```
#include <stdio.h>
#include <conio.h>
#define qsize 3
int f=0, r=-1, ch;
int item, q[10];
int isfull()
{ return (r==qsize-1) ? 1:0;
}
int isempty(int f, int r)
{ return (f>r) ? 1:0;
}
void insertrear()
{ if(isfull(r))
  { printf("Queue Overflow");
    return;
  }
  r=r+1;
  q[r]=item;
}
void deletefront()
{ if(isempty(f,r))
  { printf("Queue Underflow");
    return;
  }
```

```
pf ("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(f,r))
    { pf ("Queue is empty \n");
      return;
    }
pf ("item deleted is %d \n", q[(f)--]);
if (f>r)
  {f=0;
   r=-1;
  }
}
```

```
Void display ()
{ int i ;
    if (isempty(f,r))
    { pf("queue empty \n");
      return;
    }
  for (i=f;i<=r;i++)
     pf("%d\n",q[i]);
}
void main()
{ clrscr()
 for(;;)
 {
 printf("\n1: insert_rear \n2: insert front \n 3. delete rear
          \n 4: delete front \n 5. display \n");
 print("Enter choice ")
 scanf("%d",&ch);
 switch(ch)
{ case 1: printf(" enter the item ");
          scanf("%d",&item);
          insert_rear();
          break;
 case 2: pf(" enter the item ");
          scanf("%d",&item);
          insert_front();
          break;
```

```
case 3:  delete rear();
         break;
case 4:  delete front();
         break;
case 5:  display();
default: exit(0);
    }
  }
getch();
}
```