#include<stdio.h>

#include<stdlib.h>

int mutex=1,full=0,empty=3,x=0;

int main()

{

Int n;

Void producer();

Void consumer();

Int wait();

Int signal();

Printf(“1.Producer\n 2.Consumer\n 3.Exit);

While(1)

{

Printf(“\n Enter your choice”);

Scanf(“%d”,&n);

Switch(n)

{

Case1: if((mutex==1)&&(empty!=0))

Producer();

Else

Printf(“\n Buffer is full”);

Break;

Case2: if((mutex==1)&&(full!=0))

Consumer();

Else

Printf(“Buffer is empty”);

Break;

Case3: exit(0)

Break;

}

}

Return 0;

}

Int wait(int s)

{

Return(--s);

}

Iint signal(int s)

{

Return(++s);

}

Void producer()

{

Mutex=wait(mutex);

Full=signal(full);

Empty=wait(empty);

X++;

Printf(“\n Producer produces the item %d”,x);

Mutex=signal(mutex);

}

Void consumer()

{

Mutex=wait(mutex);

Full=wait(full);

Empty=signal(empty);

Printf(“\n Consumer consumes items %d”,x);

x--;

mutex=signal(mutex);

}