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CS33211

Banker's Algorithm Program Documentation

Overview

From the Assignment #2:

Banker's Algorithm for deadlock avoidance. Considering a system with five processes P0 through P4 and three resources of type A, B, C. Resource type A has 10 instances, B has 5 instances and type C has 7 instances. Implement the Banker's algorithm to answer the following question： Is the system in a safe state? If Yes, then what is the safe sequence?

Files

banker.cpp: The main C++ source code file containing the implementation of the Banker's Algorithm.

input.txt: The input file containing information about the processes, resource allocation, and available resources.

README.md: Documentation file providing instructions on how to use the program.

Compilation

To compile the program, use a C++ compiler such as g++:

g++ banker.cpp -o banker

Input Format

The input file (input.txt) should follow this format:

n m

Allocated resources for each process

Max resources required for each process.

Available resources

Where:

n: Number of processes

m: Number of resource types

Allocated resources for each process: Matrix representing the resources currently allocated to each process.

Max resources required for each process: Matrix represents the maximum resources each process may request.

Available resources: Vector representing the available resources in the system.

Running the Program

After compilation, run the program using:

./banker

Follow the on-screen instructions to provide the input file (input.txt). The program will then determine whether the system is in a safe state and output the safe sequence if it is.

To remove the program from:

 rm -r banker

Credits

This program is developed by Albaraa Alluhaibi.