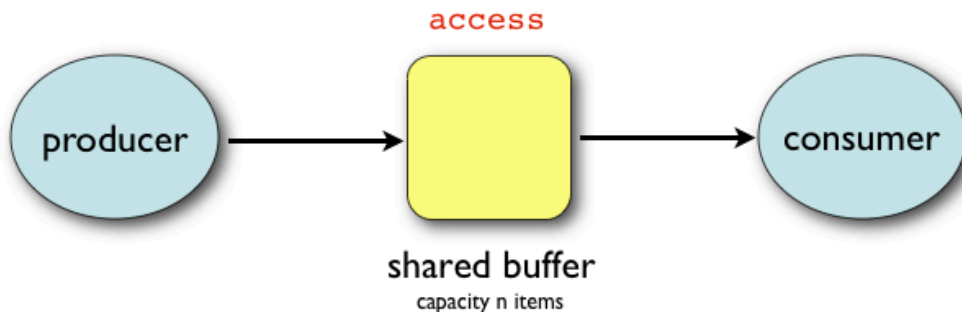


This activity was designed to involve two partners A and B. Be sure to find someone to work with! What follows below is a script to be carried out by the two partners - you chose who plays A and who plays B. Consider the solution to the bounded-buffer as we just discussed.

The Bounded-Buffer Problem

```
int n;  
mutex access;      init(&access,1);  
semaphore empty;  init(&empty,n);  
semaphore full;   init(&full,0);
```



- A) Explain to your partner the purpose of the *mutex access*.
- B) Explain to your partner why the *mutex access* needs to be initialized with value 1.
- A) Explain to your partner what *semaphore empty* is for.
- B) Explain to your partner why *empty* cannot be a *mutex*.
- A) Explain to your partner why *semaphore empty* must be initialized with value *n*.
- B) Explain to your partner what *semaphore full* is for.
- A) Explain to your partner why *semaphore full* must be initialized with value 0.

Finally, without looking at the slides, collaborate to reconstruct (on the back of this page) the code for the producer and for the consumer processes.