

Sheet

1. Create a structure called time. Its three members, all type int, should be called hours, minutes, and seconds. Write a program that obtains two time values from the user in 12:59:59 format, stores them in struct time variables, converts each one to seconds (type int), adds these quantities, converts the result back to hours-minutes-seconds, stores the result in a time structure, and finally displays the result in 12:59:59 format.
2. Create a structure called fraction, whose two members are the fraction's numerator and denominator (both type int). Create a four-function calculator for fractions. Here are the formulas for the four arithmetic operations applied to fractions:

Addition	$a/b + c/d = (a*d + b*c) / (b*d)$
Subtraction	$a/b - c/d = (a*d - b*c) / (b*d)$
Multiplication	$a/b * c/d = (a*c) / (b*d)$
Division	$a/b / c/d = (a*d) / (b*c)$

The user should type the first fraction, an operator, and a second fraction. The program should then display the result and ask if the user wants to continue.

3. Write a C++ program to keep records and perform statistical analysis for a class of 20 students. The information of each student contains ID, Name, Sex, quizzes Scores (2 quizzes per semester), mid-term score, final score, and total score.

The program will prompt the user to choose the operation of records from a menu as shown below:

MENU

1. Add student records
2. View all student records
3. Calculate an average of a selected student's scores
4. Show student who gets the max total score
5. Show student who gets the min total score
6. Find student by ID
7. Sort records by total scores