These are a few abstracts from HW 1 that were good. Although they are not all perfect, they each had their own individual style and generally clearly summarized the program as a whole, rather than simply repeating the in-code comments.

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This is an interesting abstract -- seems to be addressed to a potential user of the program:

The R code included with this abstract was written to compute some basic descriptive statistics (mean, sd) and components of the linear model (r and slope/intercept) for two vectors X and Y. It may be pasted directly into the R console and run without additional entries or modifications by the user. Text following the # symbol are comments from the programmer about the code. The code contains four functions, me.an(), stdev(x), r(x,y) and lin.reg(x,y) which will calculate the mean, standard deviation, correlation coefficient (r) and slope/intercept of the specified vectors. Currently only two vectors ('X' and 'Y') have been defined in this code, but the functions are written so that they may be applied to any desired vector or pair of vectors. To specify a new vector, the user may employ the following command: name <- c(values) where 'name' is a user generated identifier and 'value' is a string of numbers separate by commas (,).

Good broad commentary, some detail but not overly detailed:

The code submitted for this assignment uses the programming language ‘R’ to calculate important statistical values. The values of interest are an average of a series of numbers, the standard deviation of a series of numbers, the correlation coefficient value between two sets of numbers, and finally the equation for simple linear regression for a two sets of numbers. These four values are seen frequently in statistical studies. Although the programming language R is capable of calculating these values with a single command, the submitted code does not utilize these features. This was done to show that it is possible to get these four values without using the built in R features.

To obtain the mean, the code simply uses a built-in feature capable of adding up a series of values. The values are then divided by the number of values present to show the mean. We obtain the standard deviation by using the same summing feature as before. R also has built-in arithmetic functions. So we use division to determine the standard deviation of the set of numbers. To obtain the correlation coefficient, we utilize the summing feature along with a feature capable of defining a range of numbers (observation 1, observation2,…, observation x) This then allows us to define the range needed to include all necessary values. We also multiply and divide stored variables here too to get the solution. Lastly, we determine the slope needed for the linear regression equation by dividing two variables already defined in previous steps. We then obtain the intercept portion of the linear regression equation by using the slope value from the previous step along with two predetermined averages. We are basically plugging one number into an equation that only needs one more value to be solved. This solution is the intercept.

This abstract shows the right idea, although it could perhaps use a touch more detail:

With a list of numerical data, statistical information can be created. Creating statistical information from data is the main goal of this program written in R. The specific statistics the program is concerned with is the sample standard mean, the sample standard deviation, the correlation coefficient, the slope and the intercept of a simple linear regression. Numerical data that has been provided will be stored into several objects that will hold each statistical value. These objects will then be called on to display the statistical results at the end of the program.

This has an appropriate amount of detail for this assignment:

The main purpose of this code is to generate a simple linear regression line between two variables step by step. We first obtain the means and standard deviation of the two variables, X and Y. Then we use the means and standard deviations to calculate the correlation between X and Y according to the formula. Finally, we find the slope and intercept of the linear regression using all the numbers we get in the previous steps. The goal of this practise is to get familiar with the basic functions and calculations that we can perform in R and also to review on the process of generating a linear regression step by step.