BINARY COUNTER

```c
#include <stdio.h>

#include <math.h>


void Counter(int a[], int k)
{
    int n = pow(2, k);
    while (n > 1)
    {
        int i = k - 1;
        while (i < k && a[i] == 1)
        {
            a[i] = 0;
            i = i - 1;
        }
        if (i < k)
        {
            a[i] = 1;
        }
        for (int i = 0; i < k; i++)
        {
            printf("%d ", a[i]);
        }
        printf("\n");
        n--;
    }
}


int main()
{
    int a[100], k;
```

```c
    printf("Enter the number of bits you want to insert: ");

    scanf("%d", &k);

    printf("Enter 0 in the array:-\n");

    for (int i = 0; i < k; i++)

    {

        scanf("%d", &a[i]);

    }

    printf("The bit-counter result:-\n");

    for (int i = 0; i < k; i++)

    {

        printf("%d ", a[i]);

    }

    printf("\n");

    Counter(a, k);

    return 0;

}
```

OUTPUT

```
Enter the number of bits you want to insert: 4
Enter 0 in the array:-
0
0
0
0
The bit-counter result:-
0 0 0 0
0 0 0 1
0 0 1 0
0 0 1 1
0 1 0 0
0 1 0 1
0 1 1 0
0 1 1 1
1 0 0 0
1 0 0 1
1 0 1 0
1 0 1 1
1 1 0 0
1 1 0 1
1 1 1 0
1 1 1 1
```