

```

#include<stdio.h>
#include<stdlib.h>
#define SIZE 3
int item;
int front=0,rear=-1,q[SIZE],count=0;
void insertrear()
{
    if(count==SIZE)
    {
        printf("\nqueue overflow\n");
        return;
    }
    rear=(rear+1)%SIZE;
    q[rear]=item;
    count++;
}
int deletefront()
{
    if(count==0)
        return -1;
    item=q[front];
    front=(front+1)%SIZE;
    count=count-1;
    return item;
}
void displayQ()
{
    int i,f;
    if(count==0)
    {
        printf("queue is empty\n");
        return;
    }
    f=front;
    printf("contents of queue \n");
    for(i=1;i<=count;i++)
    {
        printf("%d\n",q[f]);
        f=(f+1)%SIZE;
    }
}
int main()
{
    int choice;

```

```

for(;;)
{
printf("\n1.insertrear\n2.deletefront\n3.display\n4.exit\n");
printf("enter choice\n");
scanf("%d",&choice);
switch(choice)
{
case 1:printf("Enter the item to be inserted:\n ");
scanf("%d",&item);
insertrear();
break;
case 2:item=deletefront();
if(item== -1)
printf("Queue is empty\n");
else
printf("Item deleted: %d\n",item);
break;
case 3: displayQ();
break;
default: exit(0);
}
}
}

```

```

1.insertrear
2.deletefront
3.display
4.exit
enter choice
1
enter the item to be inserted:
10
1.insertrear
2.deletefront
3.display
4.exit
enter choice
1
enter the item to be inserted:
20
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
enter the item to be inserted:
30
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
item deleted: 20
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
item deleted: 30
1.insertrear
2.deletefront
3.display
4.exit
enter choice
3
contents of queue
20
30
50
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
item deleted: 50
1.insertrear
2.deletefront
3.display
4.exit
enter choice
3
queue is empty
1.insertrear
2.deletefront
3.display
4.exit
enter choice
4
Program finished with exit code 0
Press ENTER to exit console

```

```

enter the item to be inserted:
40
queue overflow
1.insertrear
2.deletefront
3.display
4.exit
enter choice
1
contents of queue
10
20
30
50
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
item deleted: 10
1.insertrear
2.deletefront
3.display
4.exit
enter choice
1
enter the item to be inserted:
50
1.insertrear

```

```

1.insertrear
2.deletefront
3.display
4.exit
enter choice
3
contents of queue
20
30
50
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
item deleted: 20
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
item deleted: 30
1.insertrear
2.deletefront
3.display
4.exit
enter choice
3
contents of queue
20
30
50
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
item deleted: 50
1.insertrear
2.deletefront
3.display
4.exit
enter choice
3
queue is empty
1.insertrear
2.deletefront
3.display
4.exit
enter choice
4
Program finished with exit code 0
Press ENTER to exit console

```

```

item deleted: 50
1.insertrear
2.deletefront
3.display
4.exit
enter choice
2
queue is empty
1.insertrear
2.deletefront
3.display
4.exit
enter choice
3
queue is empty
1.insertrear
2.deletefront
3.display
4.exit
enter choice
4
Program finished with exit code 0
Press ENTER to exit console

```