

DATA STRUCTURES AND ALGORITHMS

PRACTICE No.6

Exercises

No.1 Write a C program to find sum and average of whole numbers within interval $] a, b]$. a and b can be any numbers – decimal numbers as well.

(Recommendation: use *floor()* or *ceil()* functions)

No.2 x_1, y_1 and x_2, y_2 are the coordinates of the centers of two circles. R_1 and R_2 are radius of the circles. Your task is to define if circles are intersected, contacted or not intersected.

No.3 Two dimensional array with random elements is given. Put diagonal elements in reverse order.

Homework

Find all primary numbers within interval $[1; 10^{15}]$ using at least three different algorithms.

- Evaluate number of operations of each algorithm.
- Measure running time of each algorithm in [*ms*] and compare with evaluated number of operations.