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**Program 7 Part 1**

1. What is the website you used to obtain your data? List the agency/organization as well as the specific URL. Your instructor should be able to go and find your data from this information.

U.S. Energy Information Administration  
http://www.eia.gov/totalenergy/data/monthly/#summary

2. Often times the data files contain more data than you’ll need for P7. What data from the file are you going to use/analyze in your P7?

The data I’m using is the total renewable energy produced and total energy produced in the United States from 1949-2014.

3. You will need to perform analysis on the data and generate at least three data facts. Describe the analysis you plan to do.

The first analysis will be to determine the percent of total renewable energy produced from the total overall energy produced.

The second analysis will be the total renewable energy produced and total overall energy produced in the U.S. from 1949-2014.

The third analysis will take the averages of both energies (total renewable & overall total) and break them down by decade (50’s 60’s 70’s 80s 90s 00s).

4. What is your plan for reading in the data?

The original data file I used was the downloaded excel from the website. The only alteration I made was “Find and Replace” the text “Not Available” to 0. This way it would make reading it simpler because for a number of years certain energies did not exist (solar and wind in particular) so the field had “Not Available” (hence the change in the data file). The excel file was then saved as a text file.

The plan to read the data is skip the first 12 lines with a “for” loop using getline. Once that loop is complete a new one is started to read in the data. The first number is being read in as “dyear” with datatype int. A temporary double variable is used to capture twelve other data points that I will not be using. Then the two other data points are read in as double datatype as well to variables “drenewable” and “dtotal”. Then the arrays are filled by assigning them to their appropriate variables. The loop ends when the counter is less than 66 because that’s the total of data rows. This is passed into the function as total from main.