Implement N queen algo using backtracking.

Program:

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

int canplace(int r,int c[50])
{
  int i;
  for(i=0;i<r;i++)
  {
   //no 2 queen in same row,same colm and also in same diagonal
   if(c[i]==c[r] || abs(c[i]-c[r])==abs(i-r))
   return 0;
  }
  return 1;
}

void display(int c[50],int n)
{
   int i,j;
   char cb[10][10];
   for(i=0;i<n;i++)
     for(j=0;j<n;j++)
            cb[i][j]='-';
  for(i=0;i<n;i++)
    cb[i][c[i]]='q';
  printf("----------------------------\n");
  for(i=0;i<n;i++)
  {
    for(j=0;j<n;j++)
    {
            printf("%c\t ",cb[i][j]);
    }
    printf("\n");
  }
}

void nqueen(int n)
{
  int r,c[50];
  c[0]=-1;
  r=0;
  while(r>=0)
  {
    c[r]++;
    while(c[r]<n && !canplace(r,c))
            c[r]++;
   if(c[r]<n)
   {
            if(r==n-1)
            {
               display(c,n);
               printf("\n");
            }
            else
```

```
            {
               r++;
               c[r]=-1;
            }
    }
    else
           r--;
  }
}

void main()
{
   int n;

   printf("Enter the number of queens\n");
   scanf("%d",&n);
   nqueen(n);

}
```

Output screenshot: