```c
#include <stdio.h>
#include <stdlib.h>
int mutex = 1;
int full = 0;
int empty = 10, x = 0;
void producer()
{
    --mutex;
    ++full;
    --empty;
    x++;
    printf("\nProducer produces"
        "item %d",
        x);
    ++mutex;
}
void consumer()
{
    --mutex;
    --full;
    ++empty;
    printf("\nConsumer consumes "
        "item %d",
        x);
    x--;
    ++mutex;
}
```

```c
33        x--;
34        ++mutex;
35    }
36    int main()
37    {
38        int n, i;
39        printf("\n1. Press 1 for Producer"
40            "\n2. Press 2 for Consumer"
41            "\n3. Press 3 for Exit");
42    #pragma omp critical
43        for (i = 1; i > 0; i++) {
44            printf("\nEnter your choice:");
45            scanf("%d", &n);
46            switch (n) {
47            case 1:
48                if ((mutex == 1)
49                    && (empty != 0)) {
50                    producer();
51                }
52                else {
53                    printf("Buffer is full!");
54                }
55                break;
56            case 2:
57                    if ((mutex == 1)
58                    && (full != 0)) {
59                    consumer();
```

```c
        switch (n) {
        case 1:
            if ((mutex == 1)
                && (empty != 0)) {
                producer();
            }
            else {
                printf("Buffer is full!");
            }
            break;
        case 2:
                if ((mutex == 1)
                && (full != 0)) {
                consumer();
            }
            else {
                printf("Buffer is empty!");
            }
            break;
            case 3:
            exit(0);
            break;
        }
    }
}
```

```
1. Press 1 for Producer
2. Press 2 for Consumer
3. Press 3 for Exit
Enter your choice:1

Producer producesitem 1
Enter your choice:2

Consumer consumes item 1
Enter your choice:2
Buffer is empty!
Enter your choice:3


...Program finished with exit code 0
Press ENTER to exit console.
```