

producer();

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EXPERIMENT NO. 03

```
Source Code:
#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)) {
```

```
}
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;
} }
}
```

Output:

```
1. Press 1 for Producer
2. Press 2 for Consumer
Press 3 for Exit
Enter your choice:1
Producer produces item 1
Enter your choice:1
Producer produces item 2
Enter your choice:1
Producer produces item 3
Enter your choice:1
Producer produces item 4
Enter your choice:1
Producer produces item 5
Enter your choice:1
Buffer is full!
Enter your choice:2
Consumer consumes item 5
Enter your choice:2
Consumer consumes item 4
Enter your choice:2
Consumer consumes item 3
Enter your choice:2
Consumer consumes item 2
Enter your choice:2
Consumer consumes item 1
Enter your choice:2
Buffer is empty!
Enter your choice:3
```