main.c

Share Run

```c
#include <stdio.h>
#include <semaphore.h>
#include <pthread.h>
#define SIZE 5
int buf[SIZE],in=0,out=0; sem_t empty,full,mutex;
void* producer(){for(int i=1;i<=5;i++){sem_wait(&empty);sem_wait(&mutex);
buf[in]=i; printf("Produced %d\n",i); in=(in+1)%SIZE;
sem_post(&mutex);sem_post(&full);}return NULL;}
void* consumer(){for(int i=1;i<=5;i++){sem_wait(&full);sem_wait(&mutex);
printf("Consumed %d\n",buf[out]); out=(out+1)%SIZE;
sem_post(&mutex);sem_post(&empty);}return NULL;}
int main(){pthread_t p,c;sem_init(&empty,0,SIZE);sem_init(&full,0,0);sem_init
    (&mutex,0,1);
pthread_create(&p,NULL,producer,NULL);pthread_create(&c,NULL,consumer,NULL);
pthread_join(p,NULL);pthread_join(c,NULL);}
```

Output

```
Produced 1
Produced 2
Produced 3
Produced 4
Produced 5
Consumed 1
Consumed 2
Consumed 3
Consumed 4
Consumed 5


=== Code Execution Successful ===
```