```
Output
        main.c
        1 #include <stdio.h>
                                                                                                   Produced: 1
R
        2 #include <pthread.h>
                                                                                                   Consumed: 1
        3 #include <semaphore.h>
                                                                                                   Produced: 2
                                                                                                   Consumed: 2
Produced: 3
        4 #include <unistd.h>
6 #define SIZE 5
7 int buffer[SIZE], in=0, out=0;
                                                                                                   Produced: 4
5
        8 sem_t empty, full;
        9 pthread_mutex_t mutex;
       10
       11 - void* producer(void *arg) {
              for(int i=1;i<=10;i++){
       12-
(6)
       13
                 sem_wait(&empty);
              pthread_mutex_lock(&mutex);
buffer[in] = i;
printf("Produced: %d\n", i);
in = (in+1)%SIZE;
       14
       15
0
       16
       17
                pthread_mutex_unlock(&mutex);
sem_post(&full);
JS
       18
       19
TS
       20
                 sleep(1);
       21
               return NULL;
E
       22
       23 }
```