#include<iostream>

using namespace std;

int i;

int mutex =1,E=10,f=0,c=0;

void producer()

{

mutex--;

f++;

E--;

c++;

cout<<"Producer produced\n"<<c;

mutex++;

}

void consumer()

{

mutex--;

f--;

E++;

c--;

cout<<"consumer consume\n"<<c;

mutex++;

}

main()

{

while(1)

{ cout<<"1- p 2-c 3-exit\n";

cout<<"Enter your choice\n";

cin>>i;

switch(i)

{case 1: if(mutex==1 && E!=0)

{

producer();break;}

else

{

cout<<"producer is waiting\n";break;}

case 2: if(mutex==1 && f!=0)

{consumer();break;

}else{cout<<"consumer is waiting\n";break;

}

case 3: exit(0);

default:cout<<"invalid input\n";

}

}

}

Output:-

1- p 2-c 3-exit

Enter your choice

1

Producer produced

11- p 2-c 3-exit

Enter your choice

2

consumer consume

01- p 2-c 3-exit

Enter your choice

1

Producer produced

11- p 2-c 3-exit

Enter your choice

2

consumer consume

01- p 2-c 3-exit

Enter your choice

1

Producer produced

11- p 2-c 3-exit

Enter your choice

3

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Process exited after 11.92 seconds with return value 0

Press any key to continue . . .