#include<stdio.h>

#define N 50

int rear=-1,front=-1;

void enqueue(int\*);

void dequeue(int\*);

void display(int\*);

int main()

{

int Q[N],i,choice;

printf("\*\*\*\*\*\*QUEUE OPERATIONS\*\*\*\*\*\*");

printf("\n1.Enqueue");

printf("\n2.Dequeue");

printf("\n3.Display");

printf("\n4.Exit");

do

{

printf("\nEnter choice (1-4): ");

scanf("%d",&choice);

switch(choice)

{

case 1: enqueue(Q);

break;

case 2: dequeue(Q);

break;

case 3: display(Q);

break;

case 4: printf("Exit!!!")

break;

default: printf("Choose a valid option (1-3)!!!");

}

}

while(choice!=4);

return 0;

}

void enqueue(int\*Q)

{

int item;

if(rear==N-1)

{

printf("Overflow!! Insertion not possible");

}

else

{

if(front==-1 && rear==-1)

front=0;

printf("Enter element that to be inserted into a queue: ");

scanf("%d",&item);

rear=rear+1;

Q[rear]=item;

printf("\nElement inserted successfully");

}

}

void dequeue(int\*Q)

{

int item2;

if(front==-1 && rear==-1)

{

printf("Queue is empty!!!");

}

else

{

item2=Q[front];

if(front==rear)

{

front=-1;

rear=-1;

}

else

{

front=front+1;

}

// printf("Element deleted successfully from queue!!!");

printf("\nDeleted element is : %d",item2);

//display();

}

}

void display(int\*Q)

{

int i;

printf("\nQueue is : ");

for(i=front;i<=rear;i++)

{

printf("%d ",Q[i]);

}

}

OUTPUT

\*\*\*\*\*\*QUEUE OPERATIONS\*\*\*\*\*\*

1.Enqueue

2.Dequeue

3.Display

4.Exit

Enter choice (1-4): 1

Enter element that to be inserted into a queue: 1

Element inserted successfully

Enter choice (1-4): 1

Enter element that to be inserted into a queue: 2

Element inserted successfully

Enter choice (1-4): 1

Enter element that to be inserted into a queue: 3

Element inserted successfully

Enter choice (1-4): 3

Queue is : 1 2 3

Enter choice (1-4): 2

Deleted element is : 1

Enter choice (1-4): 2

Deleted element is : 2

Enter choice (1-4): 2

Deleted element is : 3

Enter choice (1-4): 2

Queue is empty!!!

Enter choice (1-4): 4

Exit!!!