STAT 541: Final Exam

1. Consider the EColi data. Suppose you have a second data set Birthday that contains three variables: your first name, last name and your 2009 birthday; use date format MMDDYY10 to input your birthdate and to format your birthdate. Print the contents of Birthday. E.g., my file looked like this:

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John      Grego      10/18/2009
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   (a) Change the format for your birthdate to DATE9 using MODIFY in PROC DATASETS.

   (b) Use INTNX to save the quarter for your birthday as another variable in data set Birthday.

   (c) Use the method of your choice to extract all records from Ecoli that share the same quarter as your 2009 birthday. My first solution owed more to STAT 540 than STAT 541. A solution that takes an output value for quarter (my value was 18171) and then plugs it in as a constant in another portion of your code will not receive full credit.

2. We will be working with the MEDDB data set (available in Blackboard under Course Documents as a tab-delimited text file).

   (a) Select the first 100 observations from the MEDDB data set and save them in a table.

   (b) Use NOTSORTED to generate histograms of Claim for each category of TOS (Use a frequency scale, not a percent scale). Report on the results.

   (c) Now save the 100-record data set as an Excel file, sort on TOS *in* Excel and import the sorted Excel file as a new data set. Try NOTSORTED on this data set and report on the results.

3. The file below contains information on conservation and historic preservation grants in a local county. Save it as data set WORK.Grants

Organization	Total	County Funds	County Funds Expended	Match	Match Expended	Balance
FFA	$10,000	$8000	$0	$2000	$0	$10,000
TCWA	$ 5000	$4000	$2524	$1000	$1000	$1476
SCCF	$7500	$6000	$6000	$1500	$1500	$0
CWLT	$15,000	$12,000	$10,000	$3000	$3000	$2000
FONP	$8000	$6400	$6400	$1600	$1600	$0

   (a) Create two additional variables that measure the proportion of county funds expended (call this variable County_Spent) and the proportion of match funds expended (call this variable Match_Spent); this step requires no special techniques. Display this information in a table listing only Organization, County_Spent and Match_Spent; the last two variables should be displayed as percentages.

(b) Use these two new variables and a multidimensional character array (see table below) to create a third variable, GrantStatus. Display Organization, County_Spent, Match_Spent and Grant_Status.

County Spent	0%	1%-99%	100 %
0%	Nonperforming Grant	No funds withdrawn	No funds withdrawn
1 %-99 %	No Match	Funds/Match Incomplete	Unexpended funds
100%	No Match	Match Incomplete	Grant Complete

4. Return to the table in Exercise 3. Write PICTURE formats to produce the table below. Undergraduates should only provide code for County Funds.

Organization	County Funds	County Funds Expended
FFA	$8.0K	$0K
TCWA	$4.0K	$2.52K
SCCF	$6.0K	$6.00K
CWLT	$12.0K	$10.00K
FONP	$6.4K	$6.40K

5. Refer to the the table in Exercise 3. Suppose CWLT presents invoices for a total of $11,000 in county funds expended and the county allows only $1000 of the $1600 match documented by FONP.

   (a) Create a transactional data containing two records with the new information for CWLT.

   (b) Update the Grants data set by using UPDATE in a match merge. Did it work well? Graduate students should update the Grants data set using an index as well.