normal Distribution for ANNUAL_RT

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	83257.36
Std Dev	Sigma	14875.82

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.2202281	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	6.7936072	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	35.1723624	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	48062.0	48651.0
5.0	48062.0	58788.8
10.0	63442.3	64193.2
25.0	80191.7	73223.8
50.0	80191.7	83257.4
75.0	86607.1	93290.9
90.0	93022.4	102321.5
95.0	107906.0	107725.9
99.0	125170.9	117863.7

The UNIVARIATE Procedure
PAYGROUP = GEN
Fitted Normal Distribution for ANNUAL_RT

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	61160.56
Std Dev	Sigma	10471.46

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.0917559	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	2.5596188	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	14.3258099	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	42856.8	36800.3
5.0	45981.2	43936.5
10.0	49642.4	47740.8
25.0	53644.1	54097.7
50.0	59439.4	61160.6

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
75.0	68681.2	68223.5
90.0	74380.2	74580.3
95.0	80929.4	78384.6
99.0	89314.6	85520.8

The UNIVARIATE Procedure
PAYGROUP = MGM
Fitted Normal Distribution for ANNUAL_RT

Parameters for Normal Distribution		
Parameter	Symbol	Estimate
Mean	Mu	94849.85
Std Dev	Sigma	27009.68

Goodness-of-Fit Tests for Normal Distribution				
Test	Statistic		p Value	
Kolmogorov-Smirnov	D	0.0951030	Pr > D	<0.010
Cramer-von Mises	W-Sq	3.6227913	Pr > W-Sq	<0.005
Anderson-Darling	A-Sq	24.2995185	Pr > A-Sq	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
1.0	54614.6	32015.9
5.0	62119.2	50422.9
10.0	66230.3	60235.6
25.0	75712.0	76632.1
50.0	89329.3	94849.9
75.0	111868.6	113067.6
90.0	124488.9	129464.2
95.0	142433.3	139276.8
99.0	184507.0	157683.8

The UNIVARIATE Procedure
PAYGROUP = POL
Fitted Normal Distribution for ANNUAL_RT

Parameters for Normal Distribution		
Parameter	Symbol	Estimate
Mean	Mu	87342.85
Std Dev	Sigma	12777.96

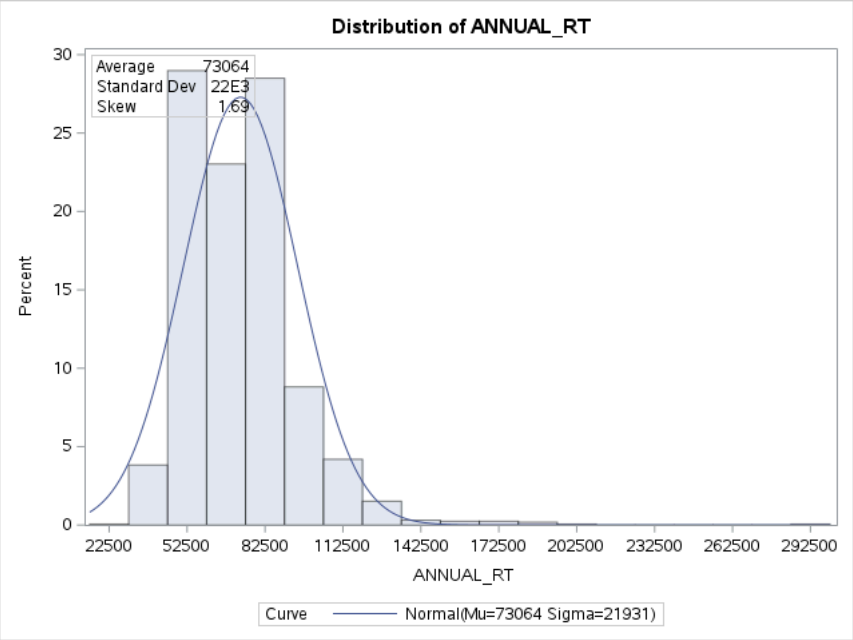
Goodness-of-Fit Tests for Normal Distribution				
Test	Statistic		p Value	
Kolmogorov-Smirnov	D	0.2587456	Pr > D	<0.010
Cramer-von Mises	W-Sq	13.7477279	Pr > W-Sq	<0.005
Anderson-Darling	A-Sq	70.2565576	Pr > A-Sq	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	Observed	Estimated
1.0	53560.0	57616.9
5.0	53560.0	66325.0
10.0	78974.4	70967.2
25.0	84389.5	78724.3
50.0	86077.3	87342.9
75.0	91140.7	95961.5
90.0	98431.9	103718.5
95.0	114181.0	108360.7
99.0	132450.0	117068.8

