

```

#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;
}

int main()
{
    int n, i;

    printf("\n1. Press 1 for Producer"

"\n2. Press 2 for Consumer"

"\n3. Press 3 for Exit");

#pragma omp critical
    for (i = 1; i > 0; i++)

```

```

{

    printf("\nEnter your choice:");
    scanf("%d", &n);
    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;
    }
}
}

```