8-1-24

①

```
#include <stdio.h>
int max =10;
int q [max], front =-1, rear =-1;

void insert (int x)
int delete()
void display()

void insert (int x) {
        if (rear = Max-1)
              printf(" Overflow")
     else {
            if( front ==-1 && reer =-1)
                 {
                    front =0
                    reer =0
                 }
  else {
        rear++ ;
        q [rear] =num; }
  }

int delete
{
     int val;
        if(front ==-1 || front >rear)
              {
                 Printf(" Underflow")
                 return -1;
              }
```

```
else {
        val = q [front++];
       if(front > rear){
            rear = -1; front = -1;}
     return val; }
}

void display()
 {
     int i;
     printf("\n")
     if ( front == -1 || front > rear)
            ~~Printf~~("Queue is empty");
     ~~else{~~
          for (i = front ; i <= rear; i++)
                printf ("\t %d", q[i]);
       }
  }

Void main()
 {
   printf("\n 1.Insert   2.Delete 3.Display 4.Exit");
    printf(" \n Enter your choice");
     int ch; int val;
     ~~Scanf ("%d", &ch);~~
   ~~while(ch!=4)~~
  {
     case1:  Printf("\n Enter value to be inserted");
              Scanf( "%d", &val);
              insert (val);
case 2:
            val:delete();
            if (val!=-1)
            printf("Deleted number is %d",val);
            break;

case 3:     printf("\n the queue is : ");
             display();
             break;
 default:   printf("\n Wrong Option");
  }
   }
```

Output:

```
1. Insert    2. Delete   3. Display   4. Exit
  Enter your choice:1
  Enter value to be inserted:10
1. Insert    2. Delete   3. Display   4. Exit
  Enter your Choice:1
  Enter value to be inserted:12
1. Insert    2. Delete   3. Display   4. Exit
  Enter your choice : 3
  1 10
1. Insert    2. Delete   3. Display   4. Exit
  Enter your Choice: 2
  Deleted number is 10
```

②.

```
# include <stdio.h>
# define qsize 3
int item, front=0, rear=-1, q[qsize], count=0;

void insertrear ()
{
   if (count==qsize)
       {printf(" queue overflow" );
          return;}
    rear=(rear+1)%qsize
    q[rear] =item;
     count++;
  }
 int deletefront ()
 {
      if(count==0) return -1;
      item = q [front];
      front=(front+1)%qsize;
       count=count-1;
       return item;
   }
 void displayQ ()
 {
      int i,f;
      if (count==0)
         {
            Printf(" queue empty");
              return;
          }
         f=front;
```

```
for (i=1;i<=count;i++)
 {
    printf("%d\t",q[f]);
      f=(f+1)%qsize
   }
}


void main()
 {
     int choice
     while(1)
       {
          Printf("1.Insert 2.delete 3.display 4.exit");
          Scanf("%d",&choice);

     Switch(choice)
      {
         case1:  Printf("Enter item");
                 Scanf("%d",&item);
                 Insertrear();
                 break;
         case 2: item=deletefront()
                   if (item==-1)
                   print f("queue is empty");
                 else
                   Printf("deleted=%d",item);
                    break;

         case 3: displayQ()
                   break;
case 4: exit(0);
}
}
}
```

Output

```
1. Insert  2. delete  3. display  4. exit
 1
Enter item
 4
1. Insert   2. delete  3. display   4. exit
 1
 Enter item
  6
1. Insert    2. delete    3. display   4. exit
  3
  6   4
1. Insert    2. delete     3. display  4. exit
  2
  deleted = 4
```

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