

Butterfly pattern(input=4)

```
*      *
**     **
***    ***
*****
*****
***    ***
**     **
*      *
```

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int i, j, n;
```

```
    scanf("%d", &n);
```

```
    // upper half of the pattern
```

```
    for(i = 0; i < n; i++)
```

```
    {
```

```
        for(j = 0; j < (2 * n); j++)
```

```
        {
```

```
            if(i >= j) // upper left triangle
```

```
                printf("*");
```

```
            else
```

```
                printf(" ");
```

```
            if(i >= (2 * n - 1) - j) // upper right triangle
```

```
                printf("*");
```

```
            else
```

```
                printf(" ");
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    // bottom half of the pattern
```

```
    for(i = 0; i < n; i++)
```

```
    {
```

```
        for(j = 0; j < (2 * n); j++)
```

```
        {
```

```
            if(i + j <= n - 1) // bottom left triangle
```

```
                printf("*");
```

```
            else
```

```
                printf(" ");
```

```
            if((i + n) <= j) // bottom right triangle
```

```
                printf("*");
```

```
            else
```

```
                printf(" ");
```

```
        }
```

```
        printf("\n");
```

```
    }
```

```
    return 0;
```

```
}
```