

Assessment

Q1 Create a class student to keep record of [student-id, name, Roll-No, Batch]. Implement user defined Queue of students record. Implement insert and delete functions for student. Call these functions concurrently [Concurrency should be implemented by multithreading]. Also implement inter thread communication to schedule insert and delete function.

Q2 Write a program for Book Record [Book-id, Name, Author, number of copies]. Create user defined stack of Book Record by implementing push pop operations of stack. Create two threads one for push the book, other to pop the book from stack. Synchronize both push, pop operations. Also implement inter thread communication.

Q3 Create a class for stock-Quantity. Define member variables [Item-ID, Quantity]. Write two constructors and two functions for "insertion" and "issue" of any stock-Item quantity. Generate and handle User Defined Exception if the updated quantity of stock is less than 50% from the initial value.