**Name-Nehal Raj**

**Enrollment:1713101310**

**Batch:11 Subject: AI Lab(BCSE9051)**

**EXPERIMENT 4:- Solving 8 Queens problem**

#include<stdio.h>

#include<stdlib.h>

int t[8] = {-1};

int sol = 1;

void printsol()

{

int i,j;

char crossboard[8][8];

for(i=0;i<8;i++)

{

for(j=0;j<8;j++)

{

crossboard[i][j]='\_';

}

}

for(i=0;i<8;i++)

{

crossboard[i][t[i]]='q';

}

for(i=0;i<8;i++)

{

for(j=0;j<8;j++)

{

printf("%c ",crossboard[i][j]);

}

printf("\n");

}

}

int empty(int i)

{

int j=0;

while((t[i]!=t[j])&&(abs(t[i]-t[j])!=(i-j))&&j<8)j++;

return i==j?1:0;

}

void queens(int i)

{

for(t[i] = 0;t[i]<8;t[i]++)

{

if(empty(i))

{

if(i==7){

printsol();

printf("\n solution %d\n",sol++);

}

else

queens(i+1);

}

}

}

int main()

{

queens(0);

return 0;

}

**OUTPUT:**

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**solution 29**

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**solution 46**

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**solution 75**

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**solution 76**

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**solution 77**

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**solution 78**

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**solution 79**

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**solution 80**

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**solution 81**

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**solution 82**

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**solution 83**

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**solution 84**

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**solution 85**

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**solution 86**

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**solution 87**

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**solution 88**

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**solution 89**

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**solution 90**

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**solution 91**

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**solution 92**