Assignment 5 – Process Synchronization (8%)

Introduction

Assignment 5 contributes 8% towards your final course grade and the assignment total is 10 marks. You should begin Assignment five after completing the materials in Module 6; it is due at the end of Module 8. Check your Course Schedule for the precise due date. Directions for submitting Assignment 5 to your Open Learning Faculty Member for grading can be found in the Assignments Overview tab. An assignment marking criteria and your assignment submission details follows at the end of this document.

Instructions

In this assignment, you will write a Java program that implements the solution to the bounded buffer problem between a producer and a consumer. The producer will produce forever and the consumer will consume forever. The producer will put data into the buffer and the consumer will remove data from the buffer. The buffer must implement a means of ensuring that the buffer never enters an under flow (take too much data out) or over flow put too much data into the buffer. Additionally the buffer must have functionality so that a critical region problem does not occur with parallel updates to the data.

Test you application by creating a java thread for the produce, the consumer and having them access a shared buffer with declared size 5. Refer back to assignment 3 to help set up the solution to this assignment.

Report Submission Details

You must submit Java files and screen shots that show how your program works. Refer to the marking criteria at the end of this document.

Assignment Marking Criteria	Weighting
No syntax error: All requirements are fully implemented without syntax errors. Submitted screen shots will be reviewed with source code.	/5
Correct implementation: All requirements are correctly implemented and produce correct results Submitted screen shots will be reviewed with source code.	/5
Total	/10