PROGRAM:PRODUCER AND CONSUMER

#include<stdio.h>

#include<stdlib.h>

int mutex=1,full=0,empty=5,x=0;

int main(){

int n;

void producer();

void consumer();

int wait(int);

int signal(int);

printf("\n1.Producer\n2.Consumer\n3.Exit");

while(1){

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;}

}

return 0;}

int wait(int s) }

return (--s);}

int signal(int s)

{

return(++s);}

void producer()

{

mutex=wait(mutex);

full=signal(full);

empty=wait(empty);

x++;

printf("\nProducer produces %d item",x);

mutex=signal(mutex);}

void consumer(){

mutex=wait(mutex);

full=wait(full);

empty=signal(empty);

printf("\nConsumer consumes %d item",x);

x--;

mutex=signal(mutex);}



