Solving the Josephus problem with circular lists.

May 10, 2023

1 Project description

You are going to implement a C++ program that provides the solution of the
Josephus problem. You are going to implement:

- A circular list. It should have at least the following functionalities: insert a
  new element, print all elements, remove an element, list third element from
  given one. If using C++ (highly encouraged), data should be private, and
  accessible from the main program only through calling member functions.

- You have freedom to the design of the program **Discuss your design
  choices in the report you submit.**

- The main program will use the provided functionality to answer the fol-
  lowing question: suppose we start the process from a given node i. Which
  is the last node to survive ?

2 What to turn in

You will turn in

1. *a short written report* containing:

    - A description of the significant choices/issues in the design of your
      code.
    - Listing of your experiments, showcasing the capabilities of the pro-
      gram.

2. The sourcecode of your program.

You may turn in the document via moodle.unibuc.ro (Class moodle).

3   Coding standards

A percentage of your grade will be based on the quality of your code, so pay attention to it. Discuss changes (if any) you made to programs presented in class. Take extra care in documenting the code you are implementing on your own. Properly modularize the code (for instance implement separate functions for significant parts of the program).

4   Deadline

June 11, 2023, noon local time. This is a strict deadline. No credit will be given for homework turned in late.