EXPERIMENT 29

#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;

}

}

}