

```

9  #include<stdio.h>
10 #include<conio.h>
11 #include<math.h>
12 int a[30],count=0;
13 int place(int pos) {
14     int i;
15     for (i=1;i<pos;i++) {
16         if((a[i]==a[pos])||((abs(a[i]-a[pos])==abs(i-pos))))
17             return 0;
18     }
19     return 1;
20 }
21 void print_sol(int n) {
22     int i,j;
23     count++;
24     printf("\n\nSolution #d:\n",count);
25     for (i=1;i<=n;i++) {
26         for (j=1;j<=n;j++) {
27             if(a[i]==j)
28                 printf("Q\t"); else
29                 printf("*\t");
30         }
31         printf("\n");
32     }
33 }
34 void queen(int n) {
35     int k=1;
36     a[k]=0;
37     while(k!=0) {
38         if(k==n) {
39             print_sol(n);
40             k--;
41             a[k]=0;
42             while(k!=0) {
43                 if(a[k]==n) {
44                     a[k]=0;
45                     k--;
46                 }
47             }
48             a[k]=k;
49             k++;
50         }
51         else {
52             a[k]=k;
53             k++;
54         }
55     }
56 }
57 int main() {
58     int n;
59     printf("Enter the value of n: ");
60     scanf("%d",&n);
61     queen(n);
62     getch();
63 }

```

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30     }
31     printf("\n");
32 }
33 }
34 void queen(int n) {
35     int k=1;
36     a[k]=0;
37     while(k!=0) {
38         a[k]=a[k]+1;
39         while((a[k]<=n)&&!place(k))
40             a[k]++;
41         if(a[k]<=n) {
42             if(k==n)
43                 print_sol(n); else {
44                     k++;
45                     a[k]=0;
46                 }
47             } else
48                 k--;
49     }
50 }
51 void main() {
52     int i,n;
53     printf("Enter the number of Queens\n");
54     scanf("%d",&n);
55     queen(n);
56     printf("\nTotal solutions=%d",count);
57     getch();
58 }
59

```

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

Press ENTER to exit console.