

Online C Compiler.

Code, Compile, Run and Debug C program online.

Write your code in this editor and press "Run" button to comp

```
#include<stdio.h>
```

```
#include <stdlib.h>
```

```
#include<math.h>
```

```
int board[20],count;
```

```
int main()
```

```
{
```

```
int n,i,j;
```

```
void queen(int row,int n);
```

```
printf(" - N Queens Problem Using Backtracking -");
```

```
printf("\n\nEnter number of Queens:");
```

```
scanf("%d",&n);
```

```
queen(1,n);
```

```
return 0;
```

```
}
```

```
void print(int n)
```

```
{
```

```
int i,j;
```

```
printf("\n\nSolution %d:\n\n",++count);
```

```
for(i=1;i<=n;++i)
```

```
printf("\t%d",i);
```

```
for(i=1;i<=n;++i)
```

```
{
```

main.c

```
38 {
39     if(board[i]==j)
40         printf("\tQ");
41     else
42         printf("\t-");
43 }
44 }
45 }
46
47 int place(int row,int column)
48 {
49     int i;
50     for(i=1;i<=row-1;++i)
51     {
52         if(board[i]==column)
53             return 0;
54         else
55             if(abs(board[i]-column)==abs(i-row))
56                 return 0;
57     }
58
59     return 1;
60 }
61
62 void queen(int row,int n)
63 {
64     int column;
65     for(column=1;column<=n;++column)
66     {
67         if(place(row,column))
68         {
69             board[row]=column;
70             if(row==n)
71                 print(n);
72             else
```



```

42     printf("\t-");
43 }
44 }
45 }
46
47 int place(int row,int column)
48 {
49     int i;
50     for(i=1;i<=row-1;++i)
51     {
52         if(board[i]==column)
53             return 0;
54         else
55             if(abs(board[i]-column)==abs(i-row))
56                 return 0;
57     }
58
59     return 1;
60 }
61
62 void queen(int row,int n)
63 {
64     int column;
65     for(column=1;column<=n;++column)
66     {
67         if(place(row,column))
68         {
69             board[row]=column;
70             if(row==n)
71                 print(n);
72             else
73                 queen(row+1,n);
74         }
75     }
76 }

```

Enter number of Queens:4

Solution 1:

	1	2	3	4
1	-	Q	-	-
2	-	-	-	Q
3	Q	-	-	-
4	-	-	Q	-

Solution 2:

	1	2	3	4
1	-	-	Q	-
2	Q	-	-	-
3	-	-	-	Q
4	-	Q	-	-

...Program finished with exit code 0
Press ENTER to exit console.