



SHREE L. R. TIWARI COLLEGE OF ENGINEERING

Approved by AICTE & DTE, Maharashtra State & Affiliated to University of Mumbai, NAAC Accredited, NBA Accredited program,
ISO 9001:2015 Certified | DTE Code No: 3423, Recognized under Section 2(f) of the UGC Act 1956, Minority Status (Hindi Linguistic)

Name: Dubey Samit

Roll no.: 22 Div: A

Batch: A1

Program:

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
int a[30],count=0;
int place(int pos)
{
    int i;
    for(i=1;i<pos;i++)
    {
        if((a[i]==a[pos])||((abs(a[i]-
a[pos])==abs(ipos))))
            return 0; }
        return 1; }
    void print_sol(int n) {
        int i,j;
        count++; printf("\n\nSolution
        #%d:\n",count);
        for(i=1;i<=n;i++) {
            for(j=1;j<=n;j++) {
                if(a[i]==j) printf("Q\t"); else
                printf("*\t");
            }
            printf("\n");
        }
        void queen(int n) {
            int k=1; a[k]=0;
            while(k!=0) { a[k]=a[k]+1;
                while((a[k]<=n)&&!place(k
                )) a[k]++; if(a[k]<=n) {
                    if(k==n) print_sol(n); else {
                        k++; a[k]=0; }
                }
                else k--; }
            } void main() {
                int i,n;
                clrscr();
                printf("Enter the number of
                Queens\n");
                scanf("%d",&n);
                queen(n);
```



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```
printf("\nTotal solutions=%d",count);  
getch();  
}
```

Output:

Enter the number of Queens 4

Solution #1:

```
*   Q   *   *  
*   *   *   Q  
Q   *   *   *  
*   *   Q   *
```

Solution #2:

```
*   *   Q   *  
Q   *   *   *  
*   *   *   Q  
*   Q   *   *
```

Total solutions=2