

```

#include<stdio.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)
    {
        printf("\n\n%d",i);
        for(j=1;j<=n;++j)
        {
            if(board[i]==j)
                printf("\tQ");
            else
                printf("\t-");
        }
    }
}
int place(int row,int column)
{
    int i;
    for(i=1;i<=row-1;++i)
    {
        if(board[i]==column)
            return 0;
        else
            if(abs(board[i]-column)==abs(i-row))
                return 0;
    }
    return 1;
}
void queen(int row,int n)
{

```

```

int column;
for(column=1;column<=n;++column)
{
    if(place(row,column))
    {
        board[row]=column;
        if(row==n)
            print(n);
        else
            queen(row+1,n);
    }
}
}

```

```

C:\Users\Sravya M\Documents\tavel.exe
2
3
1
Enter Elements of Row: 3
3
2
1
4
5
Enter Elements of Row: 4
3
2
4
5
1
Enter Elements of Row: 5
2
3
2
4
5
The cost list is:
    1    2    3    4    5
    4    5    2    3    1
    3    2    1    4    5
    3    2    4    5    1
    2    3    2    4    5
The Path is:
1--->2--->5--->3--->4--->1
Minimum cost is 12
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Process exited after 29.57 seconds with return value 0
Press any key to continue . . .

```