Salary by Race: White, Black

The UNIVARIATE Procedure

RACE=BLACK



Salary by Race: White, Black

The UNIVARIATE Procedure
Fitted Normal Distribution for ANNUAL_RT

RACE=BLACK

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	73064.26
Std Dev	Sigma	21930.79

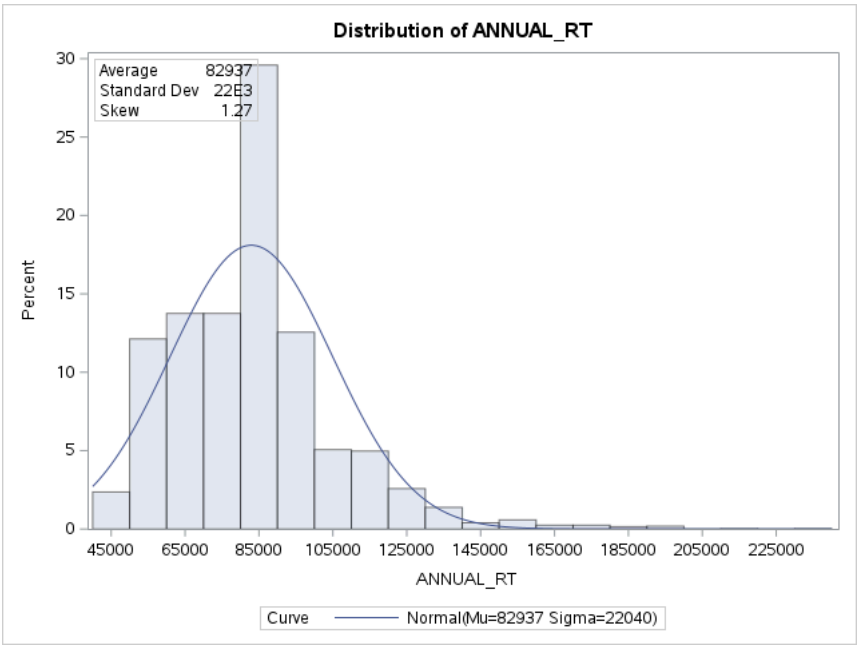
Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.0962144	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	3.4175512	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	24.5929207	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	42856.8	22045.6
5.0	46166.3	36991.3
10.0	49642.4	44958.8
25.0	54725.0	58272.2
50.0	71100.9	73064.3
75.0	86077.3	87856.4
90.0	98431.9	101169.7
95.0	112152.2	109137.2
99.0	142433.3	124082.9

Salary by Race: White, Black

The UNIVARIATE Procedure

RACE=WHITE



Salary by Race: White, Black

The UNIVARIATE Procedure
Fitted Normal Distribution for ANNUAL_RT

RACE=WHITE

Parameters for Normal Distribution		
Parameter	**Symbol**	**Estimate**
Mean	Mu	82936.84
Std Dev	Sigma	22039.87

Goodness-of-Fit Tests for Normal Distribution				
Test	**Statistic**		**p Value**	
Kolmogorov-Smirnov	**D**	0.1214782	**Pr > D**	<0.010
Cramer-von Mises	**W-Sq**	7.0843527	**Pr > W-Sq**	<0.005
Anderson-Darling	**A-Sq**	42.1448271	**Pr > A-Sq**	<0.005

Quantiles for Normal Distribution		
	Quantile	
Percent	**Observed**	**Estimated**
1.0	47517.5	31664.4
5.0	53560.0	46684.5
10.0	56624.1	54691.6
25.0	67600.0	68071.2
50.0	81307.4	82936.8
75.0	93022.4	97802.5
90.0	111868.6	111182.1
95.0	124488.9	119189.2
99.0	155047.7	134209.3