DECISION PROGRAMMING PROBLEMS

1. Write a program that reads a floating-point number and prints “zero” if the number is zero. Otherwise, print “positive” or “negative”. Add “small” if the absolute value of the number is less than 1, or “large” if it exceeds 1,000,000.

2. Write a program that translates a letter grade into a number grade. Letter grades are A, B, C, D, and F, possibly followed by + or –. Their numeric values are 4, 3, 2, 1, and 0. There is no F+ or F–. A + increases the numeric value by 0.3, a – decreases it by 0.3. However, an A+ has value 4.0.

Enter a letter grade: B-
The numeric value is 2.7.

3. Write a program that reads in three floating-point numbers and prints the largest of the three inputs without using the max function. For example:

Enter a number: 4
Enter a number: 9
Enter a number: 2.5
The largest number is 9.0

4. Unit conversion. Write a unit conversion program that asks the users from which unit they want to convert (fl. oz, gal, oz, lb, in, ft, mi) and to which unit they want to convert (ml, l, g, kg, mm, cm, m, km). Reject incompatible conversions (such as gal → km). Ask for the value to be converted, then display the result:

Convert from? gal
Convert to? ml
Value? 2.5
2.5 gal = 9463.5 ml