Name: Saikat Sheet.

University Roll: 18700120024.

Department: CSE – A

Assignment-7

Code:

#include<stdio.h>

#include<stdlib.h>

int place(int k, int i);

int\* x;

int n, count = 0;

void nQueen(int k, int n)

{

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

{

if(place(k, i))

{

x[k] = i;

if(k == n)

{

count++;

for(int l = 1; l<=n; l++)

{

printf("%d", x[l]);

}

printf("\n");

}

else

nQueen(k+1, n);

}

}

}

int place(int k, int i)

{

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

{

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

return 0;

}

return 1;

}

int main()

{

printf("Enter chessboard size: ");

scanf("%d", &n);

x = (int\*)malloc(sizeof(int)\*n);

nQueen(1, n);

printf("The number of solutions is %d", count);

return 0;

}

Output:

