

Introduction to Computing - Lab Evaluation

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1. Write a program that implements a calculator for fractional numbers. Calculator will assume all inputs to be in fractional form (i.e., *numerator/denominator* format) and result of any arithmetic operation (addition, subtraction, multiplication or division) will also be shown in fractional form. For example,

$$\frac{1}{2} + \frac{3}{5} = \frac{11}{10} \quad \text{and} \quad \frac{1}{2} - \frac{3}{5} = \frac{-1}{10}$$

[Hint: Use structures to define fractional numbers.]

2. A class of 15 students has gone through three exams, Quiz-1, Mid-term and Quiz-2. Marks of each student in individual tests are given in Table 1. Write a program that allows users to find out average marks and number of students that are above average.

Student ID	Quiz-1	Mid Term	Quiz-2
110	7	22	6
111	6	19	2
112	7	15	7
113	4	26	8
114	3	29	7
115	6	22	6
116	7	18	5
117	8	12	9
118	10	16	5
119	2	23	4
120	5	28	8
121	8	30	9
122	6	29	7
123	9	27	10
124	5	11	3

Table 1: Students marks.

Note: Write two separate functions to calculate average marks and number of students above average. For your ease, students' result data given in Table 1 is also provided in a text file along with this document.