Group FORTRAN Exam

Due Tuesday September 24, 2013

Sum, Product Calculator

This is a group exam program.

Write a FORTRAN program which will include a while loop, a case statement, and arrays which will either calculate the sum or product of the numbers in the array.

The program will continually prompt the user with a menu of “enter arrays”, “display arrays”, “sum arrays”, “multiply arrays”, “display result array”, or “quit”. Numbers can be used for the menu entry, 1 -6.

There will be three arrays of up to 10 real numbers in size each. The user can choose to enter data into two of the arrays. Data entry will begin with the first array, the data entry will stop when -999 is entered as data for the first array or the array is filled. The -999 is not kept in the first array. The same number of data, that was entered into the first array, will be then entered into the second array, no -999 will be used to stop data entry into the second array. When the arrays are displayed, both arrays are clearly identified and only their n data values are displayed. When sum is selected, each element of the result array will be set of the sum of corresponding elements of the data arrays, i.e. r(i) = a(i) + b(i). When multiply arrays is selected, each element of the result array will be set of the product of corresponding elements of the data arrays, i.e. r(i) = a(i) * b(i). When display result array is selected, the n values of the result vector is displayed. Selecting quit will terminate the program. Handle appropriate errors.

Do not use goto's or exits. Comment the program. Include appropriate group and program identification at the beginning of the program. Follow proper structured programming techniques with the program.

Name the program GxE1.FOR where x is the group number.

Turn the program in, as an ASCII file. Include your name, class, and program name on and in the program.