Project abstract

Semester Project for Operating Systems
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Class: BS CS IV (Section B)
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Title: **BANKER'S ALGORITHM; DEADLOCK MANAGEMENT**

Abstract:

The aim behind implementing Banker's algorithm as a semester project is to manage the interlinkages of process so that the deadlock is prevented. This involves the allocation of resources efficiently and to monitor them. When the system receive input, it initiates a process, that process should be handled appropriately, and adequate resources shall be given to it keeping in view that no other process get disturbed by its allocations.

Our aim is to design a program which implements the Banker's algorithm to simulate the allocation of maximum number of resources to the process and check for tests by performing all possible activities. It determines whether the system is in safe state or not.

Banker's algorithm is very useful in transaction processing systems such as Banks. The operating systems for the crucial transaction are designed in a way that no deadlock should occur. If any mishap occurs to happen, it must be handled before the issue is encountered by the customer, otherwise, it will lessen the reputation of company.

This program shall be dealing with Resource Allocation, Multiple processes, Deadlocks, Threads (implicit), and System time (CPU Burst, Throughput, etc.). After the successful implementation, we shall be able to demonstrate the use of this algorithm in critical systems and how it helps to prevent long deadlocks.

Graphical Abstract: