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1  #include<stdio.h>
2  #include<conio.h>
3  #include<math.h>
4  int a[30],count=0;
5  int place(int pos) {
6      int i;
7      for (i=1;i<pos;i++) {
8          if((a[i]==a[pos])||((abs(a[i]-a[pos])==abs(i-pos))))
9              return 0;
10     }
11     return 1;
12 }
13 void print_sol(int n) {
14     int i,j;
15     count++;
16     printf("\n\nSolution #d:\n",count);
17     for (i=1;i<=n;i++) {
18         for (j=1;j<=n;j++) {
19             if(a[i]==j)
20                 printf("Q\t"); else
21                 printf("*\t");
22         }
23         printf("\n");
24     }
25 }
26 void queen(int n) {
27     int k=1;
28     a[k]=0;
29     while(k!=0) {

```



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25 }
26 void queen(int n) {
27     int k=1;
28     a[k]=0;
29     while(k!=0) {
30         a[k]=a[k]+1;
31         while((a[k]<=n)&&!place(k))
32             a[k]++;
33         if(a[k]<=n) {
34             if(k==n)
35                 print_sol(n); else {
36                 k++;
37                 a[k]=0;
38             }
39         } else
40             k--;
41     }
42 }
43 void main() {
44     int i,n;
45     printf("Enter the number of Queens\n");
46     scanf("%d",&n);
47     queen(n);
48     printf("\nTotal solutions=%d",count);
49     getch();
50 }
51

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28     a[k]=0;
29     while(k!=0) {
30         a[k]=a[k]+1;
31         while((a[k]<=n)&&!place(k))
32             a[k]++;

```

Enter the number of Queens

4

< Solution #1:

```

*      Q      *      *
*      *      *      Q
Q      *      *      *
*      *      Q      *

```

Solution #2:

```

*      *      Q      *
Q      *      *      *
*      *      *      Q
*      Q      *      *

```

Total solutions=2

...Program finished with exit code 0