\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* Programmed By:Rick Galbo \*

\* August 2015 \*

\* Coded in SAS 9.2 \*

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\* These programs demonstrate how to imput data in various types of forms \*

\* and do basic opperations such as printing and merging data \*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*Data step: Data is over time period expressing subjects height and weight \* \* mice to complete a known maze pattern. \*

\* \*

\* This step creates new variables and preform basic opperations on the data set\*

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**Data** training;

input SUBJ **1**-**3** HEIGHT **4**-**5** WT\_INIT **6**-**8** WT\_FINAL **9**-**11**;

BMI\_INIT = (WT\_INIT / **2.2**) / ((HEIGHT \* **0.0254**)\*\***2**);

BMI\_FINAL = (WT\_FINAL / **2.2**) / ((HEIGHT \* **0.0254**)\*\***2**);

BMI\_DIFF = BMI\_FINAL - BMI\_INIT;

Datalines;

00768155150

00272250240

00563240200

00170345298

;

**run**;

**Proc** **Sort** Data = training;

BY SUBJ;

**run**;

**Proc** **print** Data = training;

Title "Diet Data";

Var SUBJ HEIGHT BMI\_INIT BMI\_FINAL BMI\_DIFF;

**run**;

/\* Problem 2: service

Data step includes importing table

Var: Last Name/First Name/Sex/Military Branch/Years of Service

\*/

\*assigns working directory;

libname hwd "P:\STAT303\SAS\_Code\HW1\DATA";

\*Data input and normal print;

**Data** hwd.service;

infile "P:\STAT303\SAS\_Code\HW1\DATA\MilitaryService.txt" DLM = '/';

input LAST $ FIRST $ SEX $ BRANCH $ YEARS; **run**;

**Proc** **print** Data = hwd.service;

Title 'Service Records';

**run**;

\*Sorted print out of service members;

**Proc** **sort** Data = hwd.service;

By BRANCH;

**RUN**;

**Proc** **print** Data = hwd.service;

Title 'Service Records (By Branch)';

ID BRANCH;

Var LAST SEX YEARS

run;

\*average years served per branch;

**Proc** **Means** Data = hwd.service;

Title 'Avg. Years Service (By Branch)';

By BRANCH;

Var YEARS;

**run**;

\*served 10+ years;

**Proc** **Print** Data = hwd.service;

Title "Served 10+ years";

Where YEARS >= **10**;

Var LAST FIRST SEX BRANCH;

**run**;

\*served between 5-10 years;

**Proc** **Print** Data = hwd.service;

Title "Served between 5-10 years";

Where YEARS < **10** & YEARS >= **5**;

Var LAST FIRST SEX BRANCH;

**run**;

\*served less than 5 years;

**Proc** **Print** Data = hwd.service;

Title "Served Less Than 5 years";

Where YEARS < **5**;

Var LAST FIRST SEX BRANCH;

**run**;

\*marines data set;

**Data** marines;

Set hwd.service;

If BRANCH = 'Marines';

**Run**;

**Proc** **Print** Data = marines;

Title 'Marines';

**run**;

Data Outputs:

|  |
| --- |
| Diet Data |

| **Obs** | **SUBJ** | **HEIGHT** | **BMI\_INIT** | **BMI\_FINAL** | **BMI\_DIFF** |
| --- | --- | --- | --- | --- | --- |
| **1** | 1 | 70 | 49.6059 | 42.8480 | -6.75790 |
| **2** | 2 | 72 | 33.9770 | 32.6179 | -1.35908 |
| **3** | 5 | 63 | 42.6030 | 35.5025 | -7.10050 |
| **4** | 7 | 68 | 23.6169 | 22.8551 | -0.76184 |

|  |
| --- |
| Service Records |

| **Obs** | **LAST** | **FIRST** | **SEX** | **BRANCH** | **YEARS** |
| --- | --- | --- | --- | --- | --- |
| **1** | Cavanaug | Peter | M | Marines | 7.4 |
| **2** | Geddy | Gerald | M | Army | 10.3 |
| **3** | Roseland | Megan | F | Army | 5.1 |
| **4** | Smith | Eileen | F | Air Forc | 6.2 |
| **5** | Peterson | Thomas | M | Navy | 13.7 |
| **6** | Bemmers | Ronald | M | Army | 4.8 |
| **7** | Johnson | James | M | Marines | 8.6 |
| **8** | Lovelace | Henry | M | Marines | 20.1 |
| **9** | Patel | Sundeep | M | Army | 14.7 |
| **10** | Li | Kim | M | Navy | 10.8 |
| **11** | Parks | Tu | F | Marines | 4.9 |
| **12** | Shotsky | Mona | F | Army | 3.3 |
| **13** | Ramble | Johnny | M | Air Forc | 15.0 |
| **14** | Fobby | Anthony | M | Air Forc | 11.2 |
| **15** | Rinaldi | Christop | M | Navy | 5.4 |
| **16** | Canter | Kathleen | F | Army | 5.0 |
| **17** | Welch | Amber | F | Marines | 9.6 |
| **18** | Johnson | Tracy | M | Marines | 5.8 |
| **19** | Little | Lemont | M | Navy | 6.8 |
| **20** | Freeman | Thomas | M | Army | 4.2 |
| **21** | Comisson | Ellen | F | Navy | 11.6 |
| **22** | Early | Michael | M | Army | 14.1 |
| **23** | Hicks | Barbara | F | Air Forc | 8.3 |
| **24** | Smith | Andrew | M | Air Forc | 9.5 |

|  |
| --- |
| Avg. Years Service (By Branch) |

The MEANS Procedure

BRANCH=Air Forc

| **Analysis Variable : YEARS** | | | | |
| --- | --- | --- | --- | --- |
| **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| 5 | 10.0400000 | 3.3170770 | 6.2000000 | 15.0000000 |

BRANCH=Army

| **Analysis Variable : YEARS** | | | | |
| --- | --- | --- | --- | --- |
| **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| 8 | 7.6875000 | 4.6412552 | 3.3000000 | 14.7000000 |

BRANCH=Marines

| **Analysis Variable : YEARS** | | | | |
| --- | --- | --- | --- | --- |
| **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| 6 | 9.4000000 | 5.5205072 | 4.9000000 | 20.1000000 |

BRANCH=Navy

| **Analysis Variable : YEARS** | | | | |
| --- | --- | --- | --- | --- |
| **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| 5 | 9.6600000 | 3.4536937 | 5.4000000 | 13.7000000 |

|  |
| --- |
| Served 10+ years |

| **Obs** | **LAST** | **FIRST** | **SEX** | **BRANCH** |
| --- | --- | --- | --- | --- |
| **2** | Ramble | Johnny | M | Air Forc |
| **3** | Fobby | Anthony | M | Air Forc |
| **6** | Geddy | Gerald | M | Army |
| **9** | Patel | Sundeep | M | Army |
| **13** | Early | Michael | M | Army |
| **16** | Lovelace | Henry | M | Marines |
| **20** | Peterson | Thomas | M | Navy |
| **21** | Li | Kim | M | Navy |
| **24** | Comisson | Ellen | F | Navy |

|  |
| --- |
| Served between 5-10 years |

| **Obs** | **LAST** | **FIRST** | **SEX** | **BRANCH** |
| --- | --- | --- | --- | --- |
| **1** | Smith | Eileen | F | Air Forc |
| **4** | Hicks | Barbara | F | Air Forc |
| **5** | Smith | Andrew | M | Air Forc |
| **7** | Roseland | Megan | F | Army |
| **11** | Canter | Kathleen | F | Army |
| **14** | Cavanaug | Peter | M | Marines |
| **15** | Johnson | James | M | Marines |
| **18** | Welch | Amber | F | Marines |
| **19** | Johnson | Tracy | M | Marines |
| **22** | Rinaldi | Christop | M | Navy |
| **23** | Little | Lemont | M | Navy |

|  |
| --- |
| Served Less Than 5 years |

| **Obs** | **LAST** | **FIRST** | **SEX** | **BRANCH** |
| --- | --- | --- | --- | --- |
| **8** | Bemmers | Ronald | M | Army |
| **10** | Shotsky | Mona | F | Army |
| **12** | Freeman | Thomas | M | Army |
| **17** | Parks | Tu | F | Marines |

|  |
| --- |
| Marines |

| **Obs** | **LAST** | **FIRST** | **SEX** | **BRANCH** | **YEARS** |
| --- | --- | --- | --- | --- | --- |
| **1** | Cavanaug | Peter | M | Marines | 7.4 |
| **2** | Johnson | James | M | Marines | 8.6 |
| **3** | Lovelace | Henry | M | Marines | 20.1 |
| **4** | Parks | Tu | F | Marines | 4.9 |
| **5** | Welch | Amber | F | Marines | 9.6 |
| **6** | Johnson | Tracy | M | Marines | 5.8 |