

CS19001/CS19002 PROGRAMMING AND DATA STRUCTURES LABORATORY

Assignment No: 0

Last Date of Submission: 05–January–2015

Generalize the F-to-C / C-to-F converter as follows.

Let $[a, b]$ and $[c, d]$ be intervals. We want to make a linear mapping from the first interval to the second. Let x be a point in the first interval, and y the corresponding point in the second interval. The following relation holds between x and y :

$$(x - a) / (b - a) = (y - c) / (d - c).$$

Write a C program to do the following:

1. The user supplies the first interval (two floating-point values a and b with $a < b$).
2. The user then supplies the second interval (two floating-point values c and d with $c < d$).
3. Finally, the user supplies a point x in the first interval.
4. Compute and print the corresponding point y in the second interval.
5. Find and print the value of x for which the corresponding value of y is the same as x .

Submit a single C file.