

CvP Practice Class 8

Chapter 13: Review Questions

16. What advantage do monitors have over semaphores?
24. Specifically, what Java program unit can run concurrently with the main method in an application program?
25. What does the Java *sleep* method do?
26. What does the Java *yield* method do?
27. What does the Java *join* method do?
28. What does the Java *interrupt* method do?
29. What are the two Java constructs that can be synchronized?

Chapter 13: Problem Set

3. Busy waiting is a method whereby a task waits for a given event by continuously checking for that event to occur. What is the main problem with this approach?
4. In the producer-consumer example of Section 13.3¹, suppose that we incorrectly replaced the *release(access)* in the consumer process with *wait(access)*. What would be the result of this error on execution of the system?
6. Suppose two tasks *A* and *B* must use the shared variable *Buf_Size*. Task *A* adds 2 to *Buf_Size*, and task *B* subtracts 1 from it. Assume that such arithmetic operations are done by the three-step process of fetching the current value, performing the arithmetic, and putting the new value back. In the absence of competition synchronization, what sequences of events are possible and what values result from these operations? Assume the initial value of *Buf_Size* is 6.

¹ 8th edition of the book