```c
#include <stdio.h>

# define max 6
int queue[max];
int front=-1;
int rear=-1;
void enqueue(int element) {

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

front=0;
rear=0; queue[rear]=element;

}

else if(((rear+1)%max==front)|| (front == rear + 1))

{
printf("Queue is overflow..");

}

else

{
rear=(rear+1)%max; queue[rear]=element;

} }

int dequeue() {
```

```c
if((front==-1) && (rear==-1)) {

printf("\nQueue is underflow.."); }

else if(front==rear) {

printf("\nThe dequeued element is %d",
queue[front]);

front=-1;

rear=-1; }

else

{
printf("\nThe dequeued element is %d",

queue[front]); front=(front+1)%max;

}
}
void display() {

int i=front;

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

printf("\n Queue is empty.."); }

else
```

```c
{
printf("\nElements in a Queue are :"); while(i<=rear)
{
printf("%d,", queue[i]);
i=(i+1)%max; }
} }
void search() {
int item,i,c=0;
printf("Enter the element which is to be searched");
scanf("%d", &item); for(i=front;i<=rear;i++) {
if(item==queue[i])
{
printf("item found at location %d ",i+1);
c++;
}
}
if(c==0)
printf("item not found"); }
int main() {
```

```c
int choice=1,x;

while(choice<4 && choice!=0)
{
printf("\n Press 1: Insert an element");
printf("\nPress 2: Delete an element");
printf("\nPress 3: Display the element");
printf("\nPress 4: search the element");
printf("\nEnter your choice"); scanf("%d", &choice);

switch(choice) {

case 1:

printf("Enter the element which is to be inserted");

scanf("%d", &x); enqueue(x); break;
case 2: dequeue(); break;

case 3: display(); break; case 4: search(); break;

}}

return 0; }
```

output

```
 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice1
Enter the element which is to be inserted1

 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice1
Enter the element which is to be inserted2

 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice1
Enter the element which is to be inserted3

 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice1
Enter the element which is to be inserted4

 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice1
Enter the element which is to be inserted5

 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice2

The dequeued element is 1
```

```
 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice3

Elements in a Queue are :2,3,4,5,
 Press 1: Insert an element
Press 2: Delete an element
Press 3: Display the element
Press 4: search the element
Enter your choice4
Enter the element which is to be searched4
item found at location 4
```