For 1 producer and 1 consumer, producer will produce 1 item upon wake up, and put it into the buffer, and consumer will consume this item when the consumer thread wake up, when consumer consume an item and producer still sleep, and no item in the buffer, there will be an error occur.

For 6 producers and 6 consumers, all the producers and consumers thread will be created at once. Every producer and consumer will try to insert or delete on item from the buffer upon wake up. Error will occur when consumers are waken and producers are sleeping and there is nothing left in the buffer to consume, or producers are waken and consumers are sleeping, then there is no place to insert into the buffer. The second case is more than 5 times larger than the first case, because more than 1 producer or consumer can work at the same time.