DATA STRUCTURES AND ALGORITHMS

PRACTICE No.5

Exercises

No.1 Build AVL heap. Implement single rotation to the left and the right.

No.2 Write a C program to built heap based on array implementation.

No.3 Write a C program to calculate nearest time (hour:min) from 13:33 that is palindrome.

Homework

Write a C program to calculate

- number PI

- integral of function $f(x) = x^2$ where $x = [0; 2]$:

applying *Monte Carlo* method and calculate the error dependence on the number of random numbers.

Homework

Main city square has a rectangular shape with the size $n \times m$ meters.

On the occasion of the city's anniversary, a decision was taken to pave the Square with square granite flagstones. Each flagstone is of the size $a \times a$.

What is the least number of flagstones needed to pave the Square?

It's allowed to cover the surface larger than the Square, but the Square has to be covered. It's not allowed to break the flagstones. The sides of flagstones should be parallel to the sides of the Square.