```
#include<stdio.h>
#include<conio.h>
#include
#define qsize 5
int f=0,r=-1,ch;
int item,q[10];

int isfull()
{
return(r==qsize-1)?1:0;
}
int isempty()
{
return(f>r)?1:0;
}
void insert_rear()
{
if(isfull())
```

```
{
printf("queue overflow\n");
return;
  }
r=r+1;
q[r]=item;
}
void delete_front()
{
if(isempty())
{
printf("queue empty\n");
return;
  }
printf("item deleted is %d\n",q[(f)++]);
if(f>r)
{
f=0;
```

```
r=-1;
  }
}
void insert_front()
{
if(f!=0)
{
f=f-1;
q[f]=item;
return;
  }
else if((f==0)&&(r==-1))
{
q[++(r)]=item;
return;
  }
else
printf("insertion not
```

```
possible\n");
}
void delete_rear()
{
if(isempty())
{
printf("queue is empty\n");
return;
  }
printf("item deleted is %d\n",q[(r)--]);
if(f>r)
{
f=0;
r=-1;
  }
}
void display()
{
```

```
int i;
if(isempty())
{
printf("queue empty\n");
return;
  }
for(i=f;i<=r;i++)
printf("%d\n",q[i]);
}
void main()
{
for(;;)
{
printf("\n**********************************************
printf("1.insert_rear\n2.insert_front\n3.delete_rear\
printf("enter choice: ");
scanf("%d",&ch);
```

```
switch(ch)
{
case 1:printf("enter the item\n");
scanf("%d",&item);
insert_rear();
break;
case 2:printf("enter the item\n");
scanf("%d",&item);
insert_front();
break;
case 3:delete_rear();
break;
case 4:delete_front();
break;
case 5:display();
break;
default:exit(0);
        }
```

```
printf("\n**********************************************
    }
}
```