NQUEEN

#include<iostream.h>

#include<conio.h>

#include<math.h>

void queen(int,int);

int place(int,int);

int x[15],count=1;

void main()

{

int i,j,n;

clrscr();

cout<<"\n\t\t queen problem";

cout<<"\n\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*";

cout<<"Enter the number of queens";

cin>>n;

queen(1,n);

getch();

}

void queen(int k,int n)

{

int i,j,m;

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

{

if(place(k,i))

{

x[k]=i;

if(k==n)

{

cout<<"\n\t feasible solution:"<<count++;

cout<<"\n\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*:";

for(j=1;j<=n;j++)

{

cout<<"\n\t\t Row"<<j<<"--column"<<x[j]<<":\t|";

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

{

if(i==x[j])

cout<<"Q|";

else

cout<<".|";

}

}

getch();

}

else

queen(k+1,n);

}

}

}

int place(int k,int i)

{

int j;

for(j=1;j<=k-1;j++)

if((x[j]==i)||(abs(x[j]-i)==abs(j-k)))

return 0;

return 1;

}

**OUTPUT:**

Queen problem

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Enter the number of queen: 4

Feasible solution: 1

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Row1--column2: |.|Q|.|.|

Row2--column4: |.|.|.|Q|

Row3--column1: |Q|.|.|.|

Row4--column3: |.|.|Q|.|

Feasible solution: 2

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Row1--column3: |.|.|Q|.|

Row2--column1: |Q|.|.|.|

Row3--column4: |.|.|.|Q|

Row4--column2: |.|Q|.|.